

DEVELOPMENT AND INITIAL VALIDATION OF A MEASURE OF  
MULTICULTURAL COMPETENCE STAGE OF CHANGE

by

MAYA ELIN O'NEIL

A DISSERTATION

Presented to the Department of Counseling Psychology  
and Human Services  
and the Graduate School of the University of Oregon  
in partial fulfillment of the requirements  
for the degree of  
Doctor of Philosophy

September 2010

“Development and Initial Validation of a Measure of Multicultural Competence Stage of Change,” a dissertation prepared by Maya Elin O’Neil in partial fulfillment of the requirements for the Doctor of Philosophy degree in the Department of Counseling Psychology and Human Services. This dissertation has been approved and accepted by:

---

Dr. Ellen McWhirter, Chair of the Examining Committee

---

Date

Committee in Charge:      Dr. Ellen McWhirter, Chair  
   Dr. Krista Chronister  
   Dr. Joseph Stevens  
   Dr. Mia Tuan

Accepted by:

---

Dean of the Graduate School

© 2010 Maya Elin O'Neil

## An Abstract of the Dissertation of

Maya Elin O'Neil for the degree of Doctor of Philosophy  
in the Department of Counseling Psychology and Human Services

to be taken September 2010

Title: DEVELOPMENT AND INITIAL VALIDATION OF A MEASURE OF  
MULTICULTURAL COMPETENCE STAGE OF CHANGE

Approved: \_\_\_\_\_  
Dr. Ellen McWhirter

Recent mandates for increased multicultural competence training in a variety of fields have stimulated a growing need for reliable and valid multicultural competence assessment instruments. Existing instruments have demonstrated varying levels of reliability and validity in assessing multicultural knowledge, awareness, and skills and have been critiqued for limitations in scope, applicability, and ability to capture the developmental nature of multicultural competence. In an attempt to address limitations of existing measures, this study investigated an original measure of multicultural competence utilizing a stages of change framework. The stages of change model has been applied to many types of behavior change but not yet to the construct of multicultural competence. The participants in this study were undergraduate and graduate students in human services (assessed one time), graduate students in education (assessed before and after participation in a required diversity course), and student services professionals

(assessed before and after participation in a multicultural training). Findings suggest that the proposed measure, the Multicultural Competence Stage of Change Scale (MCSCS), has a six factor structure corresponding to the five stages of change and one social acceptability factor. The reliability of the measure was adequate, with values of Cronbach's  $\alpha$  above .70 for 4 out of 6 subscales and .82 for the full scale score. The validity of the MCSCS was demonstrated by significant correlations with the Multicultural Awareness, Knowledge, and Skills Scale, Counselor Edition, Revised. Results indicate that student affairs professionals scored significantly higher than education students on the Pre-Contemplation and Preparation subscales and that pre-test scores were significantly lower than post-test scores on the Pre-Contemplation, Contemplation, and Action subscales. This study provides evidence that the MCSCS is a promising measure of multicultural competence stage of change. A discussion of the findings includes strengths of the MCSCS, limitations of this study, future research directions, recommended measure revisions, and applications of the MCSCS to clinical and vocational settings.

## CURRICULUM VITAE

NAME OF AUTHOR: Maya Elin O'Neil

## GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene, OR.  
Portland State University, Portland, OR.  
Portland Community College, Portland, OR.  
Smith College, Northampton, MA.

## DEGREES AWARDED:

Doctor of Philosophy in Counseling Psychology, 2010, University of Oregon  
Master of Science in Psychology, 2001, University of Oregon  
Bachelor of Science in Environmental Studies, Fine and Applied Arts, and  
Psychology, 2000, University of Oregon

## PROFESSIONAL EXPERIENCE:

Pre-doctoral Psychology Intern, Portland Veterans Affairs Medical Center, 2009-present.

Research Training Fellow, National Institute of Mental Health, 2008-present.

Data Analyst, Dynamic Measurement Group, 2007-present.

Statistics and Research Consultant, Center on Diversity and Community, 2006-present.

Instructor, Department of Counseling Psychology, 2005-2008.

Practicum Child and Family Therapist, Child and Family Center, 2005-2006.

Statistics, Survey, and Research Design Consultant, Self-Employment, 2004-present.

Diversity Trainer, University of Oregon College of Education, 2004-2005.

Practicum Group and Individual Therapist, Eugene Veterans Affairs Clinic, 2004-2005.

Instructor, Department of Family and Human Services, 2004-2005.

Instructor/Teaching Assistant, Department of Educational Leadership, 2004-2007.

Pre-Practicum Intern, Sacred Heart Medical Center Psychiatric Unit, 2004.

Human Services Supervisor, Department of Family and Human Services, 2003-2006.

Child and Family Therapist, OSLC Community Programs, 2003-present.

Graduate Teaching Assistant, Department of Family and Human Services, 2003-2005.

Assessor, Oregon Social Learning Center, 2003.

Instructor, Lane Community College, 2002.

Mental Health Specialist, Options Counseling Services, 2001-2003.

Graduate Teaching Assistant, Department of Psychology, 2000-2001.

Practicum Assessor, Child and Family Center, 2000.

Assessor/Interviewer, Oregon Research Institute, 2000-2001.

Research Assistant, Department of Psychology, 1999-2001.

Volunteer Coordinator, Project Saferide, 1999-2000.

Dispatcher, Project Saferide, 1999-2000.

Peer Advisor, Department of Environmental Studies, 1998-2000.

#### GRANTS, AWARDS AND HONORS:

NIMH Research Training Fellowship in Development and Psychopathology,  
University of Oregon Child and Family Center, 2008-2009

Paul and Helen Weiser Scholarship, University of Oregon, 2008-2009

Thomas W. Vollmer Scholarship, University of Oregon College of Education,  
2007-2008

Paul and Helen Weiser Scholarship, University of Oregon, 2007-2008

Jean Twohig Scholarship, University of Oregon College of Education, 2006-2007

Starr Scholarship, University of Oregon, 2006-2007

Graduate Service Award, University of Oregon, 2005

George A Bean Memorial Scholarship, University of Oregon, 2005

Commitment to Community Award, University of Oregon, 2004

Continuous Improvement Coordination Committee Reading Group Award,  
University of Oregon Center on Diversity and Community, 2004

LGBTQ Research Institute Reading Group Award, University of Oregon Center  
on Diversity and Community, 2004

Graduate Research Award, University of Oregon Center on Diversity and  
Community, 2003

Magna Cum Laude, University of Oregon, 2000

Departmental Honors, University of Oregon Department of Environmental  
Studies, 2000

Departmental Standard Bearer, University of Oregon Department of  
Environmental Studies, 2000

Peer Advising Award, University of Oregon Department of Environmental  
Studies, 2000

Psi Chi Honor Society, University of Oregon Department of Psychology, 1999

Dean's List, University of Oregon, 1998-2000

President's List, Portland Community College, 1997-1998



## PUBLICATIONS:

- Cerezo, A., O'Neil, M. E., & McWhirter, B. (In Press). Counseling Latina/o students from an ecological perspective: Working with Peter. *Journal of College Counseling*.
- Joyce, J. A., O'Neil, M. E., Stormshak, E., McWhirter, E. H., & Dishion T. (Under Review). Peer associations and coping: The mediating role of ethnic identity for urban, African-American adolescents.
- Joyce, J. A., O'Neil, M. E., & McWhirter, E. H. (In Press). Aspirations, inspirations, and obstacles: LGBTQ youth and processes of career development. In C. Bertram (Ed.) *Beyond progress, beyond marginalization: LGBTQ youth in and out of Schools*.
- Linville, D., O'Neil, M. E., & Huebner, A. (Under Review). Depression and positive adult support: The mediating role of disordered eating behaviors.
- Linville, D. & O'Neil, M. E. (2008). Family therapy with same-sex parents and their children. *Family Therapy Magazine*, 36-42.
- Metheny, J., McWhirter, E. H., & O'Neil, M. E. (2008). Measuring perceived teacher support and its influence on adolescent career development. *Journal of Career Assessment*, 16(2), 218-237.
- O'Neil, M. E., Cerezo, A., & McWhirter, E. H. (2008). Transgender identity and gender variance in vocational psychology: Recommendations for practice, social advocacy, and research. *Journal of Career Development*, 34(3), 286-308.
- Cerezo, A., Burt, M., O'Neil, M., Serdarevic, M., & Marchand, E. (2007). Bridging personal history and graduate training in a definition of critical psychology. *International Journal of Critical Psychology*, 19, 59-66.

## ACKNOWLEDGMENTS

I would like to thank University of Oregon Center on Diversity and Community and College of Education faculty, staff, and students for assistance with and participation in this study. Center on Diversity and Community faculty and staff including Annie Bentz, Chris Esparza, Robin Holmes, Tim McMahon, Kimi Mojica, Tina Schmich, John Shuford, and Mia Tuan provided essential contributions to the creation of the measure used in this study. I would particularly like to thank three of my colleagues, Alisia Caban, Alison Cerezo, and Cynthia Medina, for their assistance with this research project. I would also like to thank my committee members, Dr. Krista Chronister, Dr. Mia Tuan, and Dr. Joseph Stevens, for their mentorship. Special thanks are due to my committee chair and advisor, Dr. Ellen Hawley McWhirter, for her dedication to this research project and to my success as a doctoral student. Finally, I would like to thank Deanna Linville and Dana Berglund for their unending support.

## TABLE OF CONTENTS

Chapter	Page
I. LITERATURE REVIEW .....	1
Definitions .....	3
Training and Educational Efforts to Increase Multicultural Competence .....	7
Knowledge, Awareness, and Skills Training Components.....	8
Assessment of Multicultural Competence .....	10
Multicultural Awareness, Knowledge, Skills Scale (MAKSS) .....	11
Multicultural Counseling Inventory(MCI).....	12
Multicultural Counseling Awareness Scale, Form B (MCAS:B).....	12
Cross Cultural Counseling Inventory, Revised (CCCI-R).....	13
Limitations of Assessing Multicultural Knowledge, Awareness, and Skills.....	21
Scope.....	21
Applicability.....	21
Developmental Nature of Multicultural Competence .....	22
Stages of Change.....	23
Stages of Change Model .....	24
Assessment of the Stages of Change Model .....	26
Applications of the Stages of Change Model to Multicultural Competence Research .....	27
Stages of Change Applied to Multicultural Competence Behavior .....	29
Pre-Contemplation .....	29
Contemplation.....	30
Preparation .....	31
Action.....	31
Maintenance .....	32
Creating a Multicultural Competence Assessment Tool.....	33
Summary .....	37

Chapter	Page
Purpose of Study .....	38
II. METHOD .....	41
Participants.....	41
Procedures.....	42
Measures .....	45
Demographic Questionnaire (DQ) .....	45
Recent Change Questionnaire (RCQ) .....	45
Multicultural Awareness, Knowledge, Skills Scale, Counselor Edition, Revised (MAKSS-CE-R).....	45
Multicultural Competence Stage of Change Scale (MCSCS).....	47
III. RESULTS .....	49
Analysis.....	49
Exploratory Factor Analysis (EFA).....	50
Descriptive Statistics.....	63
Group Comparisons .....	75
IV. DISCUSSION.....	81
Factor Structure of the MCSCS .....	81
Reliability of the MCSCS .....	84
Validity of the MCSCS .....	85
Group Differences in MCSCS score.....	87
MCSCS Sensitivity to Change Over Time .....	89
Limitations .....	91
Future Directions for Research .....	93
Implications for Practice.....	95
Summary .....	98
APPENDICES .....	100
A. INTRODUCTORY LETTER: STUDENT AFFAIRS .....	100
B. FIRST LETTER OF INFORMATION: STUDENT AFFAIRS .....	101
C. SECOND LETTER OF INFORMATION: STUDENT AFFAIRS.....	103
D. SECOND EMAIL TO STUDENT AFFAIRS PARTICIPANTS.....	105
E. THIRD EMAIL TO STUDENT AFFAIRS PARTICIPANTS .....	106

Chapter	Page
F. EXTRA CREDIT INFORMATION FOR EDLD PARTICIPANTS.....	107
G. FIRST EMAIL TO EDLD PARTICIPANTS .....	108
H. FIRST LETTER OF INFORMATION: EDLD PARTICIPANTS.....	109
I. SECOND LETTER OF INFORMATION: EDLD PARTICIPANTS .....	111
J. SECOND EMAIL TO EDLD PARTICIPANTS .....	113
K. EMAIL TO CPHS PARTICIPANTS .....	114
L. LETTER OF INFORMATION: CPHS PARTICIPANTS.....	115
M. DEMOGRAPHIC QUESTIONNAIRE .....	117
N. RECENT CHANGE QUESTIONNAIRE .....	118
O. MULTICULTURAL AWARENESS, KNOWLEDGE, SKILLS SCALE.....	119
P. MULTICULTURAL COMPETENCE STAGE OF CHANGE SCALE.....	123
REFERENCES .....	126

## LIST OF TABLES

Table	Page
1. Strengths and Limitations of Current Multicultural Competence Assessment Tools .....	15
2. Items, Pattern Coefficients, and Factor Labels .....	52
3. Item Descriptive Statistics and Communalities .....	56
4. Factor Correlation Matrix .....	62
5. Descriptive Statistics and Reliability Coefficients for Pre- and Post-Test Total, Subscale, and Average Scores .....	65
6. Correlations Among Measures and Subscales by Time of Administration .....	70
7. Standardized Discriminant Function Coefficients (SDFCs) and Structure Coefficients (SCs) for Each Subscale by Time and Context .....	78

## CHAPTER I

### LITERATURE REVIEW

The American Psychological Association (APA) has repeatedly mandated that psychologists should strive to increase their competence to work with culturally diverse populations (e.g., APA, 1990, 2000, & 2003). Reasons for these mandates include changing racial/ethnic demographics, growing awareness of the salience of other multicultural characteristics (e.g., sexual orientation, gender identity, and ability/disability status), an increasingly global or international economy, desire for improvements in therapeutic outcomes for diverse clients, recognition of the low rates of mental health services utilization by minorities, professional ethics, political correctness, guilt, paternalistic attitudes, an interest in diversity, welfare of society, legal motivations, and humanitarianism (APA, 2003; APA, 2002; Constantine, 2002a; Fassinger, 2008; Fouad & Arredondo, 2007; Hays, 2008; Ridley, Mendoza, & Kanitz, 1994). As a result of such mandates for increased multicultural competence, there has been a growing need for reliable and valid multicultural competence assessment instruments.

Psychology training programs often emphasize multicultural training as a central feature of undergraduate, graduate, and professional curricula (Allison, Echemendia, Crawford, & Robinson, 1996; Fouad & Arredondo, 2007; Ridley, Mendoza, & Kanitz, 1994). In addition to psychology training programs, most professional organizations related to human services and helping professions emphasize diversity or multicultural

competence as fundamental components of their ethical codes (e.g., American Counseling Association, 2005; American Association for Marriage and Family Therapy, n.d.; National Association of Social Workers, n.d.; National Education Association, n.d.; National Organization of Human Services, n.d.).

Psychologists' multicultural competence impacts all types of applied work, such as work with clients from diverse multicultural backgrounds, the creation of public policy, the conduct of research, social justice work, and the implementation of trainings and educational programs (APA, 2003; APA, 2004; Constantine, 2002a; Fassinger, 2008). Multicultural competence research conducted by psychologists often has value for other fields because multicultural competence can affect the population more generally in terms of discrimination, stereotypes, prejudice, and oppression experienced in everyday settings (e.g., Fassinger, 2008). Whether practically, financially, ethically, or professionally driven, it is clear that psychologists have a mandate to emphasize multicultural competence in all aspects of the profession. As stated by Ridley, Mendoza, and Kanitz (1994), "...the issue of whether or not to include some form of MCT [Multicultural Counseling Training] in graduate training is no longer open for debate" (p. 227), and it is clear that this mandate extends far beyond graduate training in psychology.

Identifying best practices in multicultural competence training, and measuring individual change in competence, require the ability to assess multicultural competence in a manner sensitive to change. There are many ongoing efforts to develop and refine such measures. However, the assessment tools commonly used to assess multicultural competence have limitations (e.g., Bernal & Padilla, 1982; Bernal & Castro, 1994;



Boxley & Wagner, 1971; D'Andrea & Daniels, 1991; D'Andrea, Daniels, & Heck 1991; Dunn, Smith, & Montoya, 2006; Hills & Strozier, 1992; Holcomb-McCoy & Meyers, 1999; Ponterroto, 1997; Ponterroto, Alexander, & Greiger, 1995; Smith, Constantine, Dunn, Dinehart, & Montoya, 2006; Worthington, Mobley, Franks, & Tan, 2000). In light of the limitations of the currently available measures, the purpose of this research study is to test an original measure of multicultural competence. This measure is intended to improve upon existing measures by incorporating the notion of change processes, utilizing a broad and inclusive definition of diversity, and being designed for use with a variety of human service professions rather than specific professions.

In this chapter I provide a review of the literature and rationale for the development of a new measure. The literature review is organized as follows: (a) definitions central to this body of literature, (b) an overview of multicultural competence training, (c) a critique of existing assessment measures of multicultural competence, and (d) an overview of the stages of change model and applications of this model to multicultural competence assessment. Following the literature review, I describe the purpose of the present study and present the study questions and hypotheses.

### *Definitions*

Before examining of the state of multicultural competence measurement research within and outside of the field of psychology, it is necessary to review commonly used terms and definitions. The APA's Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists (2003) provides

definitions of many key terms; additional research is used to supplement these definitions as needed.

