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The initial development of a measure of cultural competence in school psychology: The Madison Assessment of Cultural Competence in School Psychology (MACCS)

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The initial development of a measure of cultural competence in school psychology:

The Madison Assessment of Cultural Competence in School Psychology (MACCS)

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Abstract

School psychology training programs are under increased pressure to train students in a way that emphasizes cultural competence. However, there is not currently an accepted instrument that can measure the cultural competence of students specific to the discipline of school psychology. The current study proposes and explores several adaptions of a proposed instrument to measure cultural competence in school psychology. Adaptions were selected to address problems observed in collecting similar data in a school psychology program. A first study was unsuccessful due to sampling issues; however, a second study was more successful. A sample was selected to exaggerate training differences that included undergraduate students, school psychology graduate students, and practicing school psychologists. Results suggested that a new set of questions combined with a scenario procedure was very successful at measuring different levels of training in cultural competence. It is recommended that these results be used to develop an instrument that can be used in all school psychology training programs.

Introduction

School systems across the country are experiencing tremendous growth in the cultural diversity of their student populations (Frisby & Reynolds, 2005) and it is unclear if school psychologists are sufficiently trained to meet the needs of these diverse students. Both research and practice have provided evidence that cultural biases in the schools, whether conscious or not, can have a negative effect on assessment and service delivery (Frisby & Reynolds, 2005; Imel et al., 2011). Compounding the issue, while student populations are becoming more culturally diverse, professionals in the field are not. The response to this interaction between diverse student populations and non-diverse school psychologists has fueled initiatives to incorporate cultural issues within training programs with the goal to produce more culturally competent practitioners. While previous research in this domain has been aimed at successfully incorporating cultural issues in training programs and defining cultural competencies (Frisby & Reynolds, 2005; Goupaul-Mcnicol, 1997) there have only been limited attempts to measure the cultural competence of school psychology students directly.

In addition to the lack of instrumentation, institutional-specific data suggested that the information gathered from self-report measures is biased in a systematic way and it is likely that the construct itself is instrumental in this issue (JMU School Psychology Program, 2012; Shiflet, 2009). Based on this data, described in more detail later in this work, it appeared that students with little training in cultural competence are systematically overrating themselves in cultural competence knowledge and skill. This seemed to be a function of their lack of available information about the topic; these

students did not know enough to know how much they did not know about cultural competence. On the other hand, students and practitioners in the field of school psychology who have received extensive training in cultural competence appeared to be systematically underrating themselves compared to their true competence level. This seemed to be a function of highly competent individuals who were able to admit that they did not know everything about cultural competence; these individuals knew enough to know how much they didn't know about cultural competence.

This issue is compounded when the groups are compared, as novice students reported ratings that were more similar to the ratings of experts. This produces a statistical fallacy know as a Type II error; a false negative situation in which existing differences between groups could be missed due to measurement error. This suggests that current program-specific instruments are inappropriate for the purpose of measuring cultural competency.

The current study will attempt to address this error in a systematic way and propose the development of new instrument that incorporates the corrections examined in this work. Specifically, this study will propose the utilization of scenarios to correct for differential item functioning and social desirability bias. Results suggest that scenario corrections, along with a revision of questions to align with research, are effective tools with which to measure cultural competence in a school psychology program.

<center>**Review of the Literature**</center>

Defining Cultural Competence

      Cross, Bazron, Dennis, and Isaacs (1989) examined the importance of cultural competence over twenty years ago, and since that time, there has been much debate on the exact definition. While there is a general consensus among professionals that school psychologists should be culturally competent, there is little consensus when it comes to defining the necessary components of the definition. Although there are differences, operational definitions of cultural competence generally include aspects in two domains, knowledge and skill, when working with diverse populations. While knowledge and skills are invariably connected, one cannot be considered competent without proficiency in both domains. It is possible for one to be knowledgeable about a diverse group but not have acquired the skills to utilize the knowledge in producing effective service. In response to the inconsistency of professional opinions, a number of experts have attempted to further define the concept of cultural competence as it relates to the field of school psychology.

      The National Association of School Psychologists (NASP) endorses a definition of cultural competence proposed in a publication intended to examine the interaction of cultural competence and health care policy (King & Emery, 1997). "Operationally defined, cultural competence is the integration and transformation of knowledge about individuals and groups of people into specific standards, policies, practices, and attitudes used in appropriate cultural settings to increase the quality of services; thereby producing better outcomes" (King, Epstein, & Brisbane 1997),." While this definition provides a

general overview of what cultural competence means, this definition is too broad to be of great use to practitioners or trainers.

In an attempt to shape school psychology program development, Goupaul-Mcnicol (1997) proposed major competency skills needed to effectively work with culturally diverse students. The article offers, on a theoretical basis, 15 multicultural competencies (see *Figure 1*). The author suggests that cultural incompetence constitutes the delivery of a mental health service outside of an area of competence, and; therefore, is a violation of the ethical principles of the profession.

More recently, Rodgers and Lopez (2002) conducted a study in order to identify critical cultural competencies in school psychologists. Twenty-four school psychology degree-holders with expertise in cross-cultural school psychology participated in a Delphi survey procedure to collect data. The sample consisted of thirteen participants who were faculty members, nine participants who were practicing school psychologists, and one participant who was a supervisor and administrator of psychological services. The survey was constructed and administered in two sessions, each by mail. During the first session, participants completed demographic information and a questionnaire developed through an extensive literature review. The questionnaire identified 185 items that were believed to have importance to cultural competence based on the current literature. Participants were asked to rate each item on a five-point Likert-type scale as it related to importance for cultural competence from very important (one) to not important (five). They were also asked to provide any additional items that were related to cultural competence. The second survey contained an expanded questionnaire of 260 items based on the results of the first questionnaire. Participants rated these items in the same way as

in the first session. Rodgers and Lopez reduced the data based on an average among

raters of 1 to 1.49 (1 being very important) and discarded items that did not meet this

criteria. This methodology resulted in a final list of 102 items that were considered to be

critical in the area of cultural competence. These items were then organized into 14

overarching categories (*see figure 1*). Sample items for each category were included in

the article; however, a full list of items was unavailable. Rodgers and Lopez suggest that

future research should be aimed at developing a tool for assessing the cultural

competence of school psychologists.

Despite some differences in the organization of skill and knowledge domains,

there seems to be a level of agreement across different experts in the field as to what

aspects make up cultural competence. This type of research, that focuses on the

definition, allows further research to concentrate on measurement of the construct

of cultural competence is certainly helpful in advancing competent service delivery and

while lagging behind some fields, such as counseling, school psychology appears closer

to addressing the issue of measurement than many other fields (Watson, Stimpson,

Topping, & Porock, 2002) that are still attempting to define what cultural competence

means for their discipline.

Measuring Cultural Competence in School Psychology

At this time, a thorough literature search revealed no published articles

concerning instruments designed to measure cultural competence specific to the

discipline of school psychology. Furthermore, only two Ed.S. level theses on the topic

was available for review (Shiflet, 2009; Wilt, 2009). This lack of instrumentation

dedicated to measuring cultural competence is unfortunate considering the current

Figure 1. Domains of cultural competence as proposed by the research literature.

Goupaul-Mcnicol (1997)	BOTH	Rodgers and Lopez (2002)

Conflict Resolution

Special Education

Awareness

Racial Issues

Beliefs and Values

Empowering Families

Ethics

Bilingual Education

Pediatric/Health Psychology

Counseling

Assessment

Working with Interpreters

Consultation

Language

Research

Report Writing

Academic Interventions

Theoretical

Professional Characteristics

Working with Organizations

Working with Parents

Laws and Regulations

Culture

Domains in the left circle were proposed by Goupaul-Mcnicol(1997). Domains in the right circle were proposed by Rodgers and Lopez (2002). Domains in the center were proposed by both.

emphasis that is placed on producing culturally competent students within training programs. It is difficult to know whether changes in programs designed to increase cultural competence are effective without a valid measure of cultural competence.   Other fields, such as counseling, have been more successful in the production of instruments designed to measure cultural competence.

Wilt's (2009) thesis detailed her efforts to measure the cultural competence knowledge of students in one school psychology program. This effort began following the implementation of a renewed effort to include cultural competence in the program. This study provided evidence for the validity of a novel instrument designed to measure cultural competence: the Cultural Issues in School Psychology Scale (CISPS) (Trice, 2008). The CISPS consisted of 26 knowledge items on a six point Likert-type scale. Each item addressed a common cultural statement encountered in the practice of school psychology and participants rated how much they agreed with each statement. An example of an item on the scale is: *High stakes testing is MORE common in other countries than in the U.S.* Items were divided into three groups: Knowledge, Awareness, and Skill. Convergent validity of the scale was shown at a moderate level with the Multicultural Counseling Knowledge and Awareness Scale (MCKAS). Statistical analyses suggested that the CISPS showed some differential validity when using the Awareness Scale; however, these results should be interpreted with caution due to the small sample size and unequal groups used in the ANOVA analyses that were utilized. The author suggested that future research should control for social desirability bias. She also noted that scenarios or vignettes might improve the measurement of cultural

competence. This instrument was replaced by the Culturally Competent Practitioner

Initiative Assessment (CCPIA) used in the current study.

Shiflet's (2009) thesis detailed her efforts to measure the cultural competence

skill of students in the same school psychology program. This effort also began

following the effort of the program to include cultural competence in the program. Ten

first year students and ten third year students in the program responded to a case study

and rated themselves on their own ability to respond adequately. The case study detailed

the situation of a culturally and linguistically diverse student. Two experts in the field of

cultural competence rated the responses based on a rubric developed using NASP

domains. Results suggested that while third year students categorically had more skill in

this area, their self-report ratings of confidence were not statistically different from the

ratings of first year students. This suggested that first year students were overconfident

and that third year students lacked confidence in their abilities.

Measuring Cultural Competence in Other Fields

The examination of fields related to school psychology yielded a greater breadth

of research exploring the assessment of cultural competence. LaFromboise, Coleman,

and Hernandez (1991) examined the psychometric properties of the Cross-Cultural

Counseling Inventory – Revised (CCCI-R), a measure used to rate counseling students on

cross-cultural competence. The CCCI-R consists of 20 items that address the

characteristics of a cross-culturally skilled counseling psychologist outlined in a report by

Division 17 (counseling) of the American Psychological Association. The items fell into

three broad categories: cultural awareness and beliefs, cultural knowledge, and flexibility

in counseling skills. Participants responded to each item on a six-point Likert-type scale

from strongly disagree to strongly agree. During the first phase of the study, experts in the field classified each item into one of the three domains and the researchers calculated the degree of inter-rater agreement. Overall, the level of agreement between raters was 80% which the researchers considered adequate to continue with phase two. Phase two of the study examined inter-rater reliability when using the scale to rate a student counseling session. Experts in the counseling field were given extensive training in the use of the CCCI-R and then asked to rate several videotaped counseling sessions. Inter-rater reliability estimates were poor (.39 - .69). Phase three of the study examined the factor structure of the scale and yielded a one factor solution that included 19 of the 20 items on the scale. The researchers suggest caution when using an observer rating scale to judge cultural competence as the influence of the observer's beliefs can easily influence their ratings.

Carlson, Brack, Laygo, Cohen, and Kirkscey (1998) examined the self-report of counseling students, detailing their multicultural competence at both the beginning and end of their curriculum. One-hundred and eighteen counseling students completed the Multicultural Awareness Knowledge-Skill Survey (MAKSS), a 60-item self-report measure of cultural competence. Participants rated their own level of competence on a scale of 1(limited) to 4 (very good). The items were arranged into three subscales: awareness, knowledge, and skill. Cronbach's Alpha was sufficiently high for all subscales. Results suggested no relationship between number of years in a graduate program and perceived competence; however, the scale was able to statistically differentiate between very high competence and very low competence participants. The authors suggest that future attempts to address multicultural issues should include an

experiential component. Based on the results of this study, the authors noted that a self-report measure may not be able accurately measure multicultural competence. They suggest that if a self-report measure is used, additional steps need to be taken to ensure the reliability and validity of the instrument.

Sodowsky, Kuo-Jackson, Richardson, and Corey (1998) conducted a study that related multicultural counseling training with multicultural competence. Surveys were mailed to 325 potential participants and returned by 176 professional counselors. The surveys contained four measures: the Multicultural Counseling Inventory (Sodowsky, Taffe, Gutkin, & Wise, 1994), the Multicultural Social Desirability Scale (Sodowsky, O'Dell, Hagemoser, Kwan, & Tonemah, 1993), the Locus of Control Race Ideology factor (Gurin, Gurin, Lao, & Beattie, 1969), and the Revised Janis-Field Feelings of Social Inadequacy Scale (Eagly, 1967). Descriptive information was also collected. A series of multiple regression techniques produced a model accounting for 34% of the variance in the Multicultural Counseling Inventory score using Social Desirability ($R^2 = .06$), Race (R^2 change = .07), Counselor Attitudes (R^2 change = .11), and Multicultural Training (R^2 change = .10). While multicultural training did account for a significant amount of variance in the scale score, it was surprising how little an effect the training program actually had on participants. This study is also important for its examination of a social desirability factor. Although this particular social desirability scale was unable to detect the influence of social desirability due to measurement error, it is possible that a scale more specific to school psychology would yield a better outcome.

More recently, Ponterotto, Grechen, Utsey, Rieger, and Austin (2002) conducted a study in order to revise and validate the Multicultural Counseling Awareness Scale

(MCAS) an instrument designed to measure individual multicultural awareness. The original version of the scale consisted of 45 items within three areas: Knowledge/Skills, Awareness, and Social Desirability. Validation studies had previously supported the use of the scale with Cronbach's Alpha and test-retest reliability estimates above .70 (Kocarek, Talbot, Natka, & Anderson, 2001; Manes, Wu, & Nepomuceno, 2001; Ponterotto, Alexander, & Grieger, 1995). Evidence for convergent validity had also been produced among several studies (Kocarek et al., 2001; LaFromboise et al., 1991; Ponterotto & Alexander, 1996). However, due to multiple concerns with the original scale including misalignment with theory, scale naming issues, and the inclusion of items that required knowledge of specific authors in the field, the authors sought to update the instrument (Ponterotto et al., 2002). Specifically, the study sought to accomplish three goals: examine the factor structure using a large sample, revise the instrument, and finally, examine the validity and structure of the new instrument. Using data collected from 525 students and professionals in the counseling field, a factor analysis procedure suggested revisions to the items on the original instrument. These revisions included eliminating six items that required familiarity with an individual scholar, removing the social desirability items, and discarding items that did not load on factors to a level greater than .40. Following the revisions, the authors renamed the scale as the Multicultural Counseling Knowledge and Awareness Scale (MCKAS). The revised scale consisted of 32 items: 20 knowledge items and 12 awareness items. The new instrument was then completed by another sample of 199 counseling students across five universities in the North-East United States. Cronbach's Alpha for the instrument was acceptably high ($\alpha = .85$); however, a confirmatory factor analysis was unable to find evidence to

support a two factor solution. This suggested a need for more research on the construct

validity of the instrument. The MCKAS showed medium correlation with appropriate

subscales of the Multicultural Counseling Index ($r = .43-.70$). The researchers list several

limitations to their findings such as the influence of social desirability, a lack of random

sampling, and a lack of a research-based link between score on the instrument and actual

performance.

Finally, Bogo, Regehr, Katz, Logie, and Mytopoulos (2011) developed a measure

of student's competencies in the field of social work. The researchers calculated scores

for each participant based on a combination of neutral rater observation of applied social

work scenarios and immediate student reflection on their own performance during the

scenarios. The sample consisted of 11 MSW students, 7 recent graduates, and 5

experienced social workers. Analysis of the means of each group revealed differences

among the groups based on level of experience. The authors found that the student

reflections were not helpful in discriminating between levels of training without the use

of the applied scenarios.

Social Desirability

The term social desirability comes from the work of Allen Edwards (1957) in

which he defines social desirability as the extent to which a trait is desirable in the

population. He further notes that it as a dimensional trait that may be used to describe

any characteristic statement. Edwards noted that social desirability would be useful in

predicting the proportion of individuals that would self-describe themselves as possessing

a trait. The influence of social desirability on self-report measures has been well

documented (Kuentzel, Henderson & Carn, 2008; Rosen, 1956; Soubelet & Salthouse, 2011).

Based on the term defined by Edwards, Crown and Marlowe (1960) developed an instrument designed to measure general social desirability response bias: the likelihood that participants are responding in a way that they perceive as socially desirable rather than their true opinions. This instrument has been well established in the field of psychology and is used often when social desirability is a factor of interest. Reynolds (1982) developed several short form versions of the Crowne-Marlowe social desirability scale. Comparisons of the shorter versions of the instrument suggest that the most psychometrically sound is form C. Studies have shown reliability estimates around .70 and acceptable convergent validity estimates with both the long form of the Crowne-Marlowe scale and with other measures of social desirability (Ballard, 1992; Reynolds, 1982).

Previous research in the field of cultural competence (Shiflet, 2009; Wilt, 2009) has hypothesized that unusual patterns of data may have been influenced by the presence of social desirability. The current study will attempt to more accurately measure the influence of social desirability in a way that is specific to school psychology. It will also attempt to remove any negative effects of the trait from self-report measures of cultural competence.

Differential Item Functioning

In addition to social desirability bias, other sources of error; inherent in using self-report questions, can hamper validity. A particularly difficult issue can arise when groups of participants approach the same questions from different viewpoints and their

answers are compared on the same scale. King and Wand (2006) refer to this error as differential item functioning. To elaborate, King and Wand provide an example from a recent World Health survey completed by participants in China, a communist government, and by participants in Mexico, a democratic government. On average, participants in China reported higher ratings of personal control over their government than the participants in Mexico. The error in this situation appeared to stem from differential item functioning: the participants from the different countries related the response scale to their own situation. Each group of participants based their responses on tremendously different situations and consequently, participants from Mexico tended to underrate their influence and participants from China tended to overrate their influence on their respective governments.

Grol-Prokopczyk, Freese, and Hauser (2011), designed a study to assess corrections to group differences in self-report ratings of health. Their study described a similar situation in which American participants and English participants differed in their opinions of "good health" and therefore interpreted the response scales on the topic of health in from different contexts. This difference in interpretation masked true differences and suggested differences that did not exist.

King and Wand (2006) proposed the use of anchoring vignettes as a correction of the influence of differential item functioning on self-report measures. This procedure involved creating a case vignette or scenario in which a hypothetical person is described responding to a situation in an intentionally, and systematically, positive or negative way. Each participant would rate the hypothetical person on the same questions present on the self-report survey. Following the rating of the hypothetical person, the participants

would then be instructed to rate themselves on each question as they normally would. Once both self-report measures and scenario measures were completed, a new measure would be created by determining whether self-report measures were less than, equal to, or greater than the scenario responses. In this way, the effects of differential item functioning would be statistically subtracted out of the self-report responses as participants were comparing themselves to their own ratings of a common context, the scenario. Given this, the new data is theoretically anchored on the same scale. For example, in the case of the world health questionnaire, scenarios were created that presented a person attempting to influence their government and failing or succeeding at systematic levels. The authors noted that increasing the number of scenarios increased the ability to reduce the effects of differential item functioning; however, it also increased the time and effort needed to collect data. They proposed that two scenarios would significantly increase power while only minimally increasing effort. According to King and Wand, a correction for differential item functioning using anchoring scenarios should affect scores in a predictable way that increases the variability in responses. First, participants who are truly low in the trait should see a marked decrease in overall scores. Second, participants who are truly in the middle of a trait should expect scores to remain similar to their uncorrected scores. Finally, participants who are truly high in a trait should see a marked increase in overall scores.

Several studies have utilized anchoring vignettes to successfully correct self-report data. Rice, Robone, and Smith (2008) used two anchoring scenarios to adjust self-reported health data obtained from participants in different countries. Participants were recruited from Austria, Belgium, Germany, Denmark, Spain, Finland, the United

Kingdom, and others. Participants from different countries rated identical scenarios in different ways. Corrections to the self-report data allowed the researchers to draw more valid conclusions. Building on this idea, Grol-Prokopczyk, et al. (2011) used four anchoring vignettes to increase the validity of responses to a survey on overall health in different countries. The four vignettes detailed different diseases and systematically increased in the severity of the disease, starting with a description of little to no pain and ending with a description of exhaustion and high pain. Results suggested that a failure to account for differential item functioning would have resulted in invalid conclusions. Finally, Dowd and Todd (2011) utilized anchoring vignettes using data from the 2006 U.S. health and retirement study. The correction of differential item functioning using vignettes significantly changed results based on differences in age, gender, education, and race/ethnicity. The authors state that, based on their results, traditional self-report models, not correcting for differential item functioning, are underestimating the severity of health problems across the world.

<center>**Purpose and Hypotheses**</center>

Purpose

   The school psychology program sampled in this study currently uses the

Culturally Competent Practitioner Initiative Assessment (CCPIA), a measure adapted by

the members of the faculty for the purpose of demonstrating student progress in cultural

competence. This instrument, described in detail in the materials section, has produced

several unusual patterns of data when utilized. Examination of the patterns created by the

knowledge factor of the scale revealed some unexpected results (see figure 2.1).

Figure 2.1. Knowledge of Cultural competence Factors as Measured by current
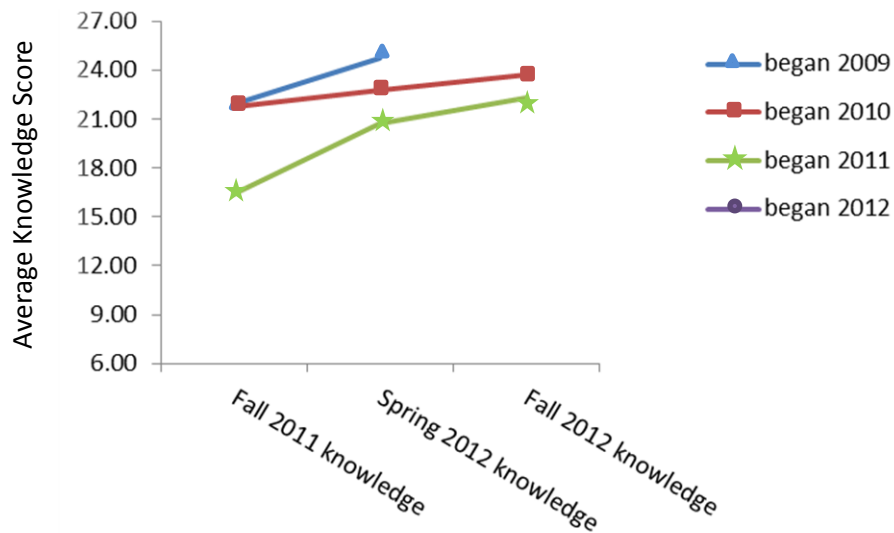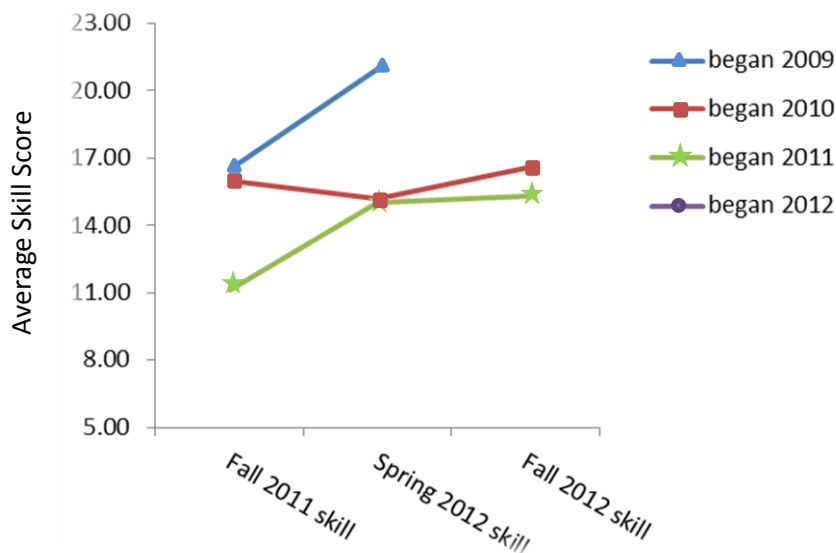
instrument

   Students in the third year of the program, as measured by this instrument, appear

to gain modestly in knowledge over the course of their training. However, at the

beginning of their third year, students who began in 2009 rated themselves as having the

same amount of knowledge as the cohort below them. This was unexpected as the 2009 cohort had three additional semesters of training. Students in the second year of the program (began in 2010), as measured by this instrument, appear to gain no additional knowledge in cultural competence over the course of three semesters of training. Additionally, by the end of their first year of training, the 2011 cohort rated themselves as equally knowledgeable as the 2010 cohort. This was also unexpected as the 2010 cohort had three additional semesters of training.