Culture is defined as “the belief systems and value orientations that influence customs, norms, practices, and social institutions, including psychological processes (language, caretaking practices, media, educational systems) and organizations” (APA, 2003, p. 380). Minority is defined as “a group of people who, because of physical or cultural characteristics, are singled out from the others in the society in which they live for differential and unequal treatment, and who therefore regard themselves as objects of collective discrimination” (Wirth, 1945; p. 347). Diversity is defined in a variety of ways depending on the source. Fouad and Arredondo (2007) suggest that diversity is “used to refer to cultural and racial variation among individuals who are of European American, African American, Latino/Hispanic, Asian American, or Native American decent” (p. 11). The definition of diversity for the purpose of this paper, however, will be much broader, and will encompass all of the categories referred to in the following definition of multicultural (e.g., APA, 2003; Hays, 2008). Multicultural refers to the multifaceted nature of identity, including “race, ethnicity, language, sexual orientation, gender, age, disability, class status, education, religious/spiritual orientation, and other cultural dimensions” (APA, 2003, p. 380). Psychologists and practitioners who are culture-centered “recognize that all individuals including themselves are influenced by different contexts, including the historical, ecological, sociopolitical, and disciplinary” (APA, 2003, p. 380). APA provide a similar definition of diversity, noting that though women

and ethnic/racial minority populations were the initial emphasis, the term now encompasses a much broader group of multicultural identities and backgrounds.

Similar to diversity, multicultural has many definitions and will be used in its broadest and most inclusive sense. D. W. Sue et al. (1998) provide a post-modernist, working definition of multiculturalism including the following components:

“Multiculturalism values cultural pluralism and acknowledges our nation as a cultural mosaic rather than a melting pot... is about social justice, cultural democracy, and equity... is about helping all of us to acquire the attitudes, knowledge, and skills needed to function effectively in a pluralistic democratic society and interact, negotiate, and communicate with peoples from diverse backgrounds... Multiculturalism is reflected in more than just race, class, gender, and ethnicity. It also includes diversity in religion, national origin, sexual orientation, ability and disability, age, geographic origin, and so forth... Multiculturalism is an essential component of analytical thinking... respects and values other perspectives, but is not value neutral.. Multiculturalism may mean owning up to painful realities about oneself, our group, and our society... Multiculturalism is about achieving positive individual, community, and societal outcomes because it values inclusion, cooperation, and movement toward mutually shared goals” (pp. 5-6).

Though lengthy, this definition of multiculturalism is included for its comprehensiveness; these broad, working, post-modern definitions of terms form the basis of the proposed measure of multicultural competence.

As many researchers point out (e.g., D. W. Sue et al., 1998), diversity and multiculturalism are related terms; however, for the purposes of this paper, diversity refers to the numerical makeup of a group (e.g., the percentage of ethnic/racial minority students in a counseling psychology graduate program), whereas multiculturalism refers to diversity as well as the professional policies and practices and the individual level knowledge, awareness, and skills of the people that make up groups or organizations. For example, a graduate program may be made up of a large percentage of ethnic/racial minority students, deeming it “diverse”, but if the policies and practices of the program do not include an emphasis on the training of multi-culturally competent professionals, then it would not be considered a “multicultural” organization.

Multicultural competence is based on the preceding definitions of diversity and multiculturalism. For the purpose of this paper, multicultural competence is defined as attitudes and behaviors that demonstrate multiculturalism. Because multiculturalism is so broadly defined, the construct of multicultural competence is similarly wide-ranging in scope. Multicultural competence can be demonstrated by having knowledge about diverse groups, implementing culturally-inclusive practices in an organization, being self-aware related to an aspect of cultural identity, having skills in working with diverse populations, showing dedication to learning about diversity-related topics, acknowledging the potential impact of background and identity on any number of outcomes, engaging in social justice efforts, and many other examples.

*Training and Educational Efforts to Increase Multicultural Competence*

The recent emphasis on multicultural competence in a variety of fields has resulted in a corresponding emphasis on multicultural competence training and educational efforts. Within the field of psychology, training and educational programs have occurred at all educational levels (e.g., Constantine, 2002a; Constantine, 2000; Hansen, Randazzo, Schwartz, Marshall, Kalis, Frazier, Burke, Kershner-Rice, & Norvig, 2006; Pope-Davis, Liu, Toporek, & Brittan-Powell, 2001; Sue & Sue, 2003) and across all subfields including counseling, school, and clinical psychology programs (e.g., D'Andrea, 2005; Ducker, & Tori, 2001; Keim, Warring, & Rau, n.d.; Rogers, 2006). Models of multicultural training efforts in other human services fields can be found in social work (e.g., Morelli, & Spencer, 2000), nursing (e.g., White, 2002), student affairs (e.g., Flowers, 2003; Pope, & Mueller, 2005), school/professional counseling (e.g., Constantine, 2002b; Constantine, 2001a; Constantine, 2001b; Constantine, 2000; Constantine & Gainor, 2001; Constantine, & Ladany, 2000; Ponterotto, Alexander, & Grieger, 1995), administration (e.g., Growe, Schmersahl, Perry, & Henry, 2002), and education/teaching (e.g., Faulkner, 2001; Milner, 2006). Multicultural training has also been implemented with college student populations (e.g., Halualani, Chitgopekar, Morrison, & Dodge, 2004; Johnson, 2003; Johnson & Kang, 2006; Lopez-Mulnix, & Mulnix, 2006; Pewewardy, & Frey, 2002). Finally, multicultural training programs have been implemented in general population settings in work related contexts (e.g., Holvino, Ferdman, & Merrill-Sands, 2004). These training and educational efforts have been conducted both in the United States and abroad (e.g., Faulkner, 2001), and incorporate

racial/ethnic definitions of culture and diversity (e.g., APA, 2003) as well as broader, more inclusive definitions of culture and diversity (e.g., Hays, 2008).

*Knowledge, awareness, and skills training components.* Multicultural competence research has been implemented in many different fields, and this work is conducted in equally diverse formats ranging from one hour workshops to 16 week semester courses. Though the content of these multicultural competence related training and educational efforts is varied based on the field and format of presentation, most training activities are designed to increase multicultural knowledge, multicultural awareness, and/or multicultural skills. Trainings that target increasing knowledge, awareness, and skills are supported by the literature (e.g., APA, 2003; D. W. Sue et al., 1998) and frequently incorporated into multicultural competence training and educational efforts. In the following paragraphs, I review content that is commonly covered in the knowledge, awareness, and skills components of multicultural competence training.

Multicultural training and educational efforts often include knowledge components. For example, definitions of diversity-related terminology are used with instruction when participants are taught definitions of terms such as privilege, oppression, race, and culture. Other types of specific knowledge include learning about the history of specific populations. An example would be learning about legal rights of minority groups and historical legal challenges related to issues of equality (e.g., *Brown v. Board of Education*, 1954). Finally, knowledge components of multicultural competence training and educational efforts frequently include learning about theories and models of identity development.

Awareness components of multicultural competence trainings and educational efforts emphasize participant awareness of their own experiences of privilege and oppression, their own place in history, and their own minority and majority culture identity development. For example, the first guideline in the APA Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists (2003) is focused on awareness: “Psychologists are encouraged to recognize that, as multicultural beings, they may hold attitudes and beliefs that can detrimentally influence their perceptions of and interactions with individuals who are ethnically and racially different from themselves” (p. 6). This awareness extends to all aspects of multicultural identity; a specific example is self-awareness related to heterosexual privilege or oppression experienced as a result of laws restricting marriage rights to heterosexual relationships.

While knowledge and awareness components emphasize a cognitive engagement with the topic of multicultural competence, the skills component teaches people to interact in a multi-culturally competent manner. The APA Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists (2003) provide many examples. Guidelines three, four, and five specifically describe skills that can be implemented in education, research, and practice settings. Guideline five, for example, states “Psychologists are encouraged to apply multi-culturally appropriate skills in clinical and other applied psychological practices” (p. 14) and presents examples of incorporating contextual information into therapy sessions with clients.

### *Assessment of Multicultural Competence*

Though multicultural competence is a relatively new emphasis within and outside of the field of psychology, there have been many attempts to assess this construct (e.g., Bernal & Padilla, 1982; Bernal & Castro, 1994; Boxley & Wagner, 1971; D'Andrea & Daniels, 1991; D'Andrea, Daniels, & Heck 1991; Dunn, Smith, & Montoya, 2006; Hills & Strozier, 1992; Holcomb-McCoy & Meyers, 1999; Ponterroto, 1997; Ponterroto, Alexander, & Greiger, 1995; Smith, Constantine, Dunn, Dinehart, & Montoya, 2006; Worthington et al., 2000). Assessment of multicultural competence historically has followed the knowledge, awareness, skills framework proposed in D. W. Sue, Arredondo, and McDavis (1992). That is, measures typically assess a respondent's knowledge of diversity issues, attitudes relevant to multiculturalism, and skills for engaging with diverse populations. In this section, I briefly review current measures of multicultural competence. Some related measures are excluded from this brief review, such as measures of identity development, even though level of identity development has implications for multicultural competence. These excluded assessments are designed to identify the developmental stage of an individual in terms of one aspect of culture or identity, for example, identifying the individual's current stage of ethnic identity development.

Though a number of recently developed measures of multicultural competence hold promise, there is a lack of sufficient data regarding the reliability, validity, and factor structure of these instruments (Ducker & Tori, 2001; Dunn, Smith, & Montoya, 2006; Pope-Davis, Liu, Nevitt, & Toporek, 2000; Tori & Ducker 2004). Other



assessment tools related to multicultural competence have been well researched, but do not examine individual growth and change. The following measures are not included in the review because they examine organizational or environmental practices (e.g., the Multicultural Environmental Inventory-Revised, Pope-Davis, Liu, Nevitt, & Toporek, 2000; the Diversity Rating Form, Bluestone, Stokes, & Kuba, 1996; and the Multicultural Competency Checklist, Ponterrotto, Alexander, & Greiger, 1995). In the following sections I review four of the most commonly used measures of multicultural competence in terms of their factor structure, reliability, validity, administration, interpretation, and sensitivity to change. After a general overview of each measure, Table 1 presents strengths and weaknesses of each.

*Multicultural Awareness, Knowledge, Skills Scale (MAKSS)*. One of the most commonly studied multicultural competence-related change assessments is the Multicultural Awareness, Knowledge, Skills Scale (MAKSS; D'Andrea, Daniels, & Heck, 1991). This measure has been revised and is now the MAKSS-Counselor Edition-Revised (MAKSS-CE-R; Kim, Cartwright, Asay, & D'Andrea, 2003). A teacher version of this measure also exists, the Multicultural Awareness, Knowledge, Skills Scale, Teacher Form (MAKSS-TF; D'Andrea, Daniels, Noonan, & Pope-Davis, 2003). The MAKSS-CE-R is comprised of 33 self-report items and three subscales related to multicultural knowledge, awareness, and skills, respectively. The awareness subscale of the revised measure has not demonstrated adequate reliability and some researchers have questioned the aspects of the measure's validity. The measure is well-researched, however, and this research suggests that the knowledge and skills subscales demonstrate

adequate reliability, and the measure is a valid assessment of multicultural knowledge, awareness, and skills. One critical review of multicultural competence measures reports that no other newly created measures have offered sufficient improvements to suggest their benefit over the revised version of this measure (Dunn, Smith, & Montoya, 2006).

*Multicultural Counseling Inventory (MCI)*. Another frequently used measure of multicultural competence is the Multicultural Counseling Inventory (MCI; Sadowsky, Taffe, Gutkin, & Wise, 1994). The MCI is comprised of 40 self-rating items and includes four subscales related to multicultural knowledge, awareness, skills, and relationship. The relationship subscale of this measure has not demonstrated adequate reliability, and some research has questioned the aspects of the measure's validity (Dunn, Smith, & Montoya, 2006). This measure is a well-researched, however, and research supports that it is a reliable measure of multicultural knowledge, awareness, and skills. Similar to the MAKSS-CE-R, a critical review of multicultural competence measures reports that no other newly created measures offer sufficient improvements to suggest their benefit over the MCI (Dunn, Smith, & Montoya, 2006).

*Multicultural Counseling Awareness Scale, Form B (MCAS: B)*. The Multicultural Counseling Awareness Scale, Form B (MCAS: B; Ponterrotto et al., 1996) is another frequently used measure. The revised version of the measure, the Multicultural Counseling Knowledge and Awareness Scale (MCKAS; Ponterrotto, Gretchen, Utsey, Reiger, & Austin, 2002) focuses on knowledge and awareness related to multicultural competence. The measure is comprised of 32 self-report items. The MCKAS is a well-researched, reliable measure of multicultural knowledge, awareness, and skills. As with

the MAKSS-CE-R and MCI, a critical review of multicultural competence measures reports that no other newly created measures have offered sufficient improvements to suggest their benefit over the MCKAS (Dunn, Smith, & Montoya, 2006).

*Cross Cultural Counseling Inventory-Revised (CCCI-R)*. The Cross Cultural Counseling Inventory-Revised (CCCI-R; LaFromboise et al., 1991) is a 20-item measure also frequently used to assess multicultural competence in counseling settings. The form is filled out by clients who provide multicultural competence ratings of their counselor. This measure can be administered as a self- or observer-reported assessment, and has been used to rate the multicultural competence of counselors and psychotherapists. Research has demonstrated this measure's reliability. Although the CCCI-R is plagued by validity concerns similar to those of other measures of multicultural competence related to counseling, the observer-report version of this measure has demonstrated discriminant validity by distinguishing multicultural counseling competence from general counseling competence (Ponterrotto & Alexander, 1996).

The MAKSS-CE-R, MCI, MCKAS, and CCCI-R are all examples of measures that have been extensively used and reviewed in the literature (e.g., Boyle & Springer, 2001; Dunn, Smith, & Montoya, 2006; Ponterrotto et al., 1994; Ponterrotto & Alexander, 1996; Pope-Davis & Dings, 1995). Though initial reviews of measures of multicultural competence have existed for more than a decade (e.g., Ponterrotto et al., 1994), revisions to these early measures and creation of new measures have resulted in well-researched measures of multicultural competence used in the counseling fields. Table 1 provides a summary of the strengths and limitations of these four most commonly used multicultural

competence assessment tools in terms of theory, factor structure, reliability, validity, administration, interpretation, and sensitivity to change.

Table 1

*Strengths and Limitations of Current Multicultural Competence Assessment Tools*

Criteria	Strengths	Limitations	Citation
	MAKSS, MAKSS-CE-R (D'Andrea, Daniels, & Heck, 1991; Kim, Cartwright, Asay, & D'Andrea, 2003)		
Theory	Theory based	Based on knowledge, awareness, skills framework	Dunn, Smith, & Montoya, 2006
Factor structure	Three factor structure supported (MAKSS-CE-R)	Three factor structure not supported (MAKSS)	Constantine, Gloria, & Ladany, 2002; Dunn, Smith, & Montoya, 2006
Reliability	Adequate internal consistency reliability of full scale ( $M = .89$ ), knowledge ( $M = .78$ ), and skills ( $M = .91$ ) subscales	Inadequate internal consistency reliability of awareness subscale ( $M = .64$ )	Dunn, Smith, & Montoya, 2006
Validity	Correlated with other measures of multicultural competence	Needs validation with diverse samples; skills subscale correlated with social desirability; possibly measuring multicultural counseling self efficacy; awareness subscales not significantly correlated with the MCI awareness subscale	Boyle & Springer, 2001; Constantine & Ladany, 2000; Dunn, Smith, & Montoya, 2006

Administration	Inexpensive; easy to score and administer; moderate length; counselor and teacher editions	Teacher and counselor versions have non-equivalent items	Boyle & Springer, 2001; D'Andrea, Daniels, & Heck, 1991; D'Andrea, Daniels, Noonan, & Pope-Davis, 2003
Interpretation	Authors provide cut-scores and category labels	Unclear interpretation of scores	Pope-Davis & Dings, 1995; Dunn, Smith, & Montoya, 2006
Sensitivity to change	Sensitive to change in therapist scores pre- and post-training		Ponterrotto & Alexander, 1996
MCI (Sodowsky, Taffe, Gutkin, & Wise, 1994)			
Theory	Theory based	Based on knowledge, awareness, skills framework	Dunn, Smith, & Montoya, 2006
Factor structure		Four factor structure not supported	Constantine, Gloria, & Ladany, 2002; Dunn, Smith, & Montoya, 2006
Reliability	Adequate internal consistency reliability of full scale ( $M = .86$ ), knowledge ( $M = .76$ ), skills ( $M = .79$ ), and awareness ( $M = .78$ ) subscales	Inadequate internal consistency reliability of relationship subscale ( $M = .65$ )	Dunn, Smith, & Montoya, 2006

Validity	Correlated with other measures of multicultural competence	Needs validation with diverse samples; relationship subscale correlated with social desirability; possibly measuring multicultural counseling self efficacy; awareness subscales not significantly correlated with the MAKSS awareness subscale; only knowledge subscale correlated with observed multicultural competence	Boyle & Springer, 2001; Constantine & Ladany, 2000; Dunn, Smith, & Montoya, 2006; Worthington et al., 2000
Administration	Inexpensive; easy to score and administer; moderate length	Only meant for counselors	Boyle & Springer, 2001; D'Andrea, Daniels, & Heck, 1991; D'Andrea, Daniels, Noonan, & Pope-Davis, 2003
Interpretation	Clear interpretation of scores		Pope-Davis & Dings, 1995
Sensitivity to change	Sensitive to change in therapist scores pre- and post-training; sensitive to differences in multicultural experience		Ponterrotto & Alexander, 1996
<hr/>			
Theory	Theory based	Based on knowledge, awareness, skills framework	Dunn, Smith, & Montoya, 2006

MCAS:B, MCKAS (Ponterrotto et al., 1991; Ponterrotto, Gretchen, Utsey, Reiger, & Austin, 2002)

Factor structure	Two factor structure supported	Constantine, Gloria, & Ladany, 2002; Dunn, Smith, & Montoya, 2006
Reliability	Adequate internal consistency reliability of all subscales ( $M = .80$ to $.89$ )	Dunn, Smith, & Montoya, 2006
Validity	Correlated with other measures of multicultural competence	Boyle & Springer, 2001; Constantine & Ladany, 2000; Dunn, Smith, & Montoya, 2006
Administration	Inexpensive; easy to score and administer; moderate length	Boyle & Springer, 2001; D'Andrea, Daniels, & Heck, 1991; D'Andrea, Daniels, Noonan, & Pope-Davis, 2003
Interpretation	Authors provide cut-scores and category labels	Pope-Davis & Dings, 1995; Dunn, Smith, & Montoya, 2006
Sensitivity to change	Sensitive to change in therapist scores pre- and post-training; sensitive to differences in multicultural experience	Ponterrotto & Alexander, 1996



CCCI-R (LaFramboise et al., 1991)

Theory	Theory based	Based on knowledge, awareness, skills framework	Dunn, Smith, & Montoya, 2006
Factor structure	Information unavailable	Information unavailable	
Reliability	Adequate internal consistency reliability	Inadequate internal consistency reliability of awareness subscale	Dunn, Smith, & Montoya, 2006
Validity	Correlated with other measures of multicultural competence; different construct from general therapist competence	Needs validation with diverse samples; self-report version possibly measuring multicultural counseling self efficacy; observer ratings significantly related to amount of multicultural verbal content, not necessarily skills	Boyle & Springer, 2001; Constantine & Ladany, 2000; Dunn, Smith, & Montoya, 2006; Ponterrotto & Alexander, 1996
Administration	Inexpensive; easy to score and administer; moderate length; self report and observer report versions		Boyle & Springer, 2001; D'Andrea, Daniels, & Heck, 1991; D'Andrea, Daniels, Noonan, & Pope-Davis, 2003
Interpretation	Authors provide cut-scores and category labels	Unclear interpretation of scores	Pope-Davis & Dings, 1995; Dunn, Smith, & Montoya, 2006

Sensitivity to change

Sensitive to change in therapist  
scores pre- and post-training

Ponterrotto & Alexander,  
1996

---

*Note.* MAKSS = Multicultural awareness, Knowledge, Skills Scale; MAKSS-CE-R = Multicultural awareness, Knowledge, Skills Scale, Counselor Edition, Revised; MCI = Multicultural Counseling Inventory; MCAS:B = Multicultural Counseling Awareness Scale, Form B; MCKAS = Multicultural Counseling Knowledge and Awareness Scale; CCCI-R = Cross Cultural Counseling Inventory, Revised.

*Limitations of Assessing Multicultural Knowledge, Awareness, and Skills*

There are critiques of the existing measures of multicultural competence related to their utilization of a knowledge, awareness and skills theoretical framework. These critiques are not measure specific and are outlined below. Though these measures are useful for assessing multicultural competence from a knowledge, awareness, skills perspective, there are limitations to using this theoretical basis for multicultural competence assessment with respect to (a) scope, (b) applicability, and (c) the developmental nature of multicultural competence.

*Scope.* Measures of multicultural knowledge, awareness, and skills frequently emphasize select aspects of multicultural competence rather than the construct as a whole. These measures may be well suited to assess whether or not specific aspects of knowledge, awareness, and skills were successfully taught in a given context, but they are not likely to be useful as a general tool for assessing multicultural competence or for assessing multicultural competence as it relates to broad and inclusive conceptualizations of diversity. Some existing measures (e.g., the MAKSS-CE-R; Kim, Cartwright, Asay, & D'Andrea, 2003) include items specific to many different minority populations; however, these items are limited in scope. Rather than relating to minority or underserved populations in general, these items assess specific aspects of knowledge, awareness, and skills in terms of narrowly defined populations.

*Applicability.* Measures of multicultural knowledge, awareness, and skills are also limited in applicability. Current measures of multicultural competence are designed to be administered with very specific fields or professions: counselors or counseling and

clinical psychology trainees (APA, 2008; APA, 1982; Bernal & Padilla, 1982; Bernal & Castro, 1994; Bluestone, Stokes, & Kuba, 1996; Boxley & Wagner, 1971; Constantine & Ladany, 1996; D'Andrea & Daniels, 1991; D'Andrea, Daniels, & Heck 1991; Ducker & Tori, 2001; Dunn, Smith, & Montoya, 2006; Fouad, 2006; Holcomb-McCoy & Meyers, 1999; Tori & Ducker 2004). More recently developed measures have only included populations of school counselors, school psychologists, and student affairs professionals (Dunn, Smith, & Montoya, 2006; Hansen et al., 2006; Smith et al., 2006). To date, no reliable and valid measures have been published that could be applied to broader human services contexts or the population in general. Though these measures are well suited to assess multicultural knowledge, awareness, and skills related to specific fields or professions, they are not able to assess multicultural competence across professions or in professions unrelated to counseling.

*Developmental nature of multicultural competence.* Current measures of multicultural competence do not adequately account for the developmental nature of the construct. Identity development models suggest that people may not simply learn multicultural knowledge, awareness, and skills at one point in time. Instead, aspects of multicultural competence are developmental and cyclical in nature (Sue et al., 1998). That is, a person can be at various stages of development in terms of multicultural competence at different points in their training, and may repeatedly cycle through these stages (Sue et al., 1998). Further, as people engage in multicultural competence training and educational efforts, they often realize how much more they need to learn (Kitaoka, 2005). In such a situation, their scores on self-report measures assessing multicultural

knowledge, awareness, and skills might decrease, even though such an experience demonstrates increased multicultural competence.

In summary, existing measures of multicultural competence assess specific aspects of knowledge, awareness, and skills. The reviewed measures focus on a narrow definition of diversity, and frequently have limited applicability to fields unrelated to counseling. Current measures fail to capture the cyclical, developmental nature of multicultural competence. As a result, researchers have called for the development of new, novel measures to assess multicultural competence (Dunn, Smith, & Montoya, 2006).

In the next section I introduce a model of behavior change that serves as the conceptual framework for the measure of multicultural competence proposed at the conclusion of this chapter. I use this model to link a cyclical, stage-based conceptualization of behavior change to the concept of multicultural competence. This model lends itself to a broader conceptualization of diversity, can be generalized to populations in a variety of fields or professions, and accounts for developmental change in multicultural competence.

### *Stages of Change*

Over the past two decades, a variety of research has been conducted examining the nature of human behavior change. On the basis of this research, Prochaska, DiClemente, and Norcross (1992) conceptualize change as a process that occurs in stages rather than a model in which a person has or has not changed. Prochaska, DiClemente,

and Norcross (1992) propose a five stage change model with the following stages: pre-contemplation, contemplation, preparation, action, and maintenance.

The stages of change model has been applied to a variety of behaviors including drug and alcohol abuse/dependence (e.g., DiClemente & Hughes, 1993), smoking cessation (e.g., DiClemente, Prochaska, Fairhurst, Velicer, Velasquez, & Rossi, 1991), and other health related behaviors (e.g., Rakowski, et al., 1998). There have also been recent applications of this model of change to therapy contexts (e.g., Prochaska, 2000) and to organizational change (e.g., Levasque, Prochaska, Prochaska, Dewart, Hamby, & Weeks, 2001). This growing body of literature suggests that the stages of change model has strong potential for application across a variety of behaviors.

The stages of change model has not yet been applied to multicultural competence, though it is well suited to applications of multicultural competence assessment. In the following sections I (a) outline the five stages of change and core aspects of the model, (b) provide an overview of research findings related to applications of the stages of change model to areas outside of multicultural competence, (c) apply the model to the area of multicultural competence, and (d) describe how the stages of change model was incorporated into the proposed measure of multicultural competence.

*Stages of change model.* The stages of change model is comprised of the five stages of change: pre-contemplation, contemplation, preparation, action, and maintenance (Prochaska, DiClemente, & Norcross, 1992). One aspect of the model that helps differentiate it from other stage-based or linear models is what researchers have termed the *spiral pattern of change* (Prochaska, DiClemente, & Norcross, 1992). The spiral

pattern of change refers to the process by which people tend to repeatedly cycle through the stages of change when making or attempting to make changes in their behavior. For example, in the case of a man changing his eating habits, he might make many attempts at behavior change and experience different levels of engagement, commitment, and motivation throughout the process of change. He might ultimately end up changing his eating habits, but he will likely cycle through at least some of the five stages of change many times throughout this process. The concept of motivation is fundamental to this model. The stages of change model incorporates the concept of readiness to change, and many intervention programs have demonstrated success in affecting participants' motivation to change (Miller & Rollnick, 2002; Velicer et al., 1998).

The following is a description of each of the five stages as described by Miller and Rollnick (2002). The *pre-contemplation* stage is characterized by a lack of motivation to change and/or a lack of recognition that change is necessary. Individuals at the *contemplation* stage are aware that there is a problem, but they are not actively engaged in trying to make changes to improve the situation. They may feel as though they are powerless to affect any change, or that any changes that they would have to make would be too difficult or costly to be worth the effort. Individuals at the *preparation* stage are aware that there is a problem, and are actively preparing or even beginning to make changes in their behaviors. This stage is characterized as a turning point. The individual believes that there are more benefits than costs associated with change, and is either beginning, or will soon begin, to change behaviors. People at the *action* stage are actively involved in attempting to correct the problem or make

behavioral changes. At this stage, individuals must invest a significant amount of time and energy in the change process, and these changes are the most overt and apparent to others compared with the other stages. Finally, people at the *maintenance* stage are actively involved in correcting a problem, and they have been engaged in these efforts for an extended period of time. At this stage, an individual may spend less time and energy on behavior change as compared to the action stage, because rather than learning to enact new changes, they are working to maintain prior changes that they have made, and to incorporate these changes into their daily lives and relationships.

*Assessment of the stages of change model.* The assessment of stages of change has been conducted in a variety of ways. Researchers have created assessment tools reflecting the general stages of change model and have altered the assessment tools so that they can be used to assess a variety of applications of the model. The University of Rhode Island Change Assessment Scale (URICA), for example, can be applied to a variety of different constructs including smoking cessation, alcohol addiction, drug addiction, psychotherapy, and domestic violence (e.g., DiClemente & Hughes, 1990; DiClemente, Schlundt, & Gemmell, 2004; McConaughy, Prochaska, & Velicer, 1983), though it has not been applied to the construct of multicultural competence. The different adaptations of the URICA can be scored in two ways. When “profile scoring,” the researcher examines patterns of scores and clusters people into groups based on the patterns of scores. Participants who have high pre-contemplation and contemplation but low action and maintenance scores might be classified in one cluster, whereas participants with low pre-contemplation but high action and maintenance scores could be classified as another



cluster. The researchers note that this type of scoring based on patterns of scores is not well established. Readiness scoring, however, utilizes cut-off scores that are linked with each of the five stages of change so that individuals can be classified as being at a specific level of the stages of change process based on an overall test score.

#### *Applications of Stages of Change to Multicultural Competence Research*

As noted, a stages of change model has not yet been applied to the concept of multicultural competence, and there are no existing measures of multicultural competence that incorporate this perspective. Research has demonstrated that multicultural competence is developmental in nature. Research on the stages of change model has demonstrated that there is variation in people's readiness to change across a variety of behaviors, and that behavioral interventions yield more positive outcomes when they are matched with people's readiness for change. Therefore, these two bodies of research support a conceptualization of multicultural competence from a stages of change perspective.

The process of becoming a more multi-culturally competent has been described as a continuous, developmental process (Fouad & Arredondo, 2007; Sue & Sue, 2003). Identity development models are often central components of training and educational efforts related to multicultural competence (e.g., Sue et al., 1998). Though these models are frequently conceptualized in terms of minority/majority perspectives, they frequently include a cyclical component (i.e., individuals cycle through the various stages of these models). These developmental frameworks are similar to the stages of change model in that both conceptualize change as a stage-based and readiness-dependent process.

As noted, many assessments of multicultural competence describe people's levels of knowledge, awareness, and skills. By applying the stages of change model to multicultural competence, it would be possible to emphasize growth in terms of readiness to change or motivation to engage rather than specific types of knowledge, awareness, and skills that are unique to training contexts and content. This model includes the recognition that people vary in their readiness and motivation to change (Velicer et al., 1998), and this conceptualization of change could be applied to the construct of multicultural competence. For example, the stages of change model could be used to more accurately assess people's change in willingness to consider diversity important, to engage in trainings, and to engage in multi-culturally competent practices, all of which are linked with becoming more multi-culturally competent (e.g., Roysircar, 2004). Additionally, instead of assuming that all individuals are invested and engaged in the process of becoming more multi-culturally competent, applying a stages of change model to the construct allows for more accurate assessment of the range of possible views related to multicultural competence. A person viewing multicultural competence as unnecessary and unimportant could be classified as having low readiness to change regardless of the amount of specific knowledge, awareness, and skills that they might have related to culture/multicultural competence. This is critical because multicultural trainings are often required rather than sought out voluntarily.

A stages of change measure of multicultural competence could provide information about the developmental stage of a participant in a training or educational program. This would enable an instructor to tailor interventions to participants based on

their developmental level and motivation to engage in the process of multicultural competence training or education. Applications of a stages of change model to intervention strategies have been successful in other areas of intervention such as drug/alcohol dependence and participation in therapy. Interventions targeted to participants' developmental stage have resulted in increased participant recruitment and retention (Prochaska, DiClemente, & Norcross, 1992; Prochaska & Norcross, 2001; Velicer et al. 1998). These targeted interventions increase participant motivation because they to reinforce small, measureable change (Miller & Rollnick, 2002). Targeted interventions can also help promote change with participants who are resistant (Miller & Rollnick, 2002). For example, trainings providing information about how to engage in social justice efforts may be ineffectual for participants who are uncertain of the importance of multicultural competence; however, a training that emphasizes learning about historical and current injustices might increase motivation in the same participants.

*Stages of change applied to multicultural competence behavior.* The central components of the stages of change model are the five stages of pre-contemplation, contemplation, preparation, action, and maintenance, accompanied by a cyclical progression through these stages. In this section, I review the five stages of change and apply them to the construct of culture competence. This application of the stages of change model formed the basis of the multicultural competence assessment tool proposed later in this chapter.

*Pre-contemplation.* Since pre-contemplation is primarily characterized by a lack of motivation to change and/or a lack of recognition that change is necessary, individuals

who are at a pre-contemplation stage in terms of multicultural competence may say the “right” thing in certain contexts. For example, in the context of a diversity class or training, these individuals might say “I think diversity is important” but they would not believe this statement or put it into action outside of a context in which there was pressure to be multi-culturally competent. Individuals at this stage may not know that they are demonstrating a lack of multicultural competence, or may even state that multicultural competence is not important. They might believe that diversity is only emphasized because of political correctness, and that it is not important to their work or relationships. They might be involved in active opposition to political, educational, or social justice efforts for the advancement of equity, for example, participants in campaigns to oppose race/ethnicity-based college student groups. They might refrain from racist or homophobic slurs in some contexts, but use such slurs in others.

*Contemplation.* Individuals at the contemplation stage may be aware that there is a problem (e.g., that there is discrimination against people with disabilities) or may wonder if there is a problem. They might believe that discrimination against people with disabilities happened in the past, but their lack of familiarity with the topic may also lead them to believe that it is likely that these forms of discrimination are currently only rare, isolated events. Similarly, they might believe that discrimination against certain minority groups exists but that this discrimination is not something that they need to address, because they do not see this discrimination as something that affects them. People at this stage are not actively engaged in trying to make changes to improve the situation. Though they may be aware that such problems and injustices exist, they may feel as

though they are powerless to affect any change, or that any changes that they would have to make to affect change would be too difficult or costly to be worth the effort. They might avoid interactions or activities related to diversity because they feel powerless, uncomfortable, or as though they may say “the wrong thing”.

*Preparation.* Individuals at the preparation stage are aware that there is a problem, and are actively preparing or even beginning to make changes in their beliefs or actions. In terms of multicultural competence, these individuals may be aware that they need more training related to aspects of cultural competence. They may acknowledge that they are confused about aspects of diversity-related topics. These individuals would not have extensive knowledge, skills, or awareness about multicultural issues, but would believe that there is a need to improve in these areas. They might be interested in becoming part of educational, professional, political, or social justice efforts, but they may not know how to enact such change at this relatively early stage of their multicultural competence development.

*Action.* People at action stage are actively involved in educational, professional, political, or social justice efforts related to multicultural competence. They may be a part of events, groups, or activities that focus on some aspects of diversity, and may be looking for other types of activities to engage in that will further their multicultural involvement and competence. These are people who consider themselves well versed in issues related to diversity but are also aware that more training and education is always necessary.

*Maintenance.* People at the maintenance stage are actively involved in educational, professional, political, or social justice efforts related to multicultural competence, but they take this further in terms of how their commitment to these issues is central to virtually all aspects of their lives. Though it is unreasonable to assume that any individuals demonstrate a commitment to simultaneously address all forms of multicultural competence at the same time, individuals at the maintenance stage demonstrate an ongoing investment in increasing competence across all areas. Though it is likely that they are not actively pursuing all areas of multicultural competence simultaneously, these individuals are so involved in diversity-related efforts that this has affected their personal relationships. These people might have more or less knowledge, skills, and awareness related to various aspects of diversity, but they know where their strengths and weaknesses lie. For example, such an individual might state “I am very involved in social justice efforts related to immigrant rights; however, I would benefit from training related to LGBTQ issues and how this aspect of culture interacts with other aspects of peoples’ identities”.

These extrapolations of the five stages suggest that a stages of change model can be theoretically applied to the construct of multicultural competence. A component of the stages of change model, the spiral pattern of change, can also be applied to multicultural competence. A woman who is cycling through multicultural competence-related stages of change might move to a certain stage after attending a training or having a personally impactful experience (e.g., if a close friend became physically disabled), but as these experiences become less salient, she might revert back to old patterns of beliefs or

behaviors related to multicultural competence. However, the same woman could later find herself reading an inspiring book or article, and might then re-examine her commitment to multiculturalism, thereby cycling back to a previously achieved stage in the model. These applications, however, are only theoretical. Further research and assessment related to the application of a stages of change model to multicultural competence is necessary to examine and clarify the proposed relationships.