Examination of the skill factor yielded further unanticipated results (see figure 2.2). Students in the third year of the program, the year of an applied internship, show a predictable increase in their rating of cultural skills across the year; however, the group's initial rating was at the same level as the cohort below them, despite having three semesters of additional training. The students in the second year of the program exhibited a decrease in their skill ratings over the course of the fall and spring semester and then returned to their original ratings the following semester. This is surprising as these students completed coursework that had been designed to incorporate cultural competence instruction.   This result suggested that students in the second year of the program did not gain any measure of skill over three semesters of training. Students in the first year of the program produced predictably low ratings at the beginning of their training which increased significantly after two semesters in the program; however, ratings plateaued over the final semester of their first year. This is especially surprising as students in this year participate in a course designed to increase their multicultural awareness and skills in counseling during their third semester.

Figure 2.2. Skill in Cultural competence Factors as Measured by current instrument

While it was possible that this instrument was functioning correctly and these

patterns exist, it is unlikely. In response to the increasing necessity of culturally

competent practitioners, the target program has engaged in systematic development of its

curriculum to establish the Culturally Competent Practitioner Initiative (CCPI)

(http://psyc.jmu.edu/school/culturalcompetence.html, retrieved January, 2013). This

revised curriculum was developed to educate school psychologists who are able to

provide services to individuals with a wide array of cultural beliefs, values, and

expectations. The CCPI has focused on improvements in six main areas: 1) diversity,

advocacy, and social justice have been integrated into every course taught by core

faculty, 2) a course 'multicultural perspectives in intervention' has been added to the

curriculum, 3) practicum experiences revised to include issues of diversity, 4) the

inclusion of program sponsored training modules focused on cultural issues, 5) the

addition of community awareness experiences into the curriculum, 6) evaluation of

cultural skills and knowledge. The current study is an attempt to increase the validity of the sixth area.

As the CCPI had been fully implemented for all students during this study, it is unlikely that the trends observed are true. A competing hypothesis is that the different cohorts were approaching the items from different viewpoints. These factors suggested that the influence of differential item functioning may have contributed to the unexpected pattern of results.

Hypotheses

The current study will test the utility and validity of several proposed alterations to a measure of cultural competence specific to school psychology. The first hypothesis is that the use of anchoring scenarios, as described above by King and Wand (2006), will significantly increase the differential validity of the instrument. Specifically, scores for students in the low training group are expected to be significantly lower on the new version of the scale compared to the previous one. The second hypothesis is that a new brief measure of social desirability specific to school psychology will be able to adequately identify people who are responding in a socially desirable manner and will show adequate levels of convergent validity with the Marlowe-Crowne Social Desirability Scale. The third hypothesis is that students with lower levels of education in the field of school psychology will exhibit higher levels of social desirability than students who have received more training.

Method

Participants

Participants for this study were recruited from a school psychology graduate program consisting of 27 students at a midsize Southeastern university. Participants had received different amounts of training in cultural competence specific to school psychology such that they could be divided into three groups: first-year graduate students, second-year graduate students, and third-year graduate students. Participants were selected using non-probability purpose sampling in order to select participants who were at different levels of training in cultural competence specific to school psychology. The program consisted of 22 female students and 5 male students. The ethnicities of the sample consisted of 13 Caucasian students, 3 African American students, 1 Asian student, and 1 multiracial student. These students were engaged in different levels of training such that 10 classified as first-year graduate students, 11 classified as second-year graduate students, and 6 classified as third-year graduate students. Students from this program were selected in response to the program's renewed focus on embedding cultural components into each of its classes via the CCPI. The results of this research assume that as cohorts progress through the program, they gain more knowledge and skill in the area of cultural competence pertaining to school psychology.

Due to sampling issues described in the results section, the final sample consisted of five first-year graduate students, three second-year graduate students, and two third-year graduate students. There were eight female students and two males. The ethnicities of the sample consisted of eight Caucasian students, one African American student, and one Latino student.

Materials

   Culturally Competent Practitioner Initiative Assessment (CCPIA). This instrument, currently used in the program of interest, is based on another measure, the Crosswalks Assessment of Student Knowledge and Skills, that was designed to measure cultural competence for pre-service programs offering bachelor's level Birth-Kindergarten (B-K) licensure and their community partners (Catlett & Maude, 2005). This 35-item self-report measure was originally adapted to school psychology by modifying the items to better suit the field and includes items in 11 domains of knowledge and skill in cultural competence: General Knowledge, Knowledge of Supporting Child Learning, Knowledge of Families, Knowledge of Assessment, Knowledge of Collaboration, Knowledge of Research, Skill in Child Learning, Skill in Working with Families, Skill in Assessment, Skill in Collaboration, and Skill in Advocacy. The adaptions were made at the discretion of the school psychology faculty who wished to measure the effect of increased cultural competence training on student outcomes. Scores for each of the eleven domains range from a low of one to a high of 5. Cultural knowledge scores range from a low of 6 to a high of 30 and cultural skill scores range from a low of 5 to a high of 25. Total cultural competence scores range from a low of 11 to a high of 55. Participants will completed this measure as a control in order to measure the increase in differential validity when adaptions are made. In an effort to minimize participant fatigue, participants will not complete the entire scale during this study. Participants will complete one self-report question from each scale of the full measure. See Appendix A for a copy of the full scale.

Madison Assessment of Cultural Competence in School Psychology. The

Madison Assessment of Cultural competence in School Psychology (MACCS) is a 42

item self-report instrument designed to measure individual cultural competence as it

relates to school psychology. The MACCS was developed by modifying questions from

the CCPIA (see previous section for a description of the initial instrument). The

instrument has three main sections: the social desirability scale, the scenarios, and the

self-report items. The first section of the measure consists of seven social desirability

questions designed to measure the likelihood that respondents are responding in a way

that would present them favorably. The next section of the scale combines case

scenarios with 35 self-report questions. The questions are arranged into the same 11

domains of knowledge and skill as the CCIPA and the scoring format is identical. The

format of each question is such that participants read two scenarios that detail the actions

of hypothetical school psychologists. Participants are then asked to rate each

hypothetical school psychologist on each of the self-report questions on a five-point

Likert-type scale with one being No Knowledge/Skill and five being High

Knowledge/Skill specific to each domain. Scenarios were developed by the researcher

and edited by graduate faculty members and practitioners who specialize in working with

culturally diverse individuals. The scenarios incorporate varying degrees of culturally

competent practice. Participants are provided with two scenarios, one that incorporates a

low level of cultural knowledge and skill and another that incorporates a medium/high

level of cultural knowledge and skill. Following the scenario ratings, participants are

asked to rate themselves using the same questions. Final scores on the MACCS are

calculated by comparison of self-report score with scores on both of the scenarios (see

table 1).

Table 1.

Calculation of scores on the MACCS

Relationship between self-score and scenario scores	Final Score
Self-Report Score < Low Scenario Score & High Scenario Score =	1
Self-Report Score = Low Scenario Score < High Scenario Score =	2
Low Scenario Score < Self-Report Score < High Scenario Score =	3
Low Scenario Score < Self-Report Score = High Scenario Score =	4
Low Scenario Score & High Scenario Score < Self-Report Score =	5

Scores assume that participants will be able to accurately rank the low scenario below the medium/high scenario; however, for a score of 1 or 5, this assumption is not considered: it does not matter the order of the ranking as long as both scenarios are either above or below the self-report.

Demographic information was also collected for this measure (see Appendix B).

A non-identifiable code was generated for each participant in order to link participant

responses across sessions. In an effort to minimize participant fatigue, participants will

not complete the entire scale during this study. Participants will complete the social

desirability scale, the scenarios, and one self-report question from each domain.

Development of the scenarios used in the MACCS. The scenarios used in the

MACCS were developed based on the current research in the field. The initial step in the

process was to develop scenarios that would elicit the highest possible rating from

experts, a five, for each of the 11 questions. Scenarios were then developed that would

elicit the lowest possible rating from experts, a one, for each question. As a check that

the scenarios would function as they were designed, several faculty members and

practicing school psychologists agreed to rate them on the self-rapport questions. These

ratings averaged near what they were intended with the mean rating for the highest

scenarios ($M = 4.8$) much higher than the mean rating for the lowest scenarios ($M = 1.3$).

Although the ratings were not unanimously low or high, the discrepancy was considered

large enough to proceed to the next step.

The second step in the process was to modify the lowest scenario such that it

would be rated slightly higher by experts, at a medium-low rating of two, and to modify

the highest scenario such that it would be rated slightly lower by experts, at a medium-

high rating of four. Modifications were made by removing key ideas from the highest

scenario and adding them to the lowest scenario. These modifications were an attempt to

pull both ratings towards the mean score of three. As another check that the scenarios

would function as designed, the same faculty members and practicing school

psychologists agreed again to complete the ratings. These ratings averaged near what

they were intended with the mean rating for the higher scenarios ($M = 3.79$) higher than

the mean rating for the lowest scenarios ($M = 1.7$). Once again, although these ratings

were not unanimously centered on the target rating, these ratings suggested that they were

likely to function as they were intended. See Appendix C for a copy of the scenarios.

Development of the school psychology social desirability scale. After a review

of commonly used assessments of social desirability (Ford & Rubin, 1970, Marlowe &

Crowne, 1960; Paulhus, 1984), it was clear that two factors prevented the useful

application of these scales in the current study. First, the scales were generally composed

of too many items to be used efficiently. This was a factor due to the number of items

that were already part of the survey. Second, the scales were either too general, or too

specific to another field, to apply to the target population of students and practitioners of

school psychology. In an attempt to address these concerns, a new measure of social

desirability was created that was brief and specific to school psychology. The items were

created at the suggestion of the researcher, collaboration with professors of school

psychology, and suggestions from current practitioners. Distractor questions and reverse

scoring procedures were included in the scale. Final scores were calculated from a low of

zero to a high of five, with higher scores suggesting higher social desirability. See

Appendix D for a copy of this scale.

Marlowe-Crowne social desirability scale. The Marlowe-Crowne Social

desirability scale is a well-established measure of social desirability (Marlowe & Crowne,

1960). However, a common issue in utility is the length of the full scale. Reynolds

(1982) developed shorter versions of the instrument including the form used in the

current study, short-form C. This scale is composed of 13 true-false items related to

various situations. Each item is designed to elicit a socially desirable response. Scores

range from 0 to 13 with higher scores indicating higher social desirability. Studies have

shown reliability estimates around .7 and convergent validity with both the long form of

the Crowne-Marlowe scale and with other measures of social desirability such as the

Edwards Social Desirability Scale (Ballard, 1992; Reynolds, 1982). This measure will be

included in order to assess the convergent validity of the new social desirability scale

included on the MACCS. See Appendix E for a copy of this scale.