*Creating a multicultural competence assessment tool.* Though the construct of multicultural competence and the theory of stages of change are both widely researched and supported in the literature, the two have not yet been combined for the purposes of assessing multicultural competence. The process of creating the measure of multicultural competence proposed in this paper began with the identification of gaps in multicultural competence research, and from there extended to an examination of a stages of change model as an alternative way to represent multicultural competence. Measures related to multicultural competence and stages of changes were examined, and I determined that a new measure was needed that linked critical features of multicultural competence with stages of change.

Therefore, I created a measure based on existing assessments of multicultural competence and research related to the applications and assessment of stages of change models. Bandura's guide for the creation of self-efficacy scales (Bandura, n.d.) and research by Worthington and Whittaker (2006) were used as frameworks for measure development. All of these sources include similar components, emphasizing a multi-stage process involving individual and group item creation, consultation with experts, piloting

of the measure, and then analyses of the measure to determine the validity, reliability, and factor structure.

The stages of change measure of multicultural competence tested in this study was created by using the above models as a guide. The first step involved both individual and research team brainstorming sessions; the research team consisted of three people: Maya O'Neil, Dr. Ellen McWhirter, and Alisia Caban. I critically examined existing measures of multicultural competence. I was especially interested in assessing the utility of these measures for evaluating the effectiveness of diversity training for undergraduate and graduate college students, human service professionals, and psychologists. I examined the measures to determine how they have been successful, how they might be improved, and how the theories behind existing measures could be broadened and combined. The team agreed that the application of a stages of change model to the construct of multicultural competence could improve multicultural competence assessment and capture different aspects of the construct.

Once a stages of change model was agreed upon as a framework, I consulted with two different panels of experts. A panel of 12 doctoral students and professors in a Counseling Psychology training program that emphasizes multicultural competence was given examples of four of the most frequently used assessment tools and asked to critique the measures and provide feedback on how they could be improved. They were then provided with information about the application of the stages of change framework and asked how it could be applied to the construct of multicultural competence. Finally, they were presented with our theoretical application of the stages of change model to



multicultural competence and were asked to critique the proposed combination of theories.

Then, a panel of professionals from a University research institute was consulted. The mission of this research institute is to promote diversity research and multicultural competence training for students, staff, and faculty at a major state university. Institute members included eight individuals who were University professors, administrators, staff psychologists, mediators, graduate student interns, or staff from a campus program designed to increase teaching effectiveness. The institute members have graduate degrees in a variety of fields including law, philosophy, sociology, business, conflict resolution, student affairs, clinical psychology, and counseling psychology. This panel was given information on existing measures and on the stages of change model, and were asked to brainstorm how existing measures could be improved, and how the concept of multicultural competence could be assessed from a stages of change perspective. Feedback from both groups suggested that our critique of existing measures was meaningful and substantive, and that the stages of change framework was a promising and logical framework for conceptualizing change in multicultural competence.

Based on the positive feedback from these two groups, I began to generate items to assess multicultural competence from a stages of change perspective. Each member of the research team also generated items related to a knowledge, awareness, skills framework of multicultural competence, so that the two frameworks/theories could be compared. Items reflected a broader definition of culture than most existing measures, including sexual orientation, gender identity, ability/disability status, etc. The research

team then compiled and refined the questions that each individual member had created. The result was a rough questionnaire comprised of four sections or measures: a section broadly assessing demographics and self-identification related to minority/majority cultures; a section assessing multicultural competence from a knowledge, awareness, and skills perspective and applying this framework to a broad range of multicultural groups; a section assessing multicultural competence using a stages of change framework; and a final section asking participants to retroactively self-assess multicultural competence for a specified period of time and relate it to their current level of multicultural competence (i.e., asking participants to rate their change in multicultural competence). The section utilizing a knowledge, awareness, and skills framework was added to the questionnaire so that self-assessments of knowledge, awareness, and skills could be compared to self-report items related to stages of change. I created these questions rather than relying on existing measures of knowledge, awareness, and skills so that a similarly broad range of multicultural identities could be compared among measures. The final section was created to be applied to people participating in education or trainings related to multicultural competence so that their self-assessed growth (i.e., being asked to assess growth over time, not simply report their current status) could be compared over periods of time when they were and were not participating in multicultural competence related training or educational efforts.

Once a rough version of the questionnaire had been created, the Counseling Psychology and research institute panels were again consulted to review and revise the measures. The members of each panel were each given copies of the initial draft of the

measures and were asked to review and revise the measures individually before meeting as a group. Individuals completed this task and then brought the measures to their respective panels for another round of review and refinement of questions. The resulting feedback from the panels was then reviewed by the research team and combined to create a revised version of the questionnaire.

This revised questionnaire was then piloted with a group of 13 doctoral students and 1 faculty member in counseling psychology, none of whom were on the counseling psychology panel consulted during initial stages of questionnaire development. This pilot group completed the measures and provided written and verbal feedback on the nature of the items, items they believed were assessing overlapping topics, and any confusion or frustration they experienced related to completing the assessment.

The feedback and responses from the pilot group were reviewed by the research team and another round of revisions was made to the measures. This version of the questionnaire was then again sent to the counseling psychology and research institute panels for examination and review, and these suggested changes were incorporated by the research team, resulting in a final version of the questionnaire. Details of the final questionnaire are presented in the Methods chapter.

### *Summary*

The review of literature and summary of research and theory related to multicultural competence and stages of change supports the following conclusions. First, the goal of improving multicultural competence is shared across a number of professions and disciplines. Second, there are a number of limitations associated with current

measures of multicultural competence, many of which cannot be addressed by continued research with the same measures. Third, application of the stages of change model to multicultural competence assessment holds great potential, yet no valid and reliable measures assessing multicultural competence from a stages of change perspective currently exist. On the basis of these conclusions, this dissertation project attempts to remedy the existing deficits related to the assessment of multicultural competence by proposing a measure of multicultural competence based on the stages of change model. This study serves to determine the factor structure, validity, reliability, and sensitivity to change of this proposed measure.

#### *Purpose of Study*

The purpose of the proposed study was to test the factor structure, reliability, validity, and sensitivity to change of an original stages of change-based measure of multicultural competence, the Multicultural Competence Stage of Change Scale (MCSCS), with a sample of human services professionals, graduate students, and undergraduate students. In order to do this, I examined the factor structure of the MCSCS, used these results to establish subscales for this measure, and examined total score and subscale reliability. I administered a well-researched measure of multicultural knowledge, awareness, and skills, the MAKSS-CE-R, and an original measure of self-assessed multicultural competence growth for comparison purposes and to establish validity. To assess sensitivity to change, I administered a measure assessing demographics to examine how subscale scores on the MCSCS differ based on participant minority group identification, professional/student identity, and participation in

multicultural training. I employed a non-experimental, survey design to examine research questions related to reliability, validity, factor structure, and group differences. My research questions were as follows: *Research question one.* What is the factor structure of the MCSCS as assessed by exploratory factor analysis? Hypothesis one: It is hypothesized that the MCSCS will have a five factor structure representing each of the five proposed stages of change. *Research question two.* What is the internal consistency reliability of the full scale MCSCS and of each subscale? Hypothesis two: It is hypothesized that the MCSCS and each subscale will have adequate reliability. *Research question three.* What is the validity of the MCSCS as assessed by the total score and subscale correlations with the MAKSS-CE-R and a measure of self-assessed growth in multicultural competence? Hypothesis three: It is hypothesized that total and subscale scores on the MCSCS will be significantly, positively correlated with total and subscale scores on the MAKSS-CE-R and with total scores on the measure of self-assessed growth in multicultural competence. *Research question four.* Do subscale scores on the MCSCS differ to a statistically significant degree for participants based on context (i.e., diversity in education graduate students versus student affairs professionals)? Hypothesis four: It is hypothesized that participants who are professionals electing to engage in training related to multicultural competence (the group of student affairs professionals) will have significantly higher mean subscale scores on the MCSCS when compared to participants who are students taking a required class (the group of diversity in education graduate students). *Research question five.* Do subscale scores on the MCSCS differ to a statistically significant degree for participants based on self-described multicultural

identities including sexual orientation, race/ethnicity, and ability/disability status?

Hypothesis five: It is hypothesized that participants who self-identify as minorities in terms of at least one multicultural identity category will have significantly higher total and subscale scores on the MCSCS when compared to participants who do not self-identify as minorities in terms of sexual orientation, race/ethnicity, and ability/disability status multicultural identity categories. *Research question six.* Do subscale scores on the MCSCS change to a statistically significant degree following participation in multicultural training? Hypothesis six: It is hypothesized that participants' MCSCS subscale scores will increase to a statistically significant degree after they have participated in a multicultural training.

## CHAPTER II

### METHOD

#### *Participants*

Participants were 142 undergraduate students, graduate students, and professionals in fields related to human services. Participants were recruited from one of three sources. First, graduate students who were participating in a required Diversity in Education (referred to as Diversity in Education graduate students) course were recruited from the University of Oregon College of Education ( $n = 64$ ). These students were enrolled in the Teacher Education, Educational Leadership, Special Education, or School Psychology graduate programs. Second, students were recruited from the undergraduate program in Family and Human Services ( $n = 20$ ) and the masters program in Couples and Family Therapy ( $n = 8$ ). This group of participants is referred to as human services students. Third, professionals who were involved in student affairs in colleges and universities in the Pacific Northwest and who chose to participate in a University of Oregon Multicultural Competence Institute were also recruited for this study ( $n = 50$ ). This group of participants is referred to as student affairs professionals. Unless otherwise specified, “participants” refers to all three groups combined. Participants were asked to give qualitative explanations of their multicultural background (including ethnic composition) rather than checking boxes. Responses varied greatly among participants

and were not amenable to categories without extensive analyses; therefore, specific numbers and percentages are not listed here. Participants were asked to describe whether they identified as being part of majority culture, minority culture, or both in terms of seven cultural identity categories. There were 127 participants (84.1%) who identified as being part of majority culture in terms of ability/disability status, 83 participants (55.0%) who identified as being part of majority culture in terms of gender identity, 133 participants (88.1%) who identified as being part of majority culture in terms of nationality, 104 participants (68.9%) who identified as being part of majority culture in terms of race/ethnicity, 120 participants (79.5%) who identified as being part of majority culture in terms of sexual orientation, 36 participants (25.4%) who identified as being part of majority culture in terms of religion, and 103 participants (68.2%) who identified as being part of majority culture in terms of social class.

### *Procedures*

This study and all recruitment procedures were approved by the University of Oregon Office for the Protection of Human Subjects. Diversity in education graduate student participants received emails recruiting them to participate in this study based on their registration for the University of Oregon Diversity in Education course. Human services student participants received emails recruiting them to participate in this study based on their status as students in the University of Oregon Marriage and Family Therapy master's and Family and Human Services bachelor's degree programs. Student affairs participants received emails recruiting them to participate in this study based on their registration for a University of Oregon Center on Community and Diversity and



Community sponsored Multicultural Competence Institute for student affairs professionals. A control group sample of student affairs professionals was also recruited via a snowball sampling technique (Gall, Gall, & Borg, 2003). This recruitment strategy involves requesting that previously identified group members identify others in the population and recruit them to participate in the study. In this case, the student affairs professionals who participated in the multicultural competence institute were asked to identify other student affairs professionals at their college or university who were not institute participants. They were asked to recruit them to participate in this study by forwarding them an email with the consent form and survey link. This type of recruitment strategy is considered a non-probability sampling technique. Only seven control group participants completed the pre-test assessment and only one completed the post-test assessment, therefore, these participants have been excluded from all analyses.

Recruitment documents and consent forms are included in Appendices A through L.

Data were collected in the form of an online questionnaire consisting of four measures. Participants were deemed eligible to participate in the study if they were in any of the aforementioned University of Oregon classes or programs, or if they were participants in the multicultural training institute. Participants were also required to be able to read and write English and be at least 18 years of age in order to participate in the study. Diversity in Education students were offered extra credit worth five per cent of their total grade in the course. Human services students were not offered an incentive for their participation. Student affairs professionals were offered the opportunity to participate in an anonymous raffle for five \$10.00 and four \$25.00 gift certificates to an

on-line bookstore.

Recruitment emails included (a) a brief description of the study, (b) eligibility criteria, (c) the approximate length of time that it should take to complete the survey, (d) a statement of participants' approximate chances to win the gift certificates (if applicable), and (e) a web-based link that connected participants to the on-line survey.

When participants accessed the on-line survey, the first page was the statement of informed consent which included study information and an explicit statement of individuals' rights as a research participant. Participants were provided with information on campus and community support services in the statement of informed consent. Participants were assured of their anonymity and indicated consent by completing and submitting the survey, as stated in the statement of informed consent. It was estimated that participants would take approximately 20 to 30 minutes to complete the survey.

Surveys were administered via the on-line data collection service, SurveyMonkey. This data collection service provides confidential storage of data on secure computer servers. Participants entered their email addresses for the purpose of matching surveys for pre- and post-institute participants, and the data collection services assigned anonymous identification numbers to matched surveys to preserve anonymity. Email addresses were collected from all participants who wished to participate in the drawing for gift certificates (when eligible) and who wished to receive extra credit in the EDLD 637 course (when eligible). Participants were notified that giving their email address was optional and that responses to the survey would not be connected to their contact information.

### *Measures*

*Demographic questionnaire (DQ)*. Participants completed a 16-item demographic questionnaire designed for the purpose of this study. The questionnaire contained eight open-ended items asking participants to describe their multicultural background including ability/disability status, gender identity, nationality, sexual orientation, social class/socio-economic status, racial/ethnic background, and religion. There were also two opportunities for participants to describe “other cultural identity” in case there was a salient cultural identity left off of the list of identities. The DQ also included eight categorical items asking participants to identify as being a part of majority culture, both majority and minority culture, or minority culture in terms of each cultural group. The DQ is included in Appendix M.

*Recent change questionnaire (RCQ)*. Participants were asked to fill out a 17-item questionnaire about recent change related to multicultural competence. Participants compared their opinions now to their opinions two weeks prior to completing the measure. Participants completed each sentence with one of five ratings on a scale ranging from *a lot less* (scored as 1) to *a lot more* (scored as 5). Sample items include “I am \_\_\_\_\_ excited to engage in dialogues related to diversity with colleagues,” and “I am \_\_\_\_\_ able to identify my own strengths and weaknesses related to diversity.” These items are included in Appendix N.

*Multicultural Awareness, Knowledge, Skills Scale, Counselor Edition, Revised (MAKSS-CE-R)*. All participants who were human services students and student affairs professionals were asked to fill out the MAKSS-CE-R assessment tool (D’Andrea,

Daniels, & Heck, 1991). Diversity in education participants were not asked to take this measure because of its focus on counseling rather than teaching. The purpose of this measure is to assess multicultural competence in terms of three components: knowledge, awareness, and skills. This measure is designed to be used with psychologists and counselors, and the items are designed to measure knowledge, awareness, and skills related to multicultural competence in counseling-related fields. This measure consists of 33 self report items and three subscales, knowledge (13 items), awareness (10 items), and skills (10 items). Sample questions include “At the present time, how would you rate your understanding of the following term: Culture?” (knowledge subscale); “Promoting a client’s sense of psychological independence is usually a safe goal to strive for in most counseling situations” (awareness subscale); and “At this time in your life, how would you rate your understanding how your cultural background has influenced the way you think and act” (skills subscale). Each item is rated on a four point scale; the knowledge subscale ratings range from *very limited* (scored as 1) to *very good* (scored as 4); the awareness subscale ratings range from *strongly disagree* (scored as 1) to *strongly agree* (scored as 4); and the skills subscale ratings range from *very limited* (scored as 1) to *very good* (scored as 4).

The MAKSS-CE-R was selected for concurrent validity because it has been used in similar research related to assessing change in multicultural competence. In a review of over 800 studies assessing multicultural competence, Dunn, Smith, and Montoya (2006) found that only 137 utilized quantitative assessments of multicultural competence; of those, the MAKSS or a revised version of this measure was used in 29 studies (21%). The

participant demographics in those studies approximated current United States demographics in terms of gender and racial/ethnic background. In these studies, all reliability estimates were .70 or above for the knowledge and skills subscales of the MAKSS; however, the average reliability estimate for the awareness subscale was .64, falling below the .70 cutoff for acceptable reliability in exploratory, measure development research (Dunn, Smith, & Montoya, 2006; Nunnally & Bernstein, 1994; Henson, 2001). Correlations between the MAKSS and similar measures (the MCI, MCKAS, and CCCI-R) ranged from .43 to .65. The factor structure of the MAKSS was questioned (e.g., Constantine, Gloria, & Ladany, 2002), and therefore the authors created the revised version (the MAKSS-CE-R, Kim et al., 2003) used in this study. The authors report that the measure has a three factor structure, demonstrated by both exploratory and confirmatory factor analyses (Kim et al., 2003). This measure is included in Appendix O.

*Multicultural Competence Stage of Change Scale (MCSCS)*. Participants were asked to fill out a 47-item measure with items assessing their multicultural competence utilizing a stages of change perspective. This measure was created by Maya O'Neil, Alisia Caban, and Dr. Ellen McWhirter to assess multicultural competence stage of change. The test items were designed to be used with participants from any field or discipline, and to reflect the developmental nature of multicultural competence. Items were designed to correspond to multicultural competence levels at each of the stages of change. Participants responded to statements asking about their participation in multicultural activities and beliefs about aspects of multiculturalism. Sample items include "I do not presently engage in any activities related to diversity," "I wish that

people wouldn't emphasize differences between multicultural groups as much as they do," and "My understanding of diversity is a lifelong learning process." Participants were asked to rate these items on a five point scale with responses ranging from *this statement is not at all true for me* (scored as 1) to *this statement is very true for me* (scored as 5).