Procedure

Participants were assessed during two sessions approximately one month apart.

Participants completed different instruments during each of the sessions.

Session one. Participants completed session one using the online survey tool Qualtrics. Participants viewed and signed a consent form that explained the minimal risks associated with the study, that all information would be aggregated, and that no identifiable information would be collected. See Appendix F for a copy of this form. Participants identified themselves as first, second, or third year graduate students in school psychology, created an anonymous ID, and then completed the 11 items from the original version of the cultural competence scale, the CCPIA. Finally, participants completed the Marlowe-Crowne Social Desirability Scale – Short Form C and demographic questions.

Session two. One month after completing session one, the same participants, were asked to complete the 11-items from the new version of the MACCS. The previous consent form was designed to cover this administration as well. This version of the scale included both the scenarios and the new school psychology social desirability scale. Scores were linked to the first administration using the anonymous ID generated for each participant.

Results and Discussion

In previous years, the response rate of the CCPIA in the target program has been 100% As such, the response rate for the first survey in the current study was less than expected at 92% (25 out of 27 possible). The response rate for the second survey was less successful at 40% (11 out of 27 possible). Together, the overall response rate, including only responses that were complete and connected across sessions, was not ideal at 37% (10 out of 27 possible). These ten participants were further divided into educational levels such that five were in the first year of their school psychology program, three were in their second year, and two were in their third year.

Due to the low response rate, this sample is very unlikely to be representative of the target population or even of the sampling frame consisting of this specific school psychology program. As such, the inferences that can be made from this study are very limited and the hypotheses were unable to be evaluated. Future research in this area should be aware of the limitations of online participation and reliance on established methods of program evaluation. In addition, the respondents in the third year of the program were required to listen to a presentation on the methodology of the study before it was conducted and would likely have been biased if they had responded.

With these limitations in mind, examining the data revealed that, at least for these students, the questions were not functioning as expected (figure 3). First year students scores decreased with the scenarios as was expected; however, other cohorts did not provide the expected results; the second year cohort's ratings increased and the third year cohort's ratings remained the same. Again, these conclusions should be examined with extreme caution due to the limitations described above.

Despite the limitations of study 1, examination of the current instrument's functioning as described in the introduction still warranted further research into alternative methods of data collection. A thorough comparison of the questions in the current instrument and the limited research on the important aspects of cultural competence in the field of school psychology suggested a discrepancy that might account for at least some of the poor functioning of the instrument. As such, a second study was designed and conducted using a new set of questions and a different sample.

Figure 3. Change in Cultural Competence Score With and Without Scenarios in Study 1
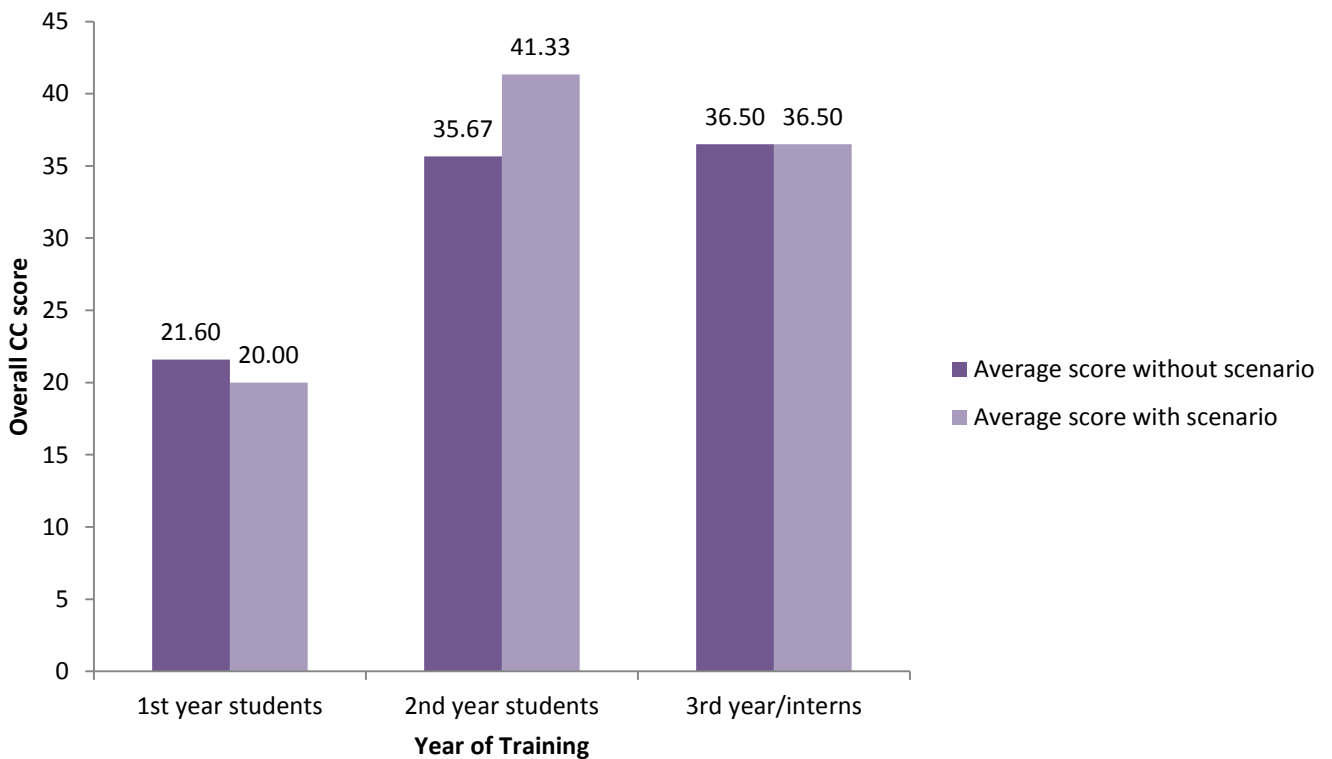
Study Two

Purpose and Hypotheses

A second study was designed to test the utility and validity of a new set of cultural competence items developed based on the current research literature. Additionally, the utility of using scenarios to correct for differential item functioning was examined. Finally, the utility of a new measure of social desirability specific to school psychology was examined. Based on the performance of the CCPIA, the first hypothesis is that the new questions will function in such a way that participants who differ vastly in knowledge and skill (undergraduate students and practicing school psychologists) will be easily differentiated. It is also hypothesized that participants that are more similar in skill and knowledge (first and second year graduate students in school psychology) will be harder to discriminate. The second hypothesis is that any difficulty in discriminating participants who are more similar in knowledge and skill will be corrected through the use of scenarios. It is anticipated that this will occur as a result of an increase in variability between each of the groups such that undergraduate ratings and first year graduate student's ratings will decrease, second year student's ratings will not change, and practicing school psychologist's ratings will increase. The third hypothesis is that the use of scenarios will be able to correct for the influence of social desirability. This hypothesis is predicted to build on the anticipated success of the scenarios in correcting for differential item functioning such that the scores of participants who were identified as providing highly socially desirable responses would be corrected using the scenario procedure.

Method

Participants

In an attempt to avoid the response issues present in study one, participants for study two were collected in-person. This strategy was successful as every participant who was invited to participate completed the materials for a response rate of 100%. Participants were selected using non-probability purpose sampling in order to enlist participants who were at different levels of training in school psychology and likely thus, in cultural competence. Participants were collected from four different levels of training specific to school psychology: 1. Minimal training, 2. Some training, 3. Moderate training, and 4. Professional training. Participants in the minimal training group consisted of 13 undergraduate students taking an introduction to school psychology course. These students were selected due to their interest in the field but lack of specific training. Participants in the some training group consisted of 10 first year school psychology graduate students enrolled in their second semester of coursework. Participants in the moderate training group consisted of 11 second year graduate students enrolled in their fifth semester of coursework. Participants in the professional training group consisted of 10 practicing school psychologists recruited from local school districts. Although the level of cultural training that the school psychologists received in their respective programs is likely to have varied, psychologists were largely selected from school districts with a culturally diverse student population which would afford these professionals the opportunity to work frequently with students from different cultures. The overall sample consisted of 37 females and 9 males. The ethnicities of the respondents were such that 32 identified as Caucasian, 7 identified as African American,

2 identified as Asian, 1 identified as Hawaiian/Pacific Islander, 3 identified as

Latino/Latina, and 1 identified as Multiracial.

Materials

   MACCS – alternative questions. In response to a lack of congruity between the

items presented in study one and the domains of practice supported by the research in the

field, new questions relating to cultural competence were developed. Research supported

the development of questions in six areas of school psychology practice. These areas

included counseling, assessment, working with interpreters, consultation, knowledge of

language, and research. Questions were developed to match each area and due to sample

size, the survey was limited to 12 questions, 2 in each area. Scores were calculated using

the same procedure outlined in Table 1. Cultural knowledge and cultural skill scores

ranged from a low of 6 to a high of 30. Total cultural competence scores ranged from a

low of 12 to a high of 60. Questions were assessed for face validity by allowing school

psychology practitioners and professors to review and suggest revisions to the list.

Following a consensus that the questions were in agreement with the current literature,

the new scenarios were constructed around each question. See Appendix G for a list of

new questions.

   MACCS – alternative scenarios. A review of the scenarios used in study one,

suggestions from participants, and a review of the literature prompted revisions to the

format of the scenarios in study two. First, it was difficult to convey all necessary

information in one scenario and the attempt to do so may have been ineffective.

Participants may not have made the connections between the specific information in the

scenario and the questions it pertained to. In study two, an individual scenario was

created for each of the 12 questions independent of the other questions and scenarios. This allowed complete control over the information presented in each question. Once all of the scenarios were written, they were connected in relation to the events in an overarching case study. The content of the scenarios is based on both the procedure outlined in creating the scenarios for study one and the influence of the literature outlined in the introduction. The scenarios were examined for face validity by allowing practicing school psychologists and school psychology professors to view and suggest revisions. See Appendix H for a list of scenarios paired with questions for study two.

Procedure

The data for this study were collected in two phases. During the first phase, undergraduate students, first-year school psychology graduate students, and second-year school psychology graduate students were approached in-person during a university class and invited to participate in the study. Third-year school psychology students were excluded from the study due to their prior knowledge of the procedure. Participants read and signed an informed consent document that detailed the purpose and procedure of the study. This form did not mention the purpose of the scenarios and this deception was considered of little risk to participants. Participants were asked to complete the 12 newly developed questions and the school psychology social desirability scale. Participants were thanked for their participation and the professor assumed control of the classroom and instructed for a period of one and one-half hours. This time utilized as a distractor task to reduce the possible influence of practice and order effects. At the conclusion of the class, participants were asked to complete the same 12 questions, each paired with an

individual scenario. These forms were collected upon completion and participants were again thanked for their participation.

The second phase of the study targeted practicing school psychologists. As these participants were not taking university classes, the procedure for completing the study was altered. Potential participants were contacted via email or phone to gauge their interest in participating in the study. School psychologists who agreed to participate were mailed a paper copy of all materials in the study along with a sheet of directions (see Appendix I). Participants were instructed, in writing, in the same way as other participants had been instructed verbally with one alteration. In place of the class-time distractor task, participants were instructed to do anything of their own choosing for a period lasting one and one-half hours before completing the second survey.