These items are included in Appendix P.

## CHAPTER III

### RESULTS

The purpose of this research study was to examine the factor structure, reliability, validity, and sensitivity to change of an original measure of multicultural competence, the MCSCS. I examined the following six research questions. Research question one: What is the factor structure of the MCSCS as assessed by exploratory factor analysis? Research question two: What is the reliability of the MCSCS full scale subscale scores as assessed by Cronbach's  $\alpha$ ? Research question three: What is the validity of the MCSCS as assessed by the total score and subscale correlations with the MAKSS-CE-R and a measure of self-assessed growth in multicultural competence? Research question four: Do subscale scores on the MCSCS differ to a statistically significant degree for participants based on context (i.e., diversity in education graduate students versus student affairs professionals)? Research question five: Do subscale scores on the MCSCS differ to a statistically significant degree for participants based on self-described multicultural identities including sexual orientation, race/ethnicity, and ability/disability status? Research question six: Do subscale scores on the MCSCS change to a statistically significant degree following participation in multicultural training?

#### *Analysis*

Data were analyzed using SPSS version 15.0 (SPSS for Windows Graduate Student Version, 2007). Data were examined for the presence of outliers and data entry

errors by reviewing histograms and boxplots. All values were within the expected range, and no item level data were changed or deleted. Additional data screening was conducted after measure subscales had been established to determine their appropriateness for follow-up analyses.

Missing data were not handled via imputation for these analyses for the following reasons: Certain participants did not complete the follow-up portion of the study, and because their data were 100 % missing for that portion of the study, these data were not imputed. Participants had the option to provide incomplete responses to any demographic items, and I chose not to impute demographic related data. Participants did not have the option to provide incomplete data on the non-demographic measures; rather, their responses to every item within each non-demographic measure were required before they could submit the responses. Therefore, no data were imputed, and all data within each measure were complete. Analyses examining demographic and pre-/post-test variables were conducted using listwise deletion within each analysis. Therefore, sample size varied across analyses, but, within each analysis, only participants who had complete data on all variables being analyzed were included. There were 123 diversity in education and student affairs participants who completed the pre-test. Only 64 (52%) completed the post-test assessment.

#### *Exploratory Factor Analysis (EFA)*

To answer research question one, I examined the factor structure of the MCSCS by conducting an EFA using principal axis factoring (Preacher & MacCallum, 2003). Because the hypothesized factors of the MCSCS were theoretically related, the EFAs



were run using oblique rotation, allowing factors to correlate (Preacher & MacCallum, 2003). The initial EFA resulted in an unclear factor structure as determined by the scree test and Kaiser-Guttman rule (Preacher & MacCallum, 2003). Thus, a series of EFAs were conducted to determine the best combination of items that represented theoretically related and empirically sound factors. Items were deleted based on having only pattern coefficients below .30 on all factors, having pattern coefficients of above .30 on factors that were theoretically unjustifiable, or having pattern coefficients of above .30 only on factors that were comprised of fewer than three items. After each group of items was deleted based on these criteria, the EFA was re-run on the new set of items and the resulting factor structure was examined to determine whether items on each factor were theoretically related. Six EFAs were run using these criteria, and therefore results must be interpreted with caution as multiple EFAs on the same dataset can result in a retained factor structure that is over fitted to the data. These empirical and theoretical decisions resulted in the deletion of 26 items from the measure, at which point the EFA resulted in a clear and theoretically justifiable factor structure. The final EFA resulted in the retention of six theoretically and empirically supported factors comprised of 21 items, and explained 64.69 % of the variance in the items. Table 2 presents items, factor labels, and pattern coefficients for the six retained factors and 21 items.

Table 2

*Items, Pattern Coefficients, and Factor Labels*

Item	Social Acceptability	Pre- Contemplation	Contemplation	Preparation	Action	Maintenance
27. I know that I have both strengths and weaknesses when it comes to diversity work.	.80					
38. I try hard to be aware of my own biases, racism, homophobia, and discriminatory or stereotyping thoughts and actions.	.77					
13. My understanding of diversity is a lifelong learning process.	.64					
14. Diversity is not important to the work that I do.	-.61					
32. I think diversity is important but it gets too much attention right now.		.75				
37. People are too fixated on diversity.		.67				
39. People should focus on being individuals rather than focusing on what cultural groups they belong to.			.66			

9. I wish that people wouldn't emphasize differences between cultural groups as much as they do.	.50
18. I don't usually engage people in diversity related conversations because it's easier to avoid these topics most of the time.	.77
21. Sometimes I avoid conversations about diversity because I don't want to be judged by others even though I think these conversations are important.	.72
5. I don't usually engage people in diversity related conversations because these conversations can be uncomfortable.	.68
45. I don't know what to do about biased, racist, homophobic, discriminatory, or stereotyping thoughts that I have about people sometimes.	.65
7. When I mess up in diversity conversations I try to defend myself.	.54
26. I am sometimes confused about why I might want to notice people's culture when I try to treat everyone as equals.	.31
	.38

19. I have recently begun engaging in more diversity related conversations and activities.	-.83
41. I am trying to find activities (such as reading, coursework, and events) related to diversity that I am interested in participating in.	-.43
33. I currently engage in many activities (such as reading, coursework, and events) related to diversity.	-.32
2. I have distanced myself from people I was close to or lost friends because they do not support the work that I do related to diversity efforts.	.67
11. My dedication to doing diversity related work has changed my friendship circle to reflect this commitment.	.63
8. There have been costs and impacts to my everyday life because of diversity related conversations and activities that I engage in on a regular basis.	.61
24. Engaging in diversity related work as much as I do has made it hard to have close relationships with people who do not support these efforts.	.51

---

---

*Note.* Factor 1 = Social Acceptability; Factor 2 = Maintenance; Factor 3 = Contemplation; Factor 4 = Pre-Contemplation; Factor 5 =

Action; Factor 6 = Preparation; Pattern coefficients below .30 are suppressed in this table for ease of factor interpretation.

Table 3

*Item Descriptive Statistics and Communalities*

Item	Factor	Mean	SD	Initial Communalities	Extraction Communalities
14. Diversity is not important to the work that I do.	Social Acceptability	4.76	0.80	.45	.51
27. I know that I have both strengths and weaknesses when it comes to diversity work.	Social Acceptability	4.56	0.87	.60	.68
13. My understanding of diversity is a lifelong learning process.	Social Acceptability	4.54	1.09	.42	.44
38. I try hard to be aware of my own biases, racism, homophobia, and discriminatory or stereotyping thoughts and actions.	Social Acceptability	4.52	0.89	.56	.66
32. I think diversity is important but it gets too much attention right now.	Pre-Contemplation	4.18	1.10	.63	.71
37. People are too fixated on diversity.	Pre-Contemplation	4.12	0.99	.61	.63
9. I wish that people wouldn't emphasize differences between	Pre-Contemplation	3.35	1.21	.29	.27

cultural groups as much as they do.					
39. People should focus on being individuals rather than focusing on what cultural groups they belong to.	Pre-Contemplation	3.24	1.08	.40	.47
5. I don't usually engage people in diversity related conversations because these conversations can be uncomfortable.	Contemplation	3.97	0.99	.45	.52
18. I don't usually engage people in diversity related conversations because it's easier to avoid these topics most of the time.	Contemplation	3.61	1.14	.61	.77
21. Sometimes I avoid conversations about diversity because I don't want to be judged by others even though I think these conversations are important.	Contemplation	3.51	1.13	.49	.57
7. When I mess up in diversity conversations I try to defend myself.	Preparation	3.61	1.06	.31	.33
26. I am sometimes confused about why I might want to notice people's culture when I try to treat everyone as equals.	Preparation	3.51	1.33	.36	.37

45. I don't know what to do about biased, racist, homophobic, discriminatory, or stereotyping thoughts that I have about people sometimes.	Preparation	3.49	1.23	.31	.43
33. I currently engage in many activities (such as reading, coursework, and events) related to diversity.	Action	3.60	1.24	.40	.43
41. I am trying to find activities (such as reading, coursework, and events) related to diversity that I am interested in participating in.	Action	3.36	1.20	.44	.51
19. I have recently begun engaging in more diversity related conversations and activities.	Action	3.33	1.16	.36	.66
11. My dedication to doing diversity related work has changed my friendship circle to reflect this commitment.	Maintenance	2.78	1.34	.47	.55
24. Engaging in diversity related work as much as I do has made it hard to have close relationships with people who do not support these efforts.	Maintenance	2.62	1.40	.36	.43
8. There have been costs and impacts	Maintenance	2.43	1.36	.39	.42
					.58



to my everyday life because of diversity related conversations and activities that I engage in on a regular basis.

2. I have distanced myself from people I was close to or lost friends because they do not support the work that I do related to diversity efforts.

Maintenance      2.26      1.36      .36      .41

---

*Note.* Items are sorted by factor label and mean score within each factor.

Five of the six factors roughly corresponded to the stages of change model. The first factor was labeled Social Acceptability. The remaining five factors roughly corresponded to the stages of change model and were labeled as follows: Maintenance (four items), Contemplation (three items), Pre-Contemplation (four items), Action (three items), and Preparation (three items). The factor labeled Social Acceptability consisted of four items that describe socially acceptable statements about the importance of learning about diversity. The factor labeled Maintenance consisted of four items related to being engaged in diversity work to the extent that it affects personal relationships. The factor labeled Contemplation consisted of three items about avoiding conversations related to diversity. The factor labeled Pre-Contemplation consisted of four items emphasizing that people are too focused on diversity. The factor labeled Action consisted of three items associated with being engaged in diversity-related activities, and this factor is comprised of two items with pattern coefficients below .50, indicating that this is a relatively weak factor. The factor labeled Preparation consisted of three items associated with being confused about how to handle situations related to diversity. This factor was comprised of one item with a pattern coefficient below .50, and this item also obtained a pattern coefficient of above .30 on the Contemplation factor, indicating that the Preparation factor is a relatively weak factor. The Pre-Contemplation, Contemplation, and Preparation factors were all factors comprised of items indicating a lack of cultural competence, and therefore the items comprising these factors were reverse scored for ease of interpretation. That is, with reverse scoring, higher scores for each factor indicate greater multicultural competence. Additionally, one item from the Social Acceptability

factor was reverse scored as it was indicative of a lack of multicultural competence, and had a negative factor loading on that factor.

This factor structure was supported by the Kaiser-Guttman rule and scree test. Additionally, Velicer's minimum average partial (MAP) test and parallel analysis were conducted on the final 21 retained items to determine if a six factor structure was justifiable (O'Connor, 2003). Results of the MAP test indicated that the data supported a four factor structure, but parallel analysis indicated that a six factor structure was supported. Therefore, an EFA was run with a forced four factor structure. The resulting four factors were similar to the six factor structure with the items associated with Pre-Contemplation and Contemplation loading together, and the items associated with Action and Maintenance loading together. Therefore, I decided to retain a six factor structure for additional analyses, using the second through sixth factors in all analyses related to assessing multicultural competence from a stages of change perspective.

Table 4 presents the correlations among the six retained factors. The factor correlations indicate that though the factors were correlated, the correlations were relatively low. Though all factor correlations were .26 or less, the theoretical linkages among factors supported allowing the factors to correlate in the EFA, and therefore I did not re-examine the EFA results using orthogonal rotation (Preacher & MacCallum, 2003).

Table 4

*Factor Correlation Matrix*

Factor	2	3	4	5	6
1. Social Acceptability	.26	.17	.18	-.09	-.14
2. Pre-Contemplation	-	.26	.20	-.26	-.19
3. Contemplation		-	.12	-.19	-.18
4. Preparation			-	-.07	-.25
5. Action				-	.01
6. Maintenance					-

### *Descriptive Statistics*

To answer research question two, I report descriptive statistics and Cronbach's  $\alpha$  coefficients by subscale and total score on all measures (MCSCS, MAKSS-CE-R, and RCQ) in Table 5. The average score for each MCSCS factor ranged from 4.60 out of 5 on the Social Acceptability subscale to 2.52 out of 5 on the Maintenance subscale. The mean scores for level of agreement decreased from subscale to subscale in the following order: Social Acceptability, Pre-Contemplation, Contemplation, Preparation, Action, and Maintenance, which supports the labeling and ordering of the factors in accordance with the stages of change model. The standard deviations were similar across subscales, with the Social Acceptability subscale obtaining the smallest standard deviation of all subscales. The MCSCS full scale score obtained a relatively small standard deviation, indicating a lack of variability in scores among this group of participants.

Values of Cronbach's  $\alpha$  coefficients for MAKSS-CE-R subscales were comparable to existing literature. The Cronbach's  $\alpha$  coefficient for the Awareness subscale fell below the .90 cutoff for tests used in applied or clinical settings, as well as the more liberal .70 cutoff for exploratory research focused on test development (Dunn, Smith, & Montoya, 2006; Nunnally & Bernstein, 1994; Henson, 2001) Similarly, the Preparation and Action subscales of the MCSCS at both pre- and post-test fell below these cutoff values, and the Social Acceptability subscale obtained a very low Cronbach's  $\alpha$  coefficient of .38 at post-test (Dunn, Smith, & Montoya, 2006; Nunnally & Bernstein, 1994; Henson, 2001).

For ease of interpretation and comparison purposes, MCSCS scores are presented as both total and average scores because subscales were comprised of different numbers of items. All subscale average scores are presented on a five point scale with scores ranging from one to five. Cronbach's  $\alpha$  values were calculated for each measure and subscale to estimate reliability (Mertler & Vennatta, 2002), and this information is presented in Table 5. Because the MCSCS was administered at two time points for analyses investigating the measure's sensitivity to change over time, descriptive statistics and Cronbach's  $\alpha$  coefficients are reported in Table 5 for both pre- and post-test administrations.

Table 5

*Descriptive Statistics and Reliability Coefficients for Pre- and Post-Test Total, Subscale, and Average Scores*

Measure	N	$\alpha$	Total Score					Average Score				
			Min	Max	Mean	SD	Min	Max	Mean	SD		
MCSCS	144	.82	37	101	75.36	11.31	1.76	4.81	3.59	0.54		
Social Acceptability	144	.80	4	20	18.38	2.91	1.00	5.00	4.60	0.73		
Pre-Contemplation	144	.75	4	20	14.89	3.34	1.00	5.00	3.72	0.83		
Contemplation	144	.76	3	15	11.09	2.69	1.00	5.00	3.70	0.90		
Preparation	144	.57	4	15	10.62	2.67	1.33	5.00	3.54	0.89		
Action	144	.65	3	15	10.29	2.77	1.00	5.00	3.43	0.92		
Maintenance	144	.72	4	20	10.09	4.02	1.00	5.00	2.52	1.00		
MAKSS-CE-R	124	.87	54	115	80.33	11.98						
Awareness	129	.63	16	36	24.36	3.72						
Knowledge	130	.82	19	52	32.45	6.55						
Skills	131	.92	10	40	23.57	6.37						

RCQ	139	.95	27	85	59.97	9.19	Post-test					
MCSCS	67	.83	50	101	78.52	10.59	2.38	4.81	3.74	0.50		
Social Acceptability	67	.38	12	20	18.36	2.04	3.00	5.00	4.59	0.51		
Pre-Contemplation	67	.73	6	20	15.64	3.25	1.50	5.00	3.91	0.81		
Contemplation	67	.73	6	15	11.64	2.33	2.00	5.00	3.88	0.78		
Preparation	67	.57	3	15	11.01	2.35	1.00	5.00	3.67	0.78		
Action	67	.63	4	15	11.43	2.50	1.33	5.00	3.81	0.83		
Maintenance	67	.79	4	20	10.43	3.88	1.00	5.00	2.61	0.97		
RCQ	66	.96	27	85	68.44	10.51						

*Note.* MCSCS = Multicultural Competence Stage of Change Scale; MAKSS-CE-R = Multicultural Awareness, Knowledge, Skills Scale, Counselor Edition, Revised; RCQ = Recent Change Questionnaire.



Histograms and boxplots were examined for all total and subscale scores on the MCSCS, MAKSS-CE-R, and RCQ to determine whether there were outliers, influential cases, or data entry errors. These analyses were conducted by item, and repeated for subscale and total scores on each measure. The only outliers were on the Social Acceptability subscale of the MCSCS: There were three participants who obtained scores more than three standard deviations below the mean. Some outlying scores are commonplace in datasets with large ( $n > 100$ ) sample sizes (Mertler & Venatta, 2002). These participants' scores were plausible, and the negative skew of this subscale resulted in many participants obtaining scores at least one standard deviation below the mean. The participants were not deleted from the multivariate analysis of variance (MANOVA) because the factor on which they were outliers (Social Acceptability) was not included as part of the MANOVA as it is not linked to the stages of change model. Additionally, I conducted a Mahalanobis distance test to determine if any of the participants had outlying scores on subscales included in the MANOVA. These results indicated that there were no multivariate outliers using a liberal significance value of  $p < .001$  as recommended by Tabachnick and Fidell (2001).

Normality was assessed by a visual examination of histograms and bivariate scatterplots. The only measure or subscale that appeared to be non-normally distributed was the MCSCS Social Acceptability factor. This negative skew is in line with theory, as socially acceptable items are likely to be endorsed by almost all participants. This subscale was not included in the MANOVA.

Linearity and homoscedasticity were investigated by a visual examination of bivariate scatterplots, and no apparent deviations from linear relationships among the data were noted. Homoscedasticity was also examined via Box's Test of Equality of Covariance Matrices which yielded non-statistically significant results, indicating that the observed covariance matrices of the dependent variable do not differ to a statistically significant degree across groups,  $F(110, 3788) = 1.03, p > .05$  (Tabachnick & Fidell, 2001). Though there were unequal sample sizes in each cell, non-significant variance in covariance matrices indicates that MANOVA will be robust to differences in cell size (Tabachnick & Fidell, 2001). Levene's Test of Equality of Error Variances yielded non-significant results for all pre- and post-test subscales with the exception of the pre-test Preparation subscale,  $F(3, 60) = 4.36, p < .05$ . These results indicate that statistical significance test results related to the Preparation subscale should be interpreted with caution. The results related to this subscale utilized a more stringent  $\alpha$  level of  $p < .01$  as recommended by Tabachnick and Fidell (2001).