Results

In this study, the first hypothesis was that the new questions would function in such a way that participants who differed vastly in knowledge and skill (undergraduate students versus practicing school psychologists) would be easily differentiated. This hypothesis was supported by the data in the areas of knowledge, $U(22) = 21$, $Z = -2.879$, $p = .004$; skill, $U(22) = 8$, $Z = -3.65$, $p < .001$; and overall score, $U(22) = 8$, $Z = -3.65$, $p < .001$, with the undergraduate group (*Overall M* = 26.86, *SD* = 8.04) ratings far lower than the ratings of the practicing school psychologist group (*Overall M* = 45.00, *SD* = 7.86). Furthermore, the hypothesis that the questions would not adequately discriminate between individuals more similar in knowledge and skill was also supported by the data in the areas of knowledge, $U(20) = 49$, $Z = -0.73$, $p = .465$; skill, $U(20) = 56$, $Z = -0.27$, $p = .791$; and overall score, $U(20) = 51$, $Z = -0.60$, $p = .551$, with the first year group (*Overall M* = 37.00, *SD* = 8.45) ratings statistically indistinguishable from the ratings of the second year group (*Overall M* = 37.00, *SD* = 5.40). See Table 2. for a summary of ratings for all groups.

The second hypothesis was that any difficulty in discriminating participants who are more closely matched in knowledge and skill would be corrected through the use of scenarios. This hypothesis was also supported by the data in the ratings of knowledge, $H(3) = 34.39$, $p < 0.001$; ratings of skill, $H(3) = 30.06$, $p < 0.001$; and overall ratings, $H(3) = 33.41$, $p < 0.001$. Furthermore, the average change in each group from non-scenario ratings was significant in the expected direction in every circumstance such that all groups were significantly distinct from one another. Specifically, the undergraduate group total ratings decreased significantly using the scenarios, $W_Z(13) = -3.30$, $p = .001$;

Table 2. Average Ratings in each area of cultural competence without scenarios

Average Knowledge Rating for All Groups Without Scenarios

	N	Mean Rating	Std. Deviation
Undergraduate Student	14	15.71	4.858
First Year School Psychology Student	10	20.10	3.814
Second Year School Psychology Student	11	19.58	2.778
Practicing School Psychologist	10	22.40	3.502

Average Skill Rating for All Groups Without Scenarios

	N	Mean Rating	Std. Deviation
Undergraduate Student	14	11.14	3.697
First Year School Psychology Student	10	16.90	4.999
Second Year School Psychology Student	11	17.42	3.232
Practicing School Psychologist	10	22.60	4.600

Average Total Rating for All Groups Without Scenarios

	N	Mean Rating	Std. Deviation
Undergraduate Student	14	26.86	8.037
First Year School Psychology Student	10	37.00	8.446
Second Year School Psychology Student	12	37.00	5.394
Practicing School Psychologist	10	45.00	7.860

the first year group total ratings decreased significantly using the scenarios, $W_Z (13) = -2.43$, $p = .015$; the second year group total ratings did not change significantly, $W_Z (13) = -0.56$, $p = .574$; and the practicing school psychologist group increased significantly, $W_Z (13) = -2.53$, $p = .011$. See table 3 for a summary of ratings for all groups. An analysis of internal consistency provided further support for the functioning of the questions ($\alpha = .956$) and the removal of any item would not serve to increase internal consistency.

The third hypothesis was that the use of scenarios would be able to correct for the influence of social desirability. Analyses concentrated on the six participants who provided the highest ratings obtained (score = 4 or 5) on the school psychology specific social desirability scale. A significant decrease in these participant's ratings from the

administration without scenarios to the administration with scenarios would provide

support for this hypothesis This hypothesis was not supported, $W_Z(5) = -1.892$, $p = .058$,

although participants who provided highly socially desirable responses on the social

Table 3. Average ratings in each area of cultural competence with scenarios

Average Knowledge Rating for All Groups With Scenarios

	N	Mean Rating	Std. Deviation
Undergraduate Student	14	7.79	1.968
First Year School Psychology Student	10	12.40	2.459
Second Year School Psychology Student	11	18.08	4.562
Practicing School Psychologist	10	23.60	4.719

Average Skill Rating for All Groups With Scenarios

	N	Mean Rating	Std. Deviation
Undergraduate Student	14	9.00	2.449
First Year School Psychology Student	10	11.60	4.142
Second Year School Psychology Student	11	16.25	4.137
Practicing School Psychologist	10	25.40	3.893

Average Total Rating for All Groups With Scenarios

	N	Mean Rating	Std. Deviation
Undergraduate Student	14	16.79	4.246
First Year School Psychology Student	10	24.00	6.128
Second Year School Psychology Student	11	34.33	7.935
Practicing School Psychologist	10	49.00	8.219

desirability scale did rate themselves higher in cultural competence without the scenarios

($M = 38.5$, $SD = 9.29$) than when scenarios were included ($M = 26.67$, $SD = 13.08$).

This decreasing trend suggests that a small sample size may have limited the statistical

conclusions available from this analysis. An comparison analysis of participants who

provided the lowest ratings (score = 0 or 1) on the school psychology specific social

desirability scale indicated no difference, $W_Z(6) = -0.524$, $p = .60$, between cultural

competence ratings without scenarios ($M = 42.71$, $SD = 5.91$) and cultural competence ratings with scenarios ($M = 38.71$, $SD = 15.52$). Although the scale showed some promise when looking at only low and high scoring participants, a reliability analysis, using the entire sample, suggested that the scale is not a valid measure of a single construct ($\alpha = .373$).

Exploratory analyses were also conducted using the information collected on the demographic sheet. As no hypotheses were developed before analyses were conducted and group sizes are very unbalanced, inferential statistics need to be considered with caution until a larger sample can be examined. Select preliminary statistical analyses are presented in table 4. In addition, an analysis of gender differences suggested no difference in cultural competence ratings, $U(44) = 102.5$, $Z = -1.7$, $p = .067$, with the male group ($M =$, $SD =$) providing similar ratings to the female group ($M =$, $SD =$). An analysis of ethnicity suggested that ratings of cultural competence on both versions of the scale were higher for participants who identified as a non-Caucasian ethnicity ($M = 39.14$, $SD = 13.77$) when compared to participants who identified as Caucasian ($M = 25.91$, $SD = 11.83$), $U(44) = 102$, $Z = -2.92$, $p = .004$. An analysis of reported number of courses with a specific emphasis on cultural issues suggested a positive correlation with cultural competence ratings increasing as the reported number of courses increased ($r = .27$, $p = .048$). An analysis of language fluency suggested that participants who reported that they were fluent in a foreign language ($M = 44.22$, $SD = 13.76$) rated themselves as more culturally competent than participants who reported they were not ($M = 26.46$, $SD = 11.44$), $U(44) = 57.5$, $Z = -3.022$, $p = .003$. An analysis of the effect of foreign studies suggested that cultural competence ratings from participants who reported a study abroad

experience were similar to ratings of participants who had not done so, $U(44) = 170$, $Z = -0.85$, $p = .394$. However, an analysis of the effect of residence in a foreign country suggested a large difference in the ratings of participants who had lived abroad ($M = 47.29$, $SD = 13.07$) and participants who had not ($M = 26.82$, $SD = 11.47$), $U(44) = 36.5$, $Z = -3.0$, $p = .002$. An analysis of the effect of initial language suggested that participants who learned another language before English ($M = 47.4$, $SD = 14.89$) rated their cultural competence higher than participants who learned English as their first language ($M = 27.8$, $SD = 12.16$), $U(44) = 30.5$, $Z = -2.54$, $p = .011$.

Table 4. Preliminary exploratory analyses for study 2

Number of participants fluent in a foreign language	Expected Number	Actual Number	$\chi^2 (3, N = 46) = 7.904$, $p = .048$
Undergraduate	2.7	1	
First year graduate	2	1	
Second year graduate	2.3	2	
Practicing school psychologists	2	5	

Number of participants who studied abroad	Expected Number	Actual Number	$\chi^2 (3, N = 46) = 5.164$, $p = .16$
Undergraduate	3.7	4	
First year graduate	2.6	2	
Second year graduate	3.1	1	
Practicing school psychologists	2.6	5	

Number of participants who have lived abroad	Expected Number	Actual Number	$\chi^2 (3, N = 46) = 12.32$ $p = .006$
Undergraduate	2.1	1	
First year graduate	1.5	0	
Second year graduate	1.8	1	
Practicing school psychologists	1.5	5	

Number of participants who learned another language before English	Expected Number	Actual Number	$\chi^2 (3, N = 46) = 5.572$ $p = .134$
Undergraduate	1.5	0	
First year graduate	1.1	1	
Second year graduate	1.3	1	
Practicing school psychologists	1.1	3	

Discussion

The results of this study provide evidence for many of the stated hypotheses. The first hypothesis, that the new version of the scale would be able to discriminate between low and high levels of training, was supported. Additionally, as predicted, the questions were unable to discriminate between groups that were closer in training. The second hypothesis, that the inability to discriminate between groups would be corrected through the use of scenarios, was also supported. See figure 3 for a comparison of group ratings with and without the scenarios. The third hypothesis, that the use of scenarios would be able to correct for the influence of social desirability, was not supported by this study.

The ability of the new questions to discriminate between groups with large differences in training was expected and lines up with the current research detailing cultural competence in school psychology. Goupaul-Mcnicol (1997) stressed that school psychology training programs need to incorporate specific aspects of cultural competence into the curriculum and Rodgers and Lopez (2002) conducted a survey of school psychologists to identify critical cultural competencies. The aspects of cultural competence common to both of these studies were incorporated into the development of the questions. For this reason, there is evidence that the competencies were measured more accurately than they have been previously been measured.

While there is some evidence to suggest valid measurement of cultural competence, the questions alone were unable to distinguish between groups with similar levels of training. In order to remove any possible effects of differential item functioning, the same questions were administered while incorporating a scenario procedure as outlined by King and Wand (2006). The results in the current study

Figure 4.

Average Ratings of Cultural competence - Knowledge, Skills, and Total (knowledge plus skills) Across Groups Without and With Scenarios
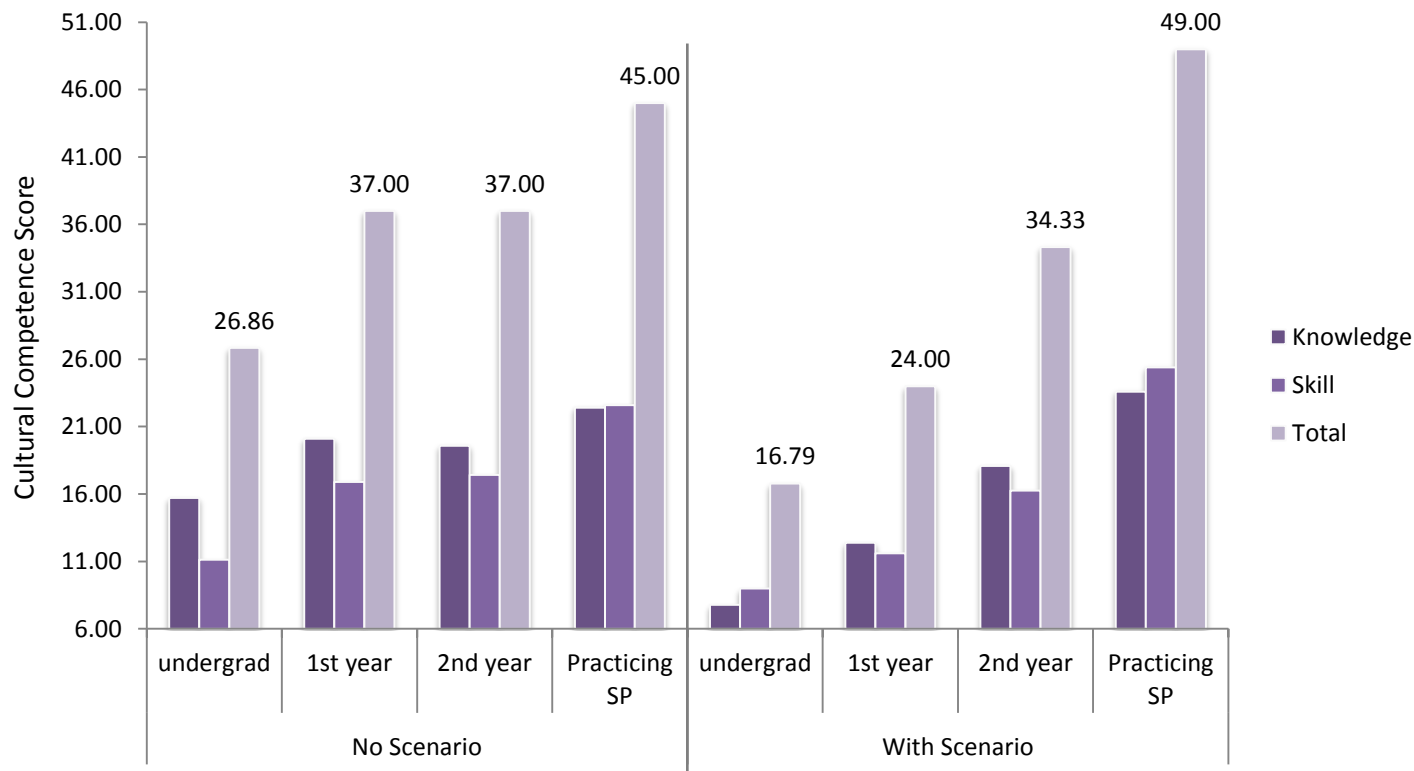
suggest that group ratings were transformed in the ways predicted by King and Wand such that the ratings of participants with low levels of training decreased significantly, the ratings of participants with medium levels of training did not change, and the ratings of participants with high levels of training increased significantly. The success of the scenario procedure in the current research is mirrored in many other studies (Dowd & Todd, 2011; Grol, Freese, & Hauser, 2011; Grol-Prokopczyk, et al., 2011; Rice, Silvana, & Smith, 2008).