Finally, Tabachnick and Fidell (2001) note that MANOVAs require at least as many participants per cell as there are dependent variables. There were five MCSCS subscales included as dependent variables in this MANOVA. The smallest number of participants per cell in the analysis was eight, which is above the minimum requirement of five participants per cell.

To answer research question three, I reported correlations among total and subscale scores on the measures in Table 6. The results indicate that, as hypothesized, the subscale and total scores on the MCSCS were significantly correlated with the MAKSS-

CE-R and the RCQ total and subscale scores. There were several exceptions to these findings. The Social Acceptability subscale was not significantly correlated with many of the MCSCS subscales; this is not unexpected as the measure is not meant to be correlated with socially acceptable responses, but with responses indicative of multicultural competence. The Pre-Contemplation subscale was not significantly correlated with the MAKSS-CE-R skills subscale. The Contemplation subscale was not significantly correlated with the MAKSS-CE-R awareness subscale. The Preparation subscale was not significantly correlated with the Maintenance subscale. The Action subscale was not significantly correlated with the MAKSS-CE-R knowledge, awareness, or skills subscales. The Maintenance subscale was not significantly correlated with the Preparation subscale or with the MAKSS-CE-R awareness or skills subscales.

Table 6

*Correlations Among Measures and Subscales by Time of Administration*

Measure	2	3	4	5
1. MCSCS, full scale, pre-test	.59*(144)	.70*(144)	.58*(144)	.50*(144)
2. MCSCS Social Acceptability, pre-test		.32*(144)	.21*(144)	.16(144)
3. MCSCS Pre-Contemplation, pre-test			.28*(144)	.36*(144)
4. MCSCS Contemplation, pre-test				.27*(144)
5. MCSCS Preparation, pre-test				
	6	7	8	9
1. MCSCS, full scale, pre-test	.70*(144)	.61*(144)	.45*(124)	.24*(129)
2. MCSCS Social Acceptability, pre-test	.37*(144)	.17*(144)	.12(124)	.07(129)
3. MCSCS Pre-Contemplation, pre-test	.36*(144)	.22*(144)	.26*(124)	.18*(129)
4. MCSCS Contemplation, pre-test	.28*(144)	.20*(144)	.43*(124)	.10(129)
5. MCSCS Preparation, pre-test	.17*(144)	.01(144)	.44*(124)	.25*(129)
6. MCSCS Action, pre-test		.40*(144)	.24*(124)	.14(129)

	10	11	12	13
7. MCSCS Maintenance, pre-test			.27*(124)	.16(129)
8. MAKSS-CE-R, full scale, pre-test				.43*(124)
9. MAKSS-CE-R Awareness, pre-test				
1. MCSCS, full scale, pre-test	.38*(130)	.25*(131)	.36*(139)	.72*(65)
2. MCSCS Social Acceptability, pre-test	-.03(130)	.05(131)	.04(139)	.42*(65)
3. MCSCS Pre-Contemplation, pre-test	.25*(130)	.14(131)	.27*(139)	.41*(65)
4. MCSCS Contemplation, pre-test	.41*(130)	.36*(131)	.29*(139)	.43*(65)
5. MCSCS Preparation, pre-test	.40*(130)	.33*(131)	.18*(139)	.30*(65)
6. MCSCS Action, pre-test	.16(130)	.07(131)	.40*(139)	.43*(65)
7. MCSCS Maintenance, pre-test	.26*(130)	.06(131)	.19*(139)	.54*(65)
8. MAKSS, full scale, pre-test	.85*(124)	.80*(124)	.16(124)	.30*(58)
9. MAKSS-CE-R Awareness, pre-test	.21*(125)	.02(127)	-.05(129)	.25*(61)
10. MAKSS-CE-R Knowledge, pre-test		.53*(128)	.30*(130)	.27*(59)
11. MAKSS-CE-R Skills, pre-test			.08(131)	.11(60)

.38\*(64)

12. RCQ, pre-test

13. MCSCS, full scale, post-test

	14	15	16	17
1. MCSCS, full scale, pre-test	.23(65)	.57*(65)	.47*(65)	.36*(65)
2. MCSCS Social Acceptability, pre-test	.14(65)	.42*(65)	.18(65)	.49*(65)
3. MCSCS Pre-Contemplation, pre-test	.12(65)	.53*(65)	.13(65)	.19(65)
4. MCSCS Contemplation, pre-test	.14(65)	.31*(65)	.73*(65)	.25*(65)
5. MCSCS Preparation, pre-test	-.01(65)	.22(65)	.18(65)	.34*(65)
6. MCSCS Action, pre-test	.28*(65)	.32*(65)	.17(65)	.24(65)
7. MCSCS Maintenance, pre-test	.13(65)	.26*(65)	.33*(65)	-.03(65)
8. MAKSS-CE-R, full scale, pre-test	.06(58)	.18(58)	.28*(58)	.22(58)
9. MAKSS-CE-R Awareness, pre-test	.08(61)	.30*(61)	.01(61)	.17(61)
10. MAKSS-CE-R Knowledge, pre-test	.03(59)	.12(59)	.29*(59)	.21(59)
11. MAKSS-CE-R Skills, pre-test	.00(60)	.02(60)	.19(60)	.14(60)
12. RCQ, pre-test	.23(64)	.27*(64)	.31*(64)	.20(64)

13. MCSCS, full scale, post-test	.63*(67)	.76*(67)	.56*(67)	.58*(67)
14. MCSCS Social Acceptability, post-test		.44*(67)	.32*(67)	.34*(67)
15. MCSCS Pre-Contemplation, post-test			.27*(67)	.49*(67)
16. MCSCS Contemplation, post-test				.35*(67)

17. MCSCS Preparation, post-test

	18	19	20
1. MCSCS, full scale, pre-test	.49*(65)	.57*(65)	.16(64)
2. MCSCS Social Acceptability, pre-test	.26*(65)	.18(65)	.05(64)
3. MCSCS Pre-Contemplation, pre-test	.29*(65)	.26*(65)	.18(64)
4. MCSCS Contemplation, pre-test	.18(65)	.15(65)	.10(64)
5. MCSCS Preparation, pre-test	.22(65)	.21(65)	.17(64)
6. MCSCS Action, pre-test	.45*(65)	.22(65)	.07(64)
7. MCSCS Maintenance, pre-test	.33*(65)	.79*(65)	.03(64)
8. MAKSS, full scale, pre-test	.16(58)	.22(58)	.04(58)
9. MAKSS-CE-R Awareness, pre-test	.15(61)	.18(61)	-.08(61)

10. MAKSS-CE-R Knowledge, pre-test	.17(59)	.20(59)	.06(59)
11. MAKSS-CE-R Skills, pre-test	-.02(60)	.11(60)	-.02(60)
12. RCQ, pre-test	.43*(64)	.10(64)	.28*(63)
13. MCSCS, full scale, post-test	.74*(67)	.60*(67)	.38*(66)
14. MCSCS Social Acceptability, post-test	.46*(67)	.14(67)	.29*(66)
15. MCSCS Pre-Contemplation, post-test	.47*(67)	.25*(67)	.37*(66)
16. MCSCS Contemplation, post-test	.26*(67)	.16(67)	.25*(66)
17. MCSCS Preparation, post-test	.30*(67)	-.02(67)	.32*(66)
18. MCSCS Action, post-test		.41*(67)	.28*(66)
19. MCSCS Maintenance, post-test			.07(66)
20. RCQ, post-test			

*Note.* Sample size is included in parentheses. \* =  $p < .05$ ; MCSCS = Multicultural Competence Stage of Change Scale; MAKSS-CE-R

= Multicultural Awareness, Knowledge, Skills Scale, Counselor Edition, Revised; RCQ = Recent Change Questionnaire.



### *Group Comparisons*

To answer research questions four, five, and six, I conducted a repeated measures, 2x2x(2) MANOVA to examine differences in mean MCSCS subscale scores by context (between subjects variable) and minority identification (between subjects variable) over time (within subjects variable). Only the second through sixth factors were included as dependent variables in these analyses, because the first factor was not related to the stages of change model. Therefore, the subscales included as dependent variables were the Pre-Contemplation, Contemplation, Preparation, Action, and Maintenance subscales of the MCSCS. The between subjects, independent variable of context was a dichotomous variable referring to whether participants were part of the group of student affairs professionals who elected to participate in a diversity training, or part of the group of graduate students in education who were participating in a required diversity course. The between subjects, independent variable of minority identification was a dichotomous variable categorizing participants as identifying or not identifying as a minority in terms of any of the following categories: disability/ability status, race/ethnicity, or sexual orientation. The within subjects, repeated measures, independent variable of time was included to examine whether there were differences in scores before and after participating in a diversity training or course (Stevens, 2001).

The within subjects multivariate results indicated that there were no statistically significant differences in mean MCSCS subscale scores based on the interaction of time by context by minority status, Wilks'  $\Lambda = .86$ ,  $F(5, 56) = 1.88$ ,  $p > .05$ ,  $1-\Lambda = .14$ . There were no statistically significant differences in mean MCSCS subscale scores based on the

interaction of time by minority status, Wilks'  $\Lambda = .96$ ,  $F(5, 56) = 0.45$ ,  $p > .05$ ,  $1-\Lambda = .04$ .

There were no statistically significant differences in mean MCSCS subscale scores based on the interaction of time by context, Wilks'  $\Lambda = .91$ ,  $F(5, 56) = 1.09$ ,  $p > .05$ ,  $1-\Lambda = .09$ .

There were statistically significant differences in mean MCSCS subscale scores based on time, Wilks'  $\Lambda = .78$ ,  $F(5, 56) = 3.15$ ,  $p < .05$ ,  $1-\Lambda = .22$ .

In conjunction with conducting the MANOVA, I examined the discriminant function used to maximally differentiate between the groups. There were only two levels of time, and therefore there was only one discriminant function to maximally differentiate between the two groups. The canonical correlation was .47, indicating that approximately 22% of the variance in pre-test versus post-test scores was explained by the discriminant function. The standardized discriminant function coefficients (SDFCs) and structure coefficients (SCs) are reported in Table 7. The SDFCs indicated that the Contemplation and Action subscales had the largest contribution to the formation of the discriminant function, whereas the Preparation and Maintenance subscales had relatively smaller contributions to the formation of the discriminant function. The SCs indicated that the Pre-Contemplation, Contemplation, and Action subscales were strongly related to the discriminant function demonstrated by correlations of -.50 to -.76. The subscales of Preparation and Maintenance, however, were much more weakly related to the discriminant function, with correlations of -.09 and -.17, respectively.

The between subjects multivariate results indicated that there were no statistically significant differences in mean MCSCS subscale scores based on the interaction of context by minority status, Wilks'  $\Lambda = .93$ ,  $F(5, 56) = 0.83$ ,  $p > .05$ ,  $1-\Lambda = .07$ . There

were no statistically significant differences in mean MCSCS subscale scores based on minority status, Wilks'  $\Lambda = .95$ ,  $F(5, 56) = 0.62$ ,  $p > .05$ ,  $1-\Lambda = .05$ . There were statistically significant differences in mean MCSCS subscale scores based on context, Wilks'  $\Lambda = .75$ ,  $F(5, 56) = 3.74$ ,  $p < .05$ ,  $1-\Lambda = .25$ .

There were only two levels of the context variable, and therefore there was only one discriminant function to maximally differentiate between the two groups. The canonical correlation was .50, indicating that approximately 25% of the variance in MCSCS scores based on context was explained by the discriminant function. The SDFCs and SCs are reported in Table 7. The SDFCs indicated that the Preparation subscale had the largest contribution to the formation of the discriminant function, whereas the Action subscale had almost no contribution to the formation of the discriminant function. The SCs indicated that the Preparation subscale was most strongly related to the discriminant function, with a correlation of  $-.85$ . The Pre-Contemplation and Action subscales were also strongly correlated with the discriminant function, with correlations of  $-.60$  and  $-.41$ , respectively. The results indicated that the subscales of Contemplation and Maintenance, however, were much more weakly related to the discriminant function, with correlations of  $.02$  and  $-.21$ , respectively.

Table 7

*Standardized Discriminant Function Coefficients (SDFCs) and Structure Coefficients (SCs) for Each Subscale by Time and Context*

Subscale	Time		Context	
	SDFC	SC	SDFC	SC
Pre-Contemplation	.44	.50	.39	.60
Contemplation	.57	.60	-.41	-.02
Preparation	-.26	.09	.85	.85
Action	.57	.76	-.01	.41
Maintenance	.16	.17	.22	.21

Because the multivariate tests indicated that there were statistically significant group differences by context and by time, these relationships were examined by subscale. A Bonferroni correction was applied to correct for an inflated Type I error rate that results from conducting multiple comparisons, and this adjustment has been applied to all reported results (Tabachnick & Fidell, 2001). The subscale results based on context are as follows: There were statistically significant differences in mean MCSCS Pre-Contemplation subscale score based on context, with student affairs participants scoring an average of .48 points higher than education students on this subscale,  $F(1, 60) = 7.16$ ,  $p < .05$ ;  $\eta^2 = .11$ . There were no statistically significant differences in mean MCSCS Contemplation subscale score based on context,  $F(1, 60) = 0.01$ ,  $p > .05$ ;  $\eta^2 = .00$ . There were statistically significant differences in mean MCSCS Preparation subscale score based on context using a more conservative  $\alpha$  level to account for inequality of error variances across groups, with student affairs participants scoring an average of .58 points higher than education students on this subscale,  $F(1, 60) = 14.37$ ,  $p < .01$ ;  $\eta^2 = .19$ . There were no statistically significant differences in mean MCSCS Action subscale score based on context,  $F(1, 60) = 3.44$ ,  $p > .05$ ;  $\eta^2 = .05$ . There were no statistically significant differences in mean MCSCS Maintenance subscale score based on context,  $F(1, 60) = 0.88$ ,  $p > .05$ ;  $\eta^2 = .01$ .

The subscale results based on time are as follows: There were statistically significant differences in mean MCSCS Pre-Contemplation subscale score based on time with participants scoring an average of .21 points higher on the post-training assessment of this subscale,  $F(1, 60) = 4.22$ ,  $p < .05$ ;  $\eta^2 = .07$ . There were statistically significant

differences in mean MCSCS Contemplation subscale score based on time with participants scoring an average of .20 points higher on the post-training assessment of this subscale,  $F(1, 60) = 6.05, p < .05; \eta^2 = .09$ . There were no statistically significant differences in mean MCSCS Preparation subscale score based on time,  $F(1, 60) = 0.12, p > .05; \eta^2 = .00$ . There were statistically significant differences in mean MCSCS Action subscale score based on time with participants scoring an average of .39 points higher on the post-training assessment of this subscale,  $F(1, 60) = 9.78, p < .05; \eta^2 = .14$ . There were no statistically significant differences in mean MCSCS Maintenance subscale score based on time,  $F(1, 60) = 0.47, p > .05; \eta^2 = .01$ .

## CHAPTER IV

### DISCUSSION

The purpose of this research study was to examine the factor structure, reliability, validity, and sensitivity to change of an original measure of multicultural competence, the MCSCS. In this chapter, I will discuss the findings related to each research question and identify limitations related to each research question and to the overall study. I will discuss implications of these findings, highlighting how this measure can be used in applied settings, and I will identify areas of future research that will be undertaken to strengthen the utility of this assessment tool.

#### *Factor Structure of the MCSCS*

The factor structure of the proposed 47-item MCSCS assessment tool was examined by conducting successive EFAs and removing items with low pattern coefficients, multiple high pattern coefficients, or pattern coefficients on factors that were not theoretically plausible. The initial measure contained many similarly worded items, and item pools were stacked for each factor. I conducted a factor analysis to determine which items functioned well in a five factor structure that corresponded to the five stages of change. This analysis was designed to eliminate many items that did not function well within this theoretical model. Twenty-one items were retained in the final EFA, and a six factor structure was selected to create subscales. This factor structure was based on the results of the Kaiser-Guttman rule, the subjective scree test, and parallel analysis

(Preacher & MacCallum, 2000) as well as theoretical plausibility of the factors. These six factors correspond to the five stages of change applied to multicultural competence and one additional Social Acceptability factor, the latter of which was dropped from further analyses due to its theoretical incompatibility with the research questions. This factor structure explains 64.69% of the variance in the measure. Item pattern coefficients on each subscale ranged from .32 to .83.

There were several limitations related to establishing a factor structure for the MCSCS. Because I conducted a series of EFAs to successively remove items that did not function in accordance with the proposed stages of change model, it is likely that these results capitalize on chance variation in the data, and the final factor structure is over fitted to the data.

One criterion for determining factor structure, the map test, resulted in a four factor solution, which was inconsistent with the other criteria used. These analyses utilized multiple groups (student affairs professionals, human services students, and diversity in education students), and these groups were all included in one EFA. Additionally, I did not examine the factor structure based on other demographic group differences, such as gender or ethnicity in the EFA. It is possible that there could be important differences in the factor structure for these populations that could not be examined due to the small sample size of each group.

Though the final six factor structure was generally supported by analyses, there were some items and factors that were relatively weak. Among all retained items in the final measure, there was one item with pattern coefficients of above .30 on more than one



factor. Item 26 was retained as an item in the Action subscale with a pattern coefficient of .38, though it also had a pattern coefficient of .31 on the Pre-Contemplation subscale. The Action and Preparation subscales were the two weakest factors, as indicated by the low pattern coefficients of some items comprising those factors. Two items that were retained in the Action and Preparation factors had pattern coefficients below .40, indicating that these items are in need of revision in future versions of this measure. Additionally, the factors correlations were .26 or less, indicating that the factors were not as strongly correlated as originally hypothesized.