The validity of the school psychology social desirability scale was unable to be adequately tested during this study. The initial attempt at validation by correlation with

an established scale developed by Marlowe and Crown (1960) was unsuccessful due to sampling issues during study one and was not pursued further in study two. In study two, although there was no significant decrease in ratings observed in cultural competence scores for participants who were identified as providing highly socially desirable responses, an interesting trend in that direction was observed. As only 6 out of 40 participants were identified in the high social desirability group, sample size likely reduced the ability to find significant changes. A reliability analysis suggested that these questions did not reliably measure a single construct. Future studies should attempt to revise these questions to more adequately measure the construct, validate the social desirability scale, and further examine the ability of the scenario procedure to reduce the effects of social desirability.

The exploratory analyses conducted using the demographic data revealed some interesting trends. It is unsurprising that participants from ethnic minorities had higher cultural competence scores than Caucasian participants. In response to research detailing the lack of congruence between increasing student diversity and relatively homoeostatic non-diversity of school psychologists, training programs across the country have been attempting to recruit more students from minority groups. The relationship between cultural competence and participants who are fluent in another language, while not surprising, is interesting. Together with the positive relationship between number of cultural courses and cultural competence, these findings are very encouraging. This trend provides evidence that all school psychologists can improve their ability to work with individuals from different backgrounds and moreover, it suggests that those who are highly competent became competent through factors under their own control.

Despite the encouraging results, there were several limitations of the current study. First, the sample was limited in several ways. The majority of the sample was collected using a purposive sampling technique from a single midsized university. Undergraduate participants were collected using a convenience sampling technique. The use of these sampling techniques limits the reliability and validity of the results. Subsequent research should attempt to include multiple training programs and employ the use of a form of probability sampling to obtain more valid and reliable results. It would be useful to include school psychology programs in the sample that do not have a curriculum with a current emphasis on cultural competence.

Second, although these questions, in conjunction with the scenarios, were able to adequately discriminate between groups with different levels of training, the survey was limited to twelve questions in order to reduce the time necessary for participation. The limited number of questions may not be a valid measure the complete construct of cultural competence. Subsequent research should examine the factor structure and validity of the questions in addition to exploring additional questions to provide evidence that it constitutes an adequate measure of the construct. The cross-sectional design of the current study does not provide direct support for the intended purpose of a final instrument; to measure the acquisition of knowledge and skill in cultural competence for school psychology students. Future research should employ a longitudinal design to provide evidence that the scale can accurately track progress over time. Finally, students from the third year of the sampled program were excluded from the current study due to the possibility of bias. Subsequent research should include students from all training

cohorts within programs in order to provide comparison data for students throughout their training.

While the current study provides convincing evidence for initial questions and techniques, this survey may or may not be useful as a functioning measure of the construct of cultural competence. It is important to remember that the cultural competence items in this study are estimates of skills and knowledge and have not been systematically related to actual skills and knowledge. Future research should concentrate on refining questions to create a final instrument that can be validated, tied to skills and knowledge in practice, and used in school psychology programs to track the progress of their students. As there are two previous theses related to the measurement of cultural competence, it would be prudent to move forward with studies designed to assess the validity of these measures.

Recommendations for School Psychology Training Programs

School psychology training programs require evidence of effective cultural competence training in order to become, and remain, accredited through the National Association of School Psychologists (NASP). A majority of programs seem to accomplish this through indirect measures such as providing evidence of implementation of curriculum believed to develop cultural competence, the use of measures designed for counseling graduate students, or through the use of program-developed measures that have yet to be validated. The measure developed in the second half of this study provided promising evidence of the development of a school psychology specific, valid, and reliable measure.

In order to provide strong evidence of training efficacy, school psychology training programs should seek to employ specific and valid measures such as the MACCS. The timing and frequency of use should depend on the purpose of measurement. If the purpose of measurement is to provide evidence of training effectiveness for accreditation purposes, administration once a year might be adequate to show student gains in cultural competence. However, if programs wish to examine their curriculum for strengths and weaknesses in building cultural competence, more frequent administration is advised. Administration at the beginning of every semester, for example, would allow programs to examine which semesters might need more emphasis on cultural competence. The latter is highly recommended for programs who are attempting to train culturally competent practitioners.

Appendix A. Culturally Competent Practitioner Initiative Assessment

*(Eleven questions used in study one are in **<u>bold and underlined</u>**)*

1. General Knowledge

	No Knowledge	Low Knowledge	Medium Knowledge	Medium/High Knowledge	High Knowledge
<u>1.1 Knowledge of my own cultural traditions, attitudes, interaction styles and use of language.</u>	○	○	○	○	○
1.2 Knowledge of how my own cultural traditions, attitudes, etc., differ from or are similar to the cultures of others.	○	○	○	○	○
1.3 Knowledge of the important role language and culture hold for children and families.	○	○	○	○	○
1.4 Knowledge of the impact of the dominant or mainstream culture on shaping research and practice.	○	○	○	○	○
1.5 Knowledge of specific legal issues and precedents related to cultural and linguistic diversity.	○	○	○	○	○

2. Supporting Child Learning

	No Knowledge	Low Knowledge	Medium Knowledge	Medium/High Knowledge	High Knowledge
2.1 Knowledge of how culture impacts the development and learning of each child.	○	○	○	○	○
<u>2.2 Knowledge of effective approaches (curricula, strategies, and resources) for supporting the learning of culturally and linguistically diverse children and families.</u>	○	○	○	○	○
2.3 Knowledge of how to adapt teaching and intervention methods to meet the needs of culturally and linguistically diverse children and families	○	○	○	○	○
2.4 Knowledge of effective approaches for supporting the transitions of culturally and linguistically diverse children between programs (e.g. transition to kindergarten).	○	○	○	○	○
2.5 Knowledge of the educational, mental health and living experiences children and their families bring from their country of origin.	○	○	○	○	○

3. Families

	No Knowledge	Low Knowledge	Medium Knowledge	Medium/High Knowledge	High Knowledge
3.1 Knowledge of the different preferences, priorities and child-rearing practices of families who are culturally and linguistically diverse.	○	○	○	○	○
3.2 Knowledge about practices, supports and resources that are responsive to the cultural and linguistic characteristics and preferences of families and their communities.	○	○	○	○	○
3.3 Knowledge of the importance of helping children to honor, preserve, and celebrate their home language and culture.	○	○	○	○	○

4. Assessment

	No Knowledge	Low Knowledge	Medium Knowledge	Medium/High Knowledge	High Knowledge
4.1 Knowledge about culturally responsive approaches to gathering information from diverse families.	○	○	○	○	○
4.2 Knowledge of non-discriminatory assessment practices and tools.	○	○	○	○	○
4.3 Knowledge of second language acquisition processes and application to the assessment.	○	○	○	○	○
4.4 Knowledge of how to conduct assessments with careful consideration of the current situation, previous interventions, and the learners' cultural and linguistic background.	○	○	○	○	○
4.5 Knowledge of ways to provide verbal and written feedback to families that focuses on the strengths of the child and family, including parent observations and qualitative descriptions and examples of the child's abilities.	○	○	○	○	○

5. Collaboration

	No Knowledge	Low Knowledge	Medium Knowledge	Medium/High Knowledge	High Knowledge
5.1 Knowledge about how to collaborate effectively with team members who have expertise in second language acquisition and/or culturally and linguistically diverse children and families.	○	○	○	○	○
5.2 Knowledge about how to access available school/community resources and supports related to cultural and linguistic diversity.	○	○	○	○	○
5.3 Knowledge of how to engage and support the participation of interpreters, cultural mediators and/or translators.	○	○	○	○	○

6. Research

	No Knowledge	Low Knowledge	Medium Knowledge	Medium/High Knowledge	High Knowledge
6.1 Knowledge about conducting culturally respectful research and program evaluation.	○	○	○	○	○
6.2 Knowledge of how to incorporate culture, acculturation, and language into a workable and ethical methodology.	○	○	○	○	○

7. Child Learning

	No Skill	Low Skill	Medium Skill	Medium/High Skill	High Skill
7.1 Skill in designing strategies for addressing different learning styles of individuals including those from culturally and linguistically diverse backgrounds.	○	○	○	○	○
7.2 Skill in using a variety of effective approaches (curricula, strategies, resources) for supporting the learning of culturally and linguistically diverse children.	○	○	○	○	○
7.3 Skill in finding ways to develop and sustain learning environments that facilitate learning about cultural and linguistic diversity and support positive inter-cultural experiences.	○	○	○	○	○

8. Families

	No Skill	Low Skill	Medium Skill	Medium/High Skill	High Skill
7.1 Skill in using a variety of strategies for eliciting family stories.	❍	❍	❍	❍	❍
7.2 Skill in working with diverse families and team members to develop shared priorities and plans.	❍	❍	❍	❍	❍
7.3 Skill in sharing information with culturally and linguistically diverse families.	❍	❍	❍	❍	❍
7.4 Feel competent and confident in my abilities to work with all diverse families.	❍	❍	❍	❍	❍

9. Assessment

	No Skill	Low Skill	Medium Skill	Medium/High Skill	High Skill
9.1 Skill in collaborating respectfully with families in the assessment process and determine with them how they want to be involved.	❍	❍	❍	❍	❍
9.2 Skill in utilizing effective strategies for asking questions and gathering information about culturally and linguistically diverse children.	❍	❍	❍	❍	❍
9.3 Skill in using assessment results to support an effective process for identifying information about culturally and linguistically diverse children and their families.	❍	❍	❍	❍	❍

10. Collaboration

	No Skill	Low Skill	Medium Skill	Medium/High Skill	High Skill
10.1 Skill in implementing strategies for effectively using available school and community resources related to cultural and linguistic diversity.	❍	❍	❍	❍	❍
10.2 Skill in finding and appropriately using interpreters, translators and cultural mediators.	❍	❍	❍	❍	❍

11. Advocacy

	No Skill	Low Skill	Medium Skill	Medium/High Skill	High Skill
11.1 Skill in advocating for systems change to include culturally and linguistically diverse children in all school activities and programs (e.g. extracurricular, gifted programs).	❍	❍	❍	❍	❍

Appendix B: Demographic sheet

Please answer the following demographic questions.
As with the entire survey, your responses will remain anonymous.

1) Gender

○ Male
○ Female

2) Which group best describes you?