These limitations should be addressed by conducting follow-up research on the measure with different populations and larger sample sizes. Due to sample size limitations, an EFA was conducted but not followed by a confirmatory factor analysis. As such, no model fit indices were obtained, no alternative models were tested to examine and compare possible models, and the possibility that the EFA results were over fitted to the data could not be examined. Future research should utilize confirmatory factor analysis to confirm the factor structure of the measure related to factor correlations and item coefficients, confirm the factor structure of the measure with different samples, highlight differences in response patterns among different populations, and examine the relative goodness of fit of alternative factor structures. Finally, item and factor weaknesses should be addressed by revising the measure and re-examining the factor structure and pattern coefficients of the revised items.

### *Reliability of the MCSCS*

The reliability of the MCSCS was examined by obtaining values of Cronbach's  $\alpha$  for total and subscale scores. While some of the subscales and the measure as a whole demonstrated adequate reliability for exploratory research focused on measure development ( $\alpha > .70$ ; Dunn, Smith, & Montoya, 2006; Nunnally & Bernstein, 1994; Henson, 2001), there were some subscales with reliability coefficients of less than .70. The pre-test Preparation ( $\alpha = .57$ ) and Action ( $\alpha = .65$ ) subscales and the post-test Social Acceptability ( $\alpha = .38$ ), Preparation ( $\alpha = .57$ ), and Action ( $\alpha = .63$ ) subscales demonstrated low reliability as assessed by Cronbach's  $\alpha$ .

The reliability of the Social Acceptability subscale at post-test is the only extremely low value obtained in this study ( $\alpha = .38$ ). These results are of less importance because this factor was not included in the final analyses due to its incompatibility with the stages of change model. Future research using this subscale should re-examine its reliability to determine whether the low value was due to chance, or whether the subscale continues to demonstrate inadequate reliability.

The internal consistency reliability coefficients of the stages of change-based subscales are similar to low values demonstrated by other measures of multicultural competence. In this study, for example, the reliability of the MAKSS-CE-R awareness subscale was demonstrated to be  $\alpha = .63$ . This value is comparable to values obtained in existing research on the MAKSS-CE-R awareness subscale (Dunn, Smith, & Montoya, 2006). Research examining assessment tools related to stages of change applied to other aspects of behavior change such as alcohol and drug abuse have also demonstrated a wide

range of internal consistency reliability. Such assessment tools have demonstrated internal consistency reliability coefficients of between .34 to .92 for full scale and subscale scores (e.g., Prochaska, Velicer, DiClemente, & Fava, 1988; Tejero, Trujols, Hernandez, Perez de los Cobos, & Casas, 1997; VonSternberg, 2005). Such variability in reliability coefficients demonstrated by measures of multicultural competence and stages of change demonstrate the difficulty in assessing these concepts in a reliable manner.

Because Cronbach's  $\alpha$  is affected by number of items (Nunnally & Bernstein, 1994; Henson, 2001), it is likely that reliability estimates for the MCSCS subscales will improve with the addition of theoretically related items to each subscale. Therefore, future research should examine the effect of adding theoretically related items to each factor on subscale reliability. Items on the less reliable Preparation and Action subscales should also be examined and revised. For this measure to be recommended for use in applied or clinical settings, items on the Preparation and Action subscales must be revised and/or additional items must be included in the measure so that subscale reliabilities are demonstrated to be above the .90 cutoff recommended for these settings (Nunnally & Bernstein, 1994; Henson, 2001).

#### *Validity of the MCSCS*

To establish validity for the stages of change subscales of this measure, I examined correlations among MCSCS, MAKSS-CR-R, and RCQ total and subscale scores. These correlations indicated that, overall, the MCSCS total and subscale scores were significantly correlated with the MAKSS-CE-R and RCQ total and subscale scores. There are several exceptions. First, the Social Acceptability subscale was not

significantly correlated with many of the MCSCS subscales. This is not unexpected as the measure is not meant to be correlated with socially acceptable responses but instead with responses indicative of multicultural competence. However, it is possible that some responses indicative of multicultural competence on the MCSCS could also be socially acceptable responses. Therefore, though strong correlations across subscales are not expected, some smaller correlations among subscales are likely. Future research should examine these correlations further and assess discriminant validity by correlating measure subscales with other assessments of social desirability. This research will help determine whether the Social Acceptability subscale is highly correlated with similar measures assessing social desirability. It will also help to establish discriminant validity of the MCSCS stages of change subscales, by demonstrating their dissimilarity from measures of social desirability. If the Social Acceptability subscale is highly correlated with measures of social desirability, including these items in MCSCS administrations could be useful. It would be possible to use scores on the Social Acceptability subscale as a covariate, partialling out any variance in other variables associated with social desirable responses. This way, only the variance in multicultural competence stage of change-based subscales not associated with social desirability could be examined.

Subscales other than the Social Acceptability subscale were also not correlated with the other measures of multicultural competence to a statistically significant degree. The Pre-Contemplation subscale was not significantly correlated with the MAKSS-CE-R skills subscale. The Contemplation subscale was not significantly correlated with the MAKSS-CE-R awareness subscale. The Preparation subscale was not significantly

correlated with the Maintenance subscale. The Action subscale was not significantly correlated with the MAKSS-CE-R knowledge, awareness, or skills subscales. The Maintenance subscale was not significantly correlated with the Preparation subscale or with the MAKSS-CE-R awareness or skills subscales. These non-significant results are likely due to low reliability of some of the MCSCS and MAKSS-CE-R subscales, and future research examining the effect of revising MCSCS items to increase reliability should also examine the effect that improved reliability has on correlations among subscales.

These correlations among the MCSCS total and subscale scores with the MAKSS-CE-R and RCQ total and subscale scores partially support the validity of the MCSCS in assessing the construct of multicultural competence. There is no particular pattern to the non-significant results that would indicate that a particular subscale is not functioning as expected; rather, the pattern of results reflects the low reliability of some of the MAKSS-CE-R and MCSCS subscales. Replication studies that examine the relationships among MCSCS subscales and existing measures of multicultural competence will help establish whether these patterns of significant and non-significant correlations are due to chance or whether they indicate underlying relationships among the constructs.

#### *Group Differences in MCSCS Score*

To examine whether there were differences in MCSCS scores based on minority status and context before and after participation in a multicultural competence training, I conducted a MANOVA using each of the MCSCS stages of change subscales as

dependent variables. The results of this analysis indicated that there were no statistically significant differences in MCSCS score based on interactions among the independent variables or based on the main effect of minority status. There were statistically significant differences based on both main effects of context and time. Though there were not statistically significant interaction effects, this is perhaps partly due to the low reliability of some subscales affecting power, and the lack of statistical power due to a relatively small sample size. The three-way interaction effect of time by context by minority status, for example obtained an effect size of .14, though this result was not statistically significant. Additional research with larger sample sizes using a more reliable, revised version of the measure is warranted to further examine the effect of these group differences on MCSCS scores.

The follow-up univariate analyses based on subscale indicated that participants who were student affairs professionals electing to participate in a multicultural competence training scored significantly higher on the Pre-Contemplation and Preparation subscales when compared to education graduate students who took a required diversity course. Though there were no statistically significant differences based on the other subscales, the score differences based on context for all of the other subscales were in the same direction, with professionals who elected to participate in multicultural competence training scoring higher than students who were required to participate in a multicultural competence training, as would be expected. This suggests that the measure is sensitive to differences based on contextual differences, though further research is needed to differentiate between the effect of elected versus required participation in a

training and the effect of student versus professional status, as these groups were nested in this study.

These results were paralleled by the examination of which factors were correlated with the discriminant function. The Contemplation and Maintenance subscales were not highly correlated with the discriminant function, indicating that there was little variation in these subscales that differentiated between the two groups. The correlations for the Pre-Contemplation, Preparation, and Action subscales, however, were more strongly correlated with the discriminant function. These findings suggest that there was not variation in responses associated with participants avoiding diversity-related activities due to discomfort (Contemplation) or having diversity-related work influence their relationships (Maintenance) that helped distinguish the two context groups. Additional research should help to confirm these group differences and separate out the effects of elected versus required training participation from the effects of professionals versus students, since these groups were completely nested in this study. These differences based on context suggest that some subscales of the MCSCS are sensitive to group differences, though these results need to be replicated to further examine whether or not these patterns of significance and non-significance are upheld with larger sample sizes and different populations.

#### *MCSCS Sensitivity to Change Over Time*

The follow-up univariate analyses based on time indicated that participants scored significantly higher on the Pre-Contemplation, Contemplation, and Action subscales of the MCSCS after participating in a multicultural competence training or

course. The Maintenance subscale includes items focused on being engaged in multicultural work to the point that it has affected personal relationships. Therefore, the non-significant results for the Maintenance subscale make sense theoretically, because participation in a training should not significantly change scores on items related to long-term relationships. It should be noted that trainings that take place over a more extended time period might affect scores on the Maintenance subscale of the MCSCS. For example, it is more plausible to propose that Maintenance scores might increase over the course of a multi-year degree program with a multicultural emphasis, demonstrating changes in a participant's relationships.

The univariate analyses indicating a non-significant change in Preparation subscale score was not hypothesized and should be examined in replication studies to determine whether these results were obtained due to chance. It is possible, however, that non-significant change in Preparation score is to be expected. For example, though participants may leave a diversity training being less confused about some topics related to multicultural competence such as the importance of acknowledging the potential impact of culture, participants might become more aware of their own biases and could leave feeling unsure of what to do about those biased thoughts or behaviors.

These univariate results were paralleled by the examination of which factors were correlated with the discriminant function. The Preparation and Maintenance subscales were not highly correlated with the discriminant function, indicating that there was little variation in these subscales that differentiated between the two time points. The



correlations for the Pre-Contemplation, Contemplation, and Action subscales, however, were more strongly correlated with the discriminant function.

These results are potentially related to the content, type, participant make-up, and length of the trainings, and future research should further examine the effect of these training differences. Future research employing a research design with a randomly assigned treatment and control group will help establish that changes in scores are not simply a matter of the passage of time, but rather the effect of participation in multicultural competence training.

### *Limitations*

Though the results of this study provide initial evidence of the MCSCS as a reliable and valid measure of multicultural competence stage of change, a number of limitations must be considered in the interpretation of these findings. First, the multiple EFAs that were conducted to establish a theoretically related factor structure can result in capitalization on change variation in the data and a factor structure that is over fitted to the data, necessitating a cautious interpretation of EFA results. The factor structure of this measure was examined only with participants who are involved in human services at a single university, leading to the possibility that the results are specific to these populations of students and professionals. Though a variety of sub-populations were sampled for the purpose of this study (student affairs professionals, human services students, and diversity in education students), the participants were all either students or professionals in the general field human services. There was inadequate sample size to

differentiate results based on sub-group such as specific graduate program or job title, or based on demographic characteristics such as gender or ethnicity.

Second, the reliability analyses indicated that some of the subscales were not reliable using a criterion of  $\alpha > .70$  (Dunn, Smith, & Montoya, 2006). This could be due to the small number of items retained in the factors, and therefore further research is needed to examine the impact of adding similar items to the factors as well as possibly revising existing items so that items with multiple and/or temporal components are clarified and simplified.

Third, the study design was limited due to response rate and sample size. Though the results indicate that the measure is sensitive to change over time after participation in multicultural competence training, it is possible that this change occurs over time regardless of training participation. In the original proposal, a non-randomly assigned control group was included in the research design. Only one control group participant completed the post-test; therefore, this lack of participation by control group members means that there is no way to distinguish whether the change in scores over time is due to training participation or due to the passage of time. Future research employing a randomly assigned treatment/control group research design is needed to distinguish the effect of time from the effect of participation in multicultural competence training.

Finally, the standard deviation of the MCSCS pre- and post-test total scores was low, indicating there was a small amount of variability among total scores. This lack of variability in responses is likely due to the samples surveyed in this study. All participants were involved in higher education either as students or professionals. All

programs surveyed (university education programs and student affairs professionals in the state university system) are likely more focused on diversity and multicultural competence than the population in general. Future research should examine broader populations more likely to demonstrate variability in responses related to multicultural competence such as populations with less exposure to training and education related to diversity and multicultural competence.

#### *Future Directions for Research*

This preliminary research into the factor structure, reliability, validity, and sensitivity to change of the MCSCS indicates that this assessment tool shows promise as a measure of multicultural competence using a stages of change model. To address some of the study limitations, however, future research should replicate the findings with other human services students and professionals as well as populations in non-academic or human services settings.

Addressing limitations in this study includes improving measure and subscale reliability. Reliability limitations should be remedied by the creation and testing of additional items for each factor. Additionally, item revisions for items comprising the less reliable factors should be considered. For example, items comprising the Action subscale should be focused on participation in activities related to diversity, but not on how recently this participation occurred. For those items with temporal specificity, such as item 19 (“I have recently begun engaging in more diversity related conversations and activities”), it is possible that some respondents focus on whether or not they engage in such activities, while others focus on the temporal indicator.

Once additional items have been added to each subscale and potentially confusing items have been revised, the factor structure of the revised version of the measure would need to be examined. To determine whether a revised measure had a similar factor structure and whether the factor structure is stable across populations, confirmatory factor analyses should be conducted and compared across a variety of populations.

Though the measure demonstrated sensitivity to change over time, future research is needed to examine whether the patterns of sensitivity to change by subscale are stable or due to chance. Future research needs to examine differences over time with randomly assigned control group participants who do not receive training (or receive training after the treatment group has completed participation in training and both groups have been re-assessed) so that temporal effects can be distinguished from training effects.

Multicultural competence trainings with different populations, types of content, and lengths of participation need to be examined to determine whether sensitivity to change is dependent on training differences. Future research needs to examine applications of this measure in a broader variety of contexts (e.g., other fields such as business, natural sciences, etc.) as well as with a wider variety of populations (e.g., undergraduate students, non-students, etc.). In addition, future research should examine whether trainings designed to facilitate movement from a specific stage to another (e.g., contemplation to preparation) correspond to changes in those subscales.

In addition to further research confirming the results of this study, the measure needs an associated set of recommendations for use. Future research should include the development of a manual including scoring rules such as reverse-scored items, subscale

definitions, and comparability of scores. For this measure to be used in a variety of settings, such a manual or set of recommendations should include interpretations about achievable scores. For example, people who take the measure (as well as their instructors, counselors, or employers, depending on the context in which the measure is administered) are likely interested in how to interpret scores. Future research should examine meaningful rather than solely statistically significant differences among scores as well as interpretations of patterns of item and subscale scores. Participants could be informed about how far above the mean their obtained score fell when compared to other participants, and the numeric value of their mean score could be linked with a verbal equivalent. For example, an average score of two on a subscale could be associated with the verbal response of “disagree” on that subscale, or linked with a descriptive term. Such information could be useful in planning trainings, interpreting scores, and comparing results.

### *Implications for Practice*

The MCSCS has promise as a measure that could enhance multicultural competence training by identifying the multicultural competence stage of change of participants, students, or trainees. Once this measure has been revised to address the limitations noted in this study, it is likely that the ability of this measure to assess multicultural competence stage of change, and stage of change over time, could be tested using an experimental or quasi-experimental design in a variety of clinical and applied settings. There is extensive research documenting the need for multi-culturally competent counselors and psychologists. There is a limited number of psychologists who are

adequately trained and multi-culturally competent, and this limited population of psychologists is not large enough to serve the needs of growing ethnically/racially diverse populations or other minority populations (Bernal & Castro, 1994). Counselors frequently report working with client groups with whom they are not multi-culturally competent (Allison, Echemendia, Crawford, & Robinson, 1996). Counselors and psychologists often engage in inadvertent or unintentional racism and other forms of discrimination, stereotyping, prejudice, and oppression (e.g., Ridley, 1995). Further, there is evidence indicating that multicultural competence on the part of counselors and psychologists is linked with improved client outcomes and ratings of counseling experiences. For example, Constantine (2002) found that clients' perceptions of their counselors' multicultural competence accounted for a statistically significant portion of variance in clients' satisfaction with counseling. For clients who identified as ethnic/racial minorities, counselors' multicultural competence accounted for variance in satisfaction with counseling above and beyond counselors' general competence (Constantine, 2002a). Research in other fields parallels these findings, suggesting that the goal of increasing cultural competence among students and professionals is not limited to populations of counselors and psychologists (Holvino, Ferdnam, & Merrill-Sands, 2004).

To address this deficit in multi-culturally competent counselors, psychologists, and personnel in all fields, it is necessary to assess level of multicultural competence in order to provide targeted training. Once items on the MCSCS have been revised and additional research has further examined the factor structure, reliability, validity, and sensitivity to change of this measure, then it could be used to improve outcomes related

to multicultural competence in counseling and other applied settings. The MCSCS could be applied in clinical, training, and vocational settings to assess individuals' multicultural competence stage of change. The measure could be used to target trainings or interventions to participants' multicultural competence stage of change. The MCSCS could assess the effectiveness of multicultural trainings or interventions by examining change in multicultural competence stage of change over time.

Being able to identify the multicultural competence stage of change for participants, students, or trainees would enable an instructor, supervisor, consultant, or educator to tailor interventions based on multicultural competence stage of change. This could increase participant motivation to engage in the process of multicultural competence training or education. Interventions targeted to participants' developmental stage have resulted in increased participant recruitment and retention (Prochaska, DiClemente, & Norcross, 1992; Prochaska & Norcross, 2001; Velicer et al. 1998), indicating that identifying participant multicultural competence stage of change could improve training outcomes. For example, a multicultural competence training providing information about how to engage in social justice efforts may be ineffectual for participants who are uncertain of the importance of multicultural competence; however, a training that emphasizes learning about historical and current injustices might increase motivation in the same participants.

Research has shown that targeted interventions increase participant motivation because they reinforce measurable change and can help promote change with participants who are resistant (Miller & Rollnick, 2002). For example, students could be

assessed using the MCSCS at multiple time points in a degree program. Their score differences could be examined over time as a way to document change in multicultural competence. These changes in MCSCS scores could help motivate students and instructors, and could also help stimulate programmatic support for multicultural training by providing observable results.

### *Summary*

This research study was undertaken to describe the creation of the MCSCS, an original measure of multicultural competence based on the stages of change model. This measure was designed to address weaknesses in existing measures of multicultural competence related to scope, applicability, and ability to reflect the developmental nature of multicultural competence.

The results of this research support a factor structure for the MCSCS that reflects the stages of change as applied to multicultural competence, though these results must be interpreted with caution until they can be replicated and further examined using confirmatory analytic approaches. The results yielded some support for the reliability of the measure and its subscales, though revisions are needed to improve the reliability of the Preparation and Action subscales for the measure to be useful in applied or clinical settings. Validity was established by correlating total and subscale scores with an existing measure of multicultural competence, the MAKSS-CE-R, and almost all correlations were statistically significant; however, more research is needed to confirm or counter the patterns of significance observed in this study as the subscales demonstrating low reliability were not correlated with other subscales to a statistically significant degree.



Finally, this study demonstrated that the MCSCS was sensitive to changes over time and between contexts as demonstrated by statistically significant MANOVA results. As with all of the results, these patterns of subscale significance need to be replicated with a revised measure demonstrating improved reliability.

This initial research on the MCSCS provides support for future applications of a revised version of this assessment tool in research, educational, and vocational contexts. The measure shows promise as a broadly applicable multicultural competence assessment tool. Though existing measures of multicultural competence are well-researched and useful for assessing levels of multicultural knowledge, awareness, and skills in specific fields such as counseling or teaching (D'Andrea, Daniels, & Heck, 1991; Dunn, Smith, & Montoya, 2006), the MCSCS can be applied to almost any field or population because of the general nature of the items.

## APPENDIX A

## INTRODUCTORY LETTER: STUDENT AFFAIRS

Help set the course for student affairs professional development! As a participant in CoDaC's Diversity Institute, Connections, Community and Best Practices, you have the opportunity to participate in assessment and research related to diversity.

Your participation is central to this project. By participating in our assessment, you will help us gather data related to multicultural competence in student affairs. This data will contribute to on-going research and future publications related to this important work. All data will be anonymous and confidential.

You will be receiving information in the next two weeks regarding the assessment process. We hope that all institute participants will take part in this exciting opportunity.

If you have questions or thoughts related to this process, please contact Maya O'Neil at [moneil@uoregon.edu](mailto:moneil@uoregon.edu) or CoDaC at [codac@uoregon.edu](mailto:codac@uoregon.edu). Thanks!

## APPENDIX B

## FIRST LETTER OF INFORMATION: STUDENT AFFAIRS

Principal Investigator: Maya O'Neil, M.S. Counseling Psychology, 5251 University of Oregon, (541)914-7663

Faculty Advisor: Ellen H. McWhirter, Ph.D., Counseling Psychology, 5251 University of Oregon, (541)346-2410

This is a research study aimed at further understanding the development and fostering of multicultural competence in student affairs professionals. This research study is especially important because we hope that by exploring perceptions of multicultural competence, the results from this research study may help improve efforts to promote the training of multi-culturally competent professionals. In this research study, you will be asked to complete two sets of questionnaires approximately two weeks apart. Each set of questionnaires will take approximately 20-30 minutes to complete. You may spend as much time as you need completing the questionnaires. Please answer the questions as honestly as possible.

When you have completed your survey, either check "submit" (if you are taking it on line) or turn it in to the designated box (if you are filling out a hard copy at the Student Affairs Institute). Hard copies of the surveys will be placed in a locked file cabinet with other surveys returned for the purpose of this research study and will be destroyed after the data has been entered into a spreadsheet. Data collected on line will only be examined in spreadsheet format. Participants will be entered into random drawings for gift certificates after each survey administration. The Institute participants will be entered to win 5 \$10 and 1 \$25 gift certificates from local vendors/restaurants after the completion of their first survey, and all participants will be entered to win 5 \$10 and 3 \$25 gift certificates to powells.com after the second survey administration.

As in any research study, your cooperation is voluntary and you may withdraw at any time with no penalty simply by not returning your survey to the principal investigator or checking "submit" for on line surveys. By completing the survey packet and either submitting or returning it, you will have indicated your willingness to participate in this research study.

To protect confidentiality, please do not put your name anywhere on the questionnaires. You will be asked to provide your email address which will be assigned an ID number. This ID number will be used to link your responses to the two sets of surveys. The list containing the ID numbers and email addresses will be kept separately from the surveys at all times, will be stored in locked file cabinets in a locked research facility, and will be destroyed immediately following the receipt of the second set of survey materials. You are asked to not provide your name or personally identifying information in the survey. All data will be reported anonymously. However, demographic information may provide

identifiable information. In order to protect against this threat to confidentiality, the data will be entered only by the principal investigator. Data will be reported aggregately and not connected to any individual response. The aggregate results of this research study may be published in scientific journals and/or presented at scientific meetings.

In addition, if you should feel distressed at any time and want to talk about your experience, you may talk individually with me and/or you can contact the following resources and referrals:

University of Oregon Crisis Center (phone line available 24 hrs/day)	346-4488
White Bird Clinic (phone line available 24 hrs/day)	687-4000

Please remove this cover letter from the rest of the survey packet (hard copy) or print it out (electronic survey) and keep it for your records. You can talk with one of us at any time after you complete the survey packet, and we encourage you to consult the list of resources above if you think that would be helpful.

Your participation is voluntary. Your decision whether or not to participate will not negatively affect your relationship with the principal investigator, the Center on Diversity and Community, or the University of Oregon. If you decide to participate, you are free to discontinue participation at any time without penalty. Your rights as a research participant have now been explained to you. If you have any additional questions about this research study, please contact Maya O'Neil, M.S., at (541) 914-7663 ([moneil@uoregon.edu](mailto:moneil@uoregon.edu)) or Dr. Ellen H. McWhirter at (541) 346-2443 ([ellenmcw@uoregon.edu](mailto:ellenmcw@uoregon.edu)). If you have any questions concerning your rights as a research participant, contact Office for the Protection of Human Subjects at (541) 346-2510. If you are interested in receiving follow-up research and publication material after the research study has been completed, please email Maya O'Neil.

Thank you for joining us in this attempt at better understanding perceptions of multicultural competence within student affairs. We greatly appreciate your time and effort in completing the questionnaires.

## APPENDIX C

## SECOND LETTER OF INFORMATION: STUDENT AFFAIRS

Principal Investigator: Maya O'Neil, M.S. Counseling Psychology, 5251 University of Oregon, (541)914-7663

Faculty Advisor: Ellen H. McWhirter, Ph.D., Counseling Psychology, 5251 University of Oregon, (541)346-2410

This is a research study aimed at further understanding the development and fostering of multicultural competence in student affairs professionals. You completed the first portion of this study about 2 weeks ago, and this is the second portion of the study. This research study is especially important because we hope that by exploring perceptions of multicultural competence, the results from this research study may help improve efforts to promote the training of multi-culturally competent professionals. In this research study, you will be asked to complete a set of questionnaires which will take approximately 20-30 minutes to complete. You may spend as much time as you need completing the questionnaires. Please answer the questions as honestly as possible.

When you have completed your survey, either check "submit" (if you are taking it on line) or turn it in to the designated box (if you are filling out a hard copy at the Student Affairs Institute). Hard copies of the surveys will be placed in a locked file cabinet with other surveys returned for the purpose of this research study and will be destroyed after the data has been entered into a spreadsheet. Data collected on line will only be examined in spreadsheet format. Participants will be entered into random drawings for gift certificates after each survey administration. The Institute participants will be entered to win 5 \$10 and 1 \$25 gift certificates from local vendors/restaurants after the completion of their first survey, and all participants will be entered to win 5 \$10 and 3 \$25 gift certificates to powells.com after the second survey administration.

As in any research study, your cooperation is voluntary and you may withdraw at any time with no penalty simply by not returning your survey to the principal investigator or checking "submit" for on line surveys. By completing the survey packet and either submitting or returning it, you will have indicated your willingness to participate in this research study.

To protect confidentiality, please do not put your name anywhere on the questionnaires. You will be asked to provide your email address which will be assigned an ID number. This ID number will be used to link your responses to the two sets of surveys. The list containing the ID numbers and email addresses will be kept separately from the surveys at all times, will be stored in locked file cabinets in a locked research facility, and will be destroyed immediately following the receipt of the second set of survey materials. You are asked to not provide your name or personally identifying information in the survey. All data will be reported anonymously. However, demographic information may provide identifiable information. In order to protect against this threat to confidentiality, the data

will be entered only by the principal investigator. Data will be reported aggregately and not connected to any individual response. The aggregate results of this research study may be published in scientific journals and/or presented at scientific meetings.

In addition, if you should feel distressed at any time and want to talk about your experience, you may talk individually with me and/or you can contact the following resources and referrals:

University of Oregon Crisis Center (phone line available 24 hrs/day)	346-4488
White Bird Clinic (phone line available 24 hrs/day)	687-4000

Please remove this cover letter from the rest of the survey packet (hard copy) or print it out (electronic survey) and keep it for your records. You can talk with one of us at any time after you complete the survey packet, and we encourage you to consult the list of resources above if you think that would be helpful.

Your participation is voluntary. Your decision whether or not to participate will not negatively affect your relationship with the principal investigator, the Center on Diversity and Community, or the University of Oregon. If you decide to participate, you are free to discontinue participation at any time without penalty. Your rights as a research participant have now been explained to you. If you have any additional questions about this research study, please contact Maya O'Neil, M.S., at (541) 914-7663 ([moneil@uoregon.edu](mailto:moneil@uoregon.edu)) or Dr. Ellen H. McWhirter at (541) 346-2443 ([ellenmcw@uoregon.edu](mailto:ellenmcw@uoregon.edu)). If you have any questions concerning your rights as a research participant, contact Office for the Protection of Human Subjects at (541) 346-2510. If you are interested in receiving follow-up research and publication material after the research study has been completed, please email Maya O'Neil.

Thank you for joining us in this attempt at better understanding perceptions of multicultural competence within student affairs. We greatly appreciate your time and effort in completing the questionnaires.

## APPENDIX D

## SECOND EMAIL TO STUDENT AFFAIRS PARTICIPANTS

Hello Connections, Community, and Best Practices Institute Attendees,

We recently sent you an email letting you know about the assessment and research component of the Institute that you will be attending in a few days. We are now inviting you to begin your participation in this project.

1. Please recruit at least 2 (or more) colleagues in student affairs who are not attending the upcoming conference who can also fill out the following survey. You can simply forward them this email and they can click on the same survey link that you will click on at the end of this email. Please ask your colleagues to fill out the survey within the next few days (before June 26<sup>th</sup>, 2007).
2. Please click on the link below to access the survey. You are eligible to participate as long as you are a student affairs professional over the age of 18. The survey will take about 20-30 minutes to fill out. Please fill this survey out within the next few days (before June 26<sup>th</sup>, 2007). We will also be asking you to fill out a follow-up survey approximately 2 weeks after you have completed the first survey. This survey will also take approximately 20-30 minutes to complete.

Participants in the institute will be randomly entered into drawings for 5 \$10 and 2 \$25 gift certificates to local restaurants and businesses that are close to the conference (these will be awarded during the 1<sup>st</sup> full day of the conference so you can enjoy them when you are in Eugene). Participants will be entered into the drawing after completing the first survey. All participants who fill out both surveys will be randomly entered into a drawing for 5 \$10 and 4 \$25 gift certificates to [powells.com](http://powells.com).

Thank you so much for participating in the assessment and research component of this institute! This cutting edge research would not be possible without your participation, so please don't forget to fill out the survey and have your colleagues do the same!

For questions, concerns, or thoughts about this research, please contact Maya O'Neil at [moneil@uoregon.edu](mailto:moneil@uoregon.edu) or CoDaC at [codac@uoregon.edu](mailto:codac@uoregon.edu). Here's the survey link (if the link doesn't work, please cut and paste the following web address):

[https://www.surveymonkey.com/s.aspx?sm=Kn0VboYyy\\_2foLfexNZqGYsg\\_3d\\_3d](https://www.surveymonkey.com/s.aspx?sm=Kn0VboYyy_2foLfexNZqGYsg_3d_3d)

Thanks!

Maya O'Neil, M.S.  
Doctoral Candidate, Counseling Psychology  
University of Oregon

## APPENDIX E

## THIRD EMAIL TO STUDENT AFFAIRS PARTICIPANTS

Hello Survey Participants,

You recently completed a multicultural survey either through the CoDaC Institute that you attended, or because a colleague forwarded you the survey link. Though you completed this survey very recently, we are hoping that you will complete a similar follow-up survey within the next week. This survey is very similar to the first survey that you took, and regardless of whether or not your answers changes, we are interested in having you fill it out for a second time. If you completed the paper version of the survey for a second time at the institute, feel free to ignore this email.

All participants who fill out both surveys will be randomly entered into a drawing for 5 \$10 and 3 \$25 gift certificates to [powells.com](http://powells.com) (the Portland-based and on-line bookstore).

Thank you so much for participating in this assessment for a second time. We know that the survey is long and sometimes repetitive, and we thank you for your patience in filling it out twice—we are hoping to use your responses to compare the different assessment tools contained in the survey and to help determine which types of questions to use for future assessments. This research would not be possible without your participation, so please don't forget to fill out the survey!

For questions, concerns, or thoughts about this research, please contact Maya O'Neil at [moneil@uoregon.edu](mailto:moneil@uoregon.edu) or CoDaC at [codac@uoregon.edu](mailto:codac@uoregon.edu).

Here's the survey link (if the link doesn't work, please cut and paste the following web address):

[https://www.surveymonkey.com/s.aspx?sm=HexSv1gQ38jFBXIN3JDomw\\_3d\\_3d](https://www.surveymonkey.com/s.aspx?sm=HexSv1gQ38jFBXIN3JDomw_3d_3d)

Thanks!

Maya O'Neil, M.S.  
Doctoral Candidate, Counseling Psychology  
University of Oregon



## APPENDIX F

## EXTRA CREDIT INFORMATION FOR EDLD PARTICIPANTS

## EDLD 637: Extra Credit Handout

There are 2 extra credit options for this course. Both options will provide you with up to 5 points of extra credit (2.5% of the points possible in this class). You may not get credit for both.

Option 1: Participate in a research study related to diversity. Maya O'Neil, the principle investigator for the project, will send you an email detailing this option at the end of this week. You will have to fill out 1 survey at the beginning of the term and one survey at the end of the term (each will take approximately 20-30 minutes to complete). You must complete the first survey by July 15<sup>th</sup> at 5pm and the second survey by August 5<sup>th</sup> at 5pm.

Option 2: You may complete 2 papers: The first paper should be a 2 page extra credit reaction paper turned in on the first day of class during the second week of the term. The paper should be on a journal article related to diversity in education and how you might apply the information presented in the article to a classroom in the future. The second paper should be a 2 page extra credit reaction paper turned in on the first day of class during the final week of the term. This paper should be on a diversity related event that you attended and how your experience could apply to teaching students of diverse backgrounds in the future.

Please note the deadlines for these extra credit options—late work will not be accepted.

## APPENDIX G

## FIRST EMAIL TO EDLD PARTICIPANTS

Hello EDLD 637 students!

Participate in research related to diversity! As a student in the EDLD 637: Diversity in Education class, you have the opportunity to participate in assessment and research related to diversity. In class you were given a handout listing 2 extra credit opportunities; this survey is one of those opportunities. Please note that to receive credit, participants must complete this first survey by **June 30<sup>th</sup> at 5pm** and the second survey by **August 20<sup>th</sup> at 5pm**.

Your participation is central to this project. By participating in our assessment, you will help us gather data related to multicultural competence and the training of future teachers and human services professionals. This data will contribute to on-going research and future publications related to this important work. All data will be anonymous and confidential.

We hope that all students in the Diversity in Education classes will take part in this exciting opportunity.

Below you will find the link to the on-line survey. The first page of the survey will provide you with a letter of information; this letter will give you more information about the study and inform you of your rights as a research participant.

If you have questions or thoughts related to this process, please contact Maya O'Neil at [moneil@uoregon.edu](mailto:moneil@uoregon.edu). Thanks!

Here's the link:

[https://www.surveymonkey.com/s.aspx?sm=Hxjmc33hfnZL3PIBIhVg3A\\_3d\\_3d](https://www.surveymonkey.com/s.aspx?sm=Hxjmc33hfnZL3PIBIhVg3A_3d_3d)

## APPENDIX H

## LETTER OF INFORMATION: EDLD PARTICIPANTS

EDLD 637: Diversity in Education class Multicultural Survey

Principal Investigator: Maya O'Neil, M.S. Counseling Psychology, 5251 University of Oregon, (541)914-7663

Faculty Advisor: Ellen H. McWhirter, Ph.D., Counseling Psychology, 5251 University of Oregon, (541)346-2410

This is a research study aimed at further understanding the development and fostering of multicultural competence in future teachers and human services professionals. This research study is especially important because we hope that by exploring perceptions of multicultural competence, the results from this research study may help improve efforts to promote the training of multi-culturally competent professionals. In this research study, you will be asked to complete two sets of questionnaires during the beginning and end of the EDLD 637 class that you are enrolled in. Each set of questionnaires will take approximately 20-30 minutes to complete. You may spend as much time as you need completing the questionnaires. Please answer the questions as honestly as possible.

When you have completed your survey, check "submit". Data collected on line will only be examined in spreadsheet format. Participants who complete both surveys will receive 5 extra credit points (2.5% of total points possible in the course) once both have been submitted. People who wish to get 5 extra credit points but do not want to participate in the survey may complete an alternative extra credit