○ College Undergraduate
○ School Psychology Graduate Student - 1st year
○ School Psychology Graduate Student - 2nd year
○ School Psychology Graduate Student - 3rd year
○ Practicing School Psychologist
○ Other (please specify) _____

3) Ethnicity

○ White
○ Black/African American
○ American Indian/Alaskan Native
○ Asian
○ Hawaiian/Pacific Islander
○ Other (please specify) _____
○ Multiracial (please specify) _____
○ Prefer not to indicate.

4) Approximately how many college level courses (or seminars/workshops at a similar level) have you taken that placed a specific emphasis on cultural issues?

○ None
○ 1-2 courses
○ 3-4 courses
○ 5-6 courses
○ 7-8 courses
○ 9-10 courses
○ more than 10 courses

5) I consider myself fluent in a foreign language:

❍ No
❍ Yes (please specify) _____

6) I have studied abroad:

❍ No
❍ Yes (please specify)

_____

7) I have lived abroad:

❍ No
❍ Yes (please specify)

_____

8) English is my first language

❍ Yes
❍ No (what is your first language)

_____

Appendix C : MACCS scenarios

Scenario 1

Jamie is a school psychologist who has been working in the schools for 10 years. Jamie

was born in the United States and was raised in a Jewish household. While she no longer

identifies as Jewish, Jamie values her upbringing and is aware of how being brought up

with the values associated with the culture affect her perceptions of people. In spite of

this awareness, other colleagues often criticize her interactions with students and teachers

who identify as Jewish. Jamie dismisses these criticisms as 'silly.' Jamie receives a

request to evaluate Juan, a middle school student who is an immigrant from Guatemala.

The first thing that she decides to do is observe the instructional environment. Jamie

notes that the teacher has placed Juan at the front of the room and tries to engage him

often, sometimes using Spanish to communicate when it seems English is insufficient.

Jamie notes that placing Juan up front is a good idea, but is unsure about the teacher

communicating in Spanish. Following this observation, she begins to prepare for the

evaluation process. Jamie remembers and makes a note that families from Guatemala are

often perceived as uninvolved because they wish to defer to the expertise of school

personnel in school decisions but she cannot recall many other cultural differences.

Jamie contacts the family directly and asks how involved they wish to be in the process.

When choosing which assessment tools to use, she is careful to consider the amount of

cultural knowledge required for completion of each instrument. Jamie decides to use the

Differential Ability Scale – Section Edition because it is familiar. Jamie also remembers

learning that it has a lower cultural knowledge requirement than some of the other

cognitive ability evaluations. Once the evaluations are selected, although she does know

some Spanish, Jamie remembers at the last minute to call and secure the services of a

Spanish interpreter for testing. Jamie has used interpreters before but decides not to meet

with the interpreter before the evaluation. At the eligibility meeting, Jamie uses the same

interpreter that assisted with the evaluation. When sharing information with the family,

Jamie is very careful to explain that the school will do everything it can to help Juan. She

knows that families from Guatemala sometimes view Learning Disabilities and Mental

Disorders as extremely negative and potentially embarrassing. At the conclusion of this

evaluation, Jamie decides that the school system should implement a system-wide

program to support immigrant students by including second-language instruction in all

classrooms. Jamie knows most of the steps in implementing such a change and gets

many people involved; however, she forgets some of the final steps and is unsuccessful in

implementing the change. Jamie conducts a research study to examine the impact of such

a program on both native students and immigrant students and is able to incorporate a

good deal of cultural aspects in the research. Eventually, with this research and more

support, she is able to implement the change.

Scenario 2

Taylor is a school psychologist who has been working in the schools for 10 years. Taylor was born in Mexico but moved to the U.S. when she was in middle school. Taylor is often asked how the experience of being raised in another country affects her job. Taylor responds by stating that aside from the language there isn't much difference between the two countries. Taylor receives a request to evaluate Juan, a middle school student who is an immigrant from Guatemala. The first thing that she decides to do is observe the instructional environment. Taylor notes that the teacher has placed Juan at the front of the room and tries to engage him often, sometimes using Spanish to communicate when it seems English is insufficient. Taylor notes that placing Juan up front might be a good idea, but is unsure about it and is also unsure about the teacher communicating in Spanish. Following this observation, Taylor begins to prepare for the evaluation process. Taylor decides that aside from language, the cultural aspects wouldn't affect the evaluation process. Taylor decides to use the Wechsler Intelligence Scale for Children – fourth edition because she is accustomed to it and she is pretty sure that language will not affect the scores much. Once the evaluations are selected, Taylor decides to forgo the use of a translator because she already knows Spanish. However, the director of special education tells Taylor to use an interpreter anyway due to possible dialect and cultural issues. Taylor has a vague idea of how to obtain a translator; however, she needs help to find an appropriate person. Taylor decides not to meet with the interpreter before the evaluation. At the eligibility meeting, Taylor does not use an interpreter. She concludes that Juan's family probably has the same positive views as she does of the special education system. At the conclusion of this evaluation, Taylor decides that the school

system could benefit from a system-wide program to support immigrant students by including second-language instruction in all classrooms. Taylor only knows some of the initial steps in implementing such a change and doesn't elicit much outside help. She is unsuccessful in implementing the change. Taylor conducts a research study to examine the impact of such a program on both native students and immigrant students but doesn't include many aspects of cultural sensitivity in the research. She includes a great deal about language issues but ignores culture. She is unsuccessful in using her research to support her cause.

Appendix D: School psychology social desirability scale

Please respond to the following questions.
If the statement is true for you, mark the answer that says true. If the statement is false for you, mark the answer that says false.

	True	*False*
1) **I always treat persons from other cultural backgrounds in a way that will not offend them.**	❍	❍
2) *Cultural issues are a source of stress for me in my work.*	❍	❍
3) *** I admit that I have some cultural biases.**	❍	❍
4) **I am familiar with the gold standard assessment instrument - the Culture-Free Inventory of Cognitive Abilities and Achievement (CICA).**	❍	❍
5) *I feel that I am always learning about new cultural issues in delivering psychological services.*	❍	❍
6) ***I will never be able to accommodate the needs of all family practices on psychological evaluations.**	❍	❍
7) ***I would never let my own cultural beliefs affect my opinion of a student.**	❍	❍

Scoring:

- Items that are **bolded** are scored items
     o (True = 1 point, False = 0)

- Items with an **bolded** with asterisk (*) are reversed scored
     o (True = 0 point, False = 1)

- Items that are *Italicized* are unscored items

Appendix E: Crowne-Marlowe social desirability scale – short form C

Please answer the following true/false questions. These questions are asking about your personal opinions. There are no right or wrong answers so please answer as honestly as possible.

	True (1)	False (2)
1) It is sometimes hard for me to go on with my work if I am not encouraged.	○	○
2) I sometimes feel resentful when I don't get my way.	○	○
3) On a few occasions, I have given up doing something because I thought too little of my ability.	○	○
4) There have been times when I felt like rebelling against people in authority even though I knew they were right.	○	○
5) No matter who I'm talking to, I'm always a good listener.	○	○
6) There have been occasions when I took advantage of someone.	○	○
7) I'm always willing to admit it when I make a mistake.	○	○
8) I sometimes try to get even rather than forgive and forget.	○	○
9) I am always courteous, even to people who are disagreeable.	○	○
10) I have never been irked when people expressed ideas very different from my own.	○	○
11) There have times when I was quite jealous of the good fortune of others.	○	○
12) I am sometimes irritated by people who ask favors of me.	○	○
13) I have never deliberately said something that hurt someone's feelings.	○	○

Scoring:

- All items are scored
  - o (True = 0 points, False = 1 point)

- Items that are **bolded** are reverse scored items
  - o (True = 1 point, False = 0 points)

Appendix F: Consent form

Cover Letter/Consent Form

<u>Identification of Investigators & Purpose of Study</u>
You are being asked to participate in a research study conducted by Nicholas A. Curtis, M.A. from James Madison University. The purpose of this study is to investigate the usefulness of a new psychological measure. This study will contribute to the researcher's completion of his Educational Specialist level thesis.

<u>Research Procedures</u>
This study consists of a survey that will be administered to individual participants in person. You will be asked to provide answers to a series of questions related to culture.

<u>Time Required</u>
Participation in this study will require 15 – 20 minutes of your time.

<u>Risks</u> The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life).

<u>Benefits</u>
Potential benefits from participation in this study include contributing to the program development of the school psychology program at James Madison University.

<u>Confidentiality</u>
The results of this research will be presented in a thesis that will be stored in Carrier library and will also be presented at a national conference. While individual responses are obtained and recorded anonymously and kept in the strictest confidence, aggregate data will be presented representing averages or generalizations about the responses as a whole. No identifiable information will be collected from the participant and no identifiable responses will be presented in the final form of this study. All data will be stored in a secure location accessible only to the researcher. The researcher retains the right to use and publish non-identifiable data. When data have been exhausted of their utility to the study, all records belonging to undergraduate participants will be destroyed. Records belonging to graduate students will be used indefinitely to inform the school psychology program of the progress of its students.

<u>Participation & Withdrawal</u>
Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind. However, once your responses have been submitted and anonymously recorded you will not be able to withdraw from the study.

<u>Questions about the Study</u>
If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

Nicholas A. Curtis, M.A.	Patricia Warner, Ph.D.
Graduate Psychology	Graduate Psychology
James Madison University	James Madison University
curtisna@dukes.jmu.edu	warnerpj@jmu.edu
540.568.3358	

<u>Questions about Your Rights as a Research Subject</u>
Dr. David Cockley, Chair, Institutional Review Board   James Madison University   (540) 568-2834   cocklede@jmu.edu

<u>Giving of Consent</u>

I have been given the opportunity to ask questions about this study. I have read this consent and I understand what is being requested of me as a participant in this study. I certify that I am at least 18 years of age. By signing below, and completing and submitting this anonymous survey, I am consenting to participate in this research.

<u>Nicholas A. Curtis, M.A.</u>   <u>1/12/13</u>
Name of Researcher (Printed)   Date

_____   _____

Signature of Participant   Date

Appendix G: New cultural competence questions developed for study 2

	Little Practical Knowledge	Some Practical Knowledge	Average Practical Knowledge	Greater than Average Practical Knowledge	Advanced Practical Knowledge
Knowledge of the influence of culture and language on assessment and ways of adapting assessment to reduce those influences.	❍	❍	❍	❍	❍
Knowledge of the competencies needed by interpreters.	❍	❍	❍	❍	❍
Knowledge of the second language acquisition process	❍	❍	❍	❍	❍
Knowledge of factors that can influence consultation	❍	❍	❍	❍	❍
Knowledge of differences between counselors and clients that can impact a counseling relationship	❍	❍	❍	❍	❍
Knowledge of sociocultural factors that could impact data analysis and interpretation of data	❍	❍	❍	❍	❍

	Little Practical Skill	Some Practical Skill	Average Practical Skill	Greater than Average Practical Skill	Advanced Practical Skill
Skill in assessing students effectively when using an interpreter	❍	❍	❍	❍	❍
Skill in using assessment to make recommendations that are sensitive to culture and language	❍	❍	❍	❍	❍
Skill in communicating to teachers that teaching methods may be inappropriate for students from different cultures	❍	❍	❍	❍	❍
Skill in selecting helping styles and methods that are appropriate for different cultures	❍	❍	❍	❍	❍
Skill in finding and interpreting current research on best practices for providing mental health services	❍	❍	❍	❍	❍
Skill in using appropriate communication when communicating with culturally and linguistically diverse individuals.	❍	❍	❍	❍	❍

Appendix H: New scenarios paired with questions for study 2

<u>Please read the following scenario:</u>

Juanye Alarcon, an eight year old student at Apple Elementary, was referred for a full psycho-educational evaluation in the middle of the school year. Juanye and his Spanish-speaking parents moved from Guatemala at the beginning of the year and teachers have expressed concerns about his academic progress. He rarely speaks in class and the teachers believe that he has limited English proficiency.

You will now be asked to respond to 12 prompts. For each prompt, **<u>you will read additional information about the situation and how each of two school psychologists (Mrs. Serna and Mrs. Alvarez) responded</u>**. You will be asked to rate each school psychologist on their response. You will also be asked to rate how you would respond to each situation.

A core cognitive assessment needs to be selected to provide an estimate of cognitive ability:

<u>Mrs. Serna</u>

Decides to use the DAS-II cognitive battery. In order to account for the influence of language, she decides to use the Special Nonverbal Index.

<u>Mrs. Alvarez</u>

Decides to use a cross-battery approach and the cultural-linguistic matrix, which allows her to select the subtests, according to the approach, with the least amount of cultural and language influence

Rate the psychologists, on their practical knowledge of the influence of culture/language on assessment and the best way of adapting assessment to reduce such influences. Then, rate your own level of practical knowledge in this area.

(Practical knowledge is defined as information that could be used, in an actual situation, right now.)

	Little Practical Knowledge	Some Practical Knowledge	Average Practical Knowledge	Greater than Average Practical Knowledge	Advanced Practical Knowledge
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

In response to the possibility of culture and language becoming an issue in the assessment, the psychologists must select an interpreter/translator:

Mrs. Serna

Is careful to select an interpreter who is fluent in Spanish. She is careful to note the theoretical perspective held by the interpreter's training program to make sure that it matches the type of Spanish spoken by the Alarcon family

Mrs. Alvarez

Is careful to select an interpreter fluent in Spanish who was trained in the same theoretical perspective as the Alarcon family. In addition, she is careful to select an interpreter who knows the assessment process and terminology and is able to adapt to several translation techniques.

Rate the psychologists, on their practical knowledge of the competencies needed by interpreters. Then, rate your own level of practical knowledge in this area.

(Practical knowledge is defined as information that could be used, in an actual situation, right now.)

	Little Practical Knowledge	Some Practical Knowledge	Average Practical Knowledge	Greater than Average Practical Knowledge	Advanced Practical Knowledge
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

After finding an interpreter, the psychologist begins the assessment:

Mrs. Serna

Meets briefly with the interpreter before the assessment to discuss the format of the session. During the assessment, she is careful to avoid unnecessarily complex terms that may be difficult to translate. She completes her assessment with the assistance of the interpreter.

Mrs. Alvarez

Meets with the interpreter before the assessment to discuss the purpose of the session, the format of the session, and specific aspects of the assessment. During the assessment, she is careful to avoid unnecessarily complex terms. She is careful to direct all questions or statements directly to the students.

Rate the psychologists, on their practical skill in assessing students effectively when using an interpreter. The rate your own level of practical skill in this area

Practical skill is defined as a skill that you have been trained to perform that could be used, in an actual situation, right now.

	Little Practical Skill	Some Practical Skill	Average Practical Skill	Greater than Average Practical Skill	Advanced Practical Skill
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

Once the psychologists finish their assessment, they begin calculating the scores based on their assessments:

<u>Mrs. Serna</u>

Considers the scores as probably valid due to her efforts to reduce the influence of language and culture.

<u>Mrs. Alvarez</u>

Considers the scores as likely underestimating the student's true cognitive abilities due to the standardization process used with many assessments.

Rate the psychologists, on their practical knowledge of sociocultural factors that could impact data analysis and interpretation of data.   Then, rate your own level of practical knowledge in this area.

 (Practical knowledge is defined as information that could be used, in an actual situation, right now.)

	Little Practical Knowledge	Some Practical Knowledge	Average Practical Knowledge	Greater than Average Practical Knowledge	Advanced Practical Knowledge
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

The two school psychologists make different recommendations based on their assessment:

Mrs. Serna

Recommends that Juanye be found eligible for services based on the results of the assessments. She notes that his assessment results may be a little lower that they might be without the influence of culture and language, but not by much. She recommends that he be moved to the front of the room, and reinforced for trying to answer questions during class.

Mrs. Alvarez

Recommends that Juanye's deficits may be due to a mismatch between his culture and the educational environment. She notes that his assessment results may be a little lower than they would be if we could eliminate the effect of culture and language. She recommends that he be given time to acculturate and learn the language with additional supports that should be discussed with the family.

Rate the psychologists, on their practical skill in using assessment to make recommendations that are sensitive to culture and language.

Practical skill is defined as a skill that you have been trained to perform that could be used, in an actual situation, right now.

	Little Practical Skill	Some Practical Skill	Average Practical Skill	Greater than Average Practical Skill	Advanced Practical Skill
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

The psychologists use their knowledge of the second language acquisition process to make additional recommendations.

Mrs. Serna

Recommends that Juanye be encouraged to speak more often in class. She thinks that by staying silent, Juanye is missing out on many opportunities for practicing the language.

Mrs. Alvarez

Recommends that Juanye not be forced to speak until he is ready to do so. She states that he is likely in the pre-production stage of language and is simply listening to build his vocabulary before he begins to use the language.

Rate the psychologists, on their practical knowledge of the second language acquisition process. Then, rate your own level of practical knowledge in this area.

(Practical knowledge is defined as information that could be used, in an actual situation, right now.)

	Little Practical Knowledge	Some Practical Knowledge	Average Practical Knowledge	Greater than Average Practical Knowledge	Advanced Practical Knowledge
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

One recommendation that both psychologists make is consultation with the teacher, administration, and parents to improve their skills:

Mrs. Serna

Notes that there might be some issues in consulting with the teachers and parents. She believes that the teachers and administrators want to help and will not be much of an issue. She notes that the parents probably need help bridging the gap between home and school in terms of academic expectations.

Mrs. Alvarez

Notes that there might be some issues in consulting with the teachers and parents. She makes a point to emphasize to teachers that families generally do wish to help their children; they are just unsure how to do so. She also notes that the parents likely need help gaining the specific knowledge of how to help. She is aware that some parents will have had negative school experiences that need to be addressed. She does not think that administrators need help.

Rate the psychologists, on their practical knowledge of the factors that can influence consultation. Then, rate your own level of practical knowledge in this area.

(Practical knowledge is defined as information that could be used, in an actual situation, right now.)

	Little Practical Knowledge	Some Practical Knowledge	Average Practical Knowledge	Greater than Average Practical Knowledge	Advanced Practical Knowledge
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

Another recommendation made by both psychologists is that the student participate in counseling due to the possibility of depression:

Mrs. Serna

Believes that as a woman of Hispanic descent, she will not have much trouble relating to Juanye in a counseling relationship. She is aware of the potential influence of being a female and Juanye being a male.

Mrs. Alvarez

Believes, that although she is a woman of Hispanic descent, she is not as familiar with Guatemalan culture as Juanye, and she will need to work to gain more understanding if she is to connect with him. She is also aware of the potential influence of being a female and Juanye being a male.

Rate the psychologists, on their practical knowledge of differences between counselors and clients that can impact a counseling relationship   Then, rate your own level of practical knowledge in this area.

(Practical knowledge is defined as information that could be used, in an actual situation, right now.)

	Little Practical Knowledge	Some Practical Knowledge	Average Practical Knowledge	Greater than Average Practical Knowledge	Advanced Practical Knowledge
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

In addition to what they already know about service delivery, the psychologists also consult the research literature:

Mrs. Serna

Using the websites for her state and national organizations and finds a few articles detailing some new ideas for her to try with Juanye.

Mrs. Alvarez

Uses her state and national organizations as a starting point and finds some new ideas for Juanye. She then uses PsycInfo, a service paid for by her school, to find journal articles describing new research on even more new ideas.

Rate the psychologists, on their practical skill in finding and interpreting current research on best practices for providing mental health services. Then, rate your own level of practical knowledge in this area.

Practical skill is defined as a skill that you have been trained to perform that could be used, in an actual situation, right now.

	Little Practical Skill	Some Practical Skill	Average Practical Skill	Greater than Average Practical Skill	Advanced Practical Skill
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

During the course of the counseling, the psychologists select different styles of helping:

Mrs. Serna

Was trained in a client-centered approach. She believes that it will be the best option for Juanye because she is very familiar with it and has seen it work before. She also believes that this approach is used in some training programs in Guatemala.

Mrs. Alvarez

Was trained in a cognitive-behavioral approach. She believes that it may work for Juanye; however, she is unsure if this type of approach is appropriate in his culture. She decides that she will evaluate the effectiveness of this approach and change the approach if necessary.

Rate the psychologists, on their practical skill in selecting helping styles and methods that are appropriate for different cultures. Then, rate your own level of practical skill in this area.

Practical skill is defined as a skill that you have been trained to perform that could be used, in an actual situation, right now.

	Little Practical Skill	Some Practical Skill	Average Practical Skill	Greater than Average Practical Skill	Advanced Practical Skill
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

The school psychologists then communicate their results and recommendations to teachers:

Mrs. Serna

Tells Juanye's teachers that they should change their teaching styles to match Juanye's needs. She gets some resistance from the teachers; however, she is able to argue with the teachers until they agree to change some of their methods to help Juanye.

Mrs. Alvarez

Tells Juanye's teachers that many students from different cultures often have difficulty because of the differences between the teaching styles of American teachers and their old classrooms. She suggests that the teachers should consider changing some of their methods to help Juanye. She gets resistance from only one teacher and is able to argue with the one teacher until she agrees.

Rate the psychologists, on their practical skill in communicating to teachers that the methods they use in the classroom may be inappropriate for students from different cultures.

Practical skill is defined as a skill that you have been trained to perform that could be used, in an actual situation, right now.

	Little Practical Skill	Some Practical Skill	Average Practical Skill	Greater than Average Practical Skill	Advanced Practical Skill
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

The school psychologists then communicate their results and recommendations to parents. Although an interpreter had been arranged, an emergency resulted in none being available:

Mrs. Serna

Goes over her results and recommendations as she usually would; however, she is careful to stop after every section to see if the parents have any questions or would like clarification.

Mrs. Alvarez

Goes over her results and recommendations as she usually would; however, she uses key words in Spanish that she learned to help make the parents more comfortable. She is also careful to use many more visual aids and physical gestures to help the parents understand the results. She also stops after every section to see if the parents have any questions or would like clarification.

Rate the psychologists, on their practical skill in using appropriate communication with culturally and linguistically diverse individuals.

Practical skill is defined as a skill that you have been trained to perform that could be used, in an actual situation, right now.

	Little Practical Skill	Some Practical Skill	Average Practical Skill	Greater than Average Practical Skill	Advanced Practical Skill
Mrs. Serna	○	○	○	○	○
Mrs. Alvarez	○	○	○	○	○
Yourself	○	○	○	○	○

Appendix I: Instructions for school psychologist participants

Thank you for agreeing to participate in this research study. In this packet, you will find several folders. Please open only one folder at a time and replace each item in its folder before continuing.

1) **Open the folder marked with a 1**
   a. Please read the cover letter and sign it if you agree to participate
   b. Please look at the **2-sided** demographic form
      i. Please answer the questions on the form, <u>front and back</u>
      ii. Place both of the forms back in the folder provided and seal it

2) **Open the folder marked with a 2**
   a. Please read and complete the **2-sided page** that has a bold number 2 in the top left corner
      i. Be sure to fill out both the <u>front and back</u>
      ii. Place the form back in folder provided and seal it

3) **Please <u>do something else for a period of one and one-half hours (1 ½ hours)</u>**
   a. **You can do whatever you need to do (work on reports, go to a meeting, etc.)**

4) **<u>After 1 ½ hours</u>, open the folder marked with a 3**
   a. please complete the packet of questions labeled with a bold number 3 in the top left corner
      i. Please complete all pages, <u>front and back</u>
      ii. Please do not look at previous forms before, during, or after completing this version of the form
      iii. Place the forms back in the folder provided and seal it

5) Please be sure that all folders have been completed, place them in the return envelope provided,   and send them back to the examiner at the address given on the folder.

Thank you again for your participation

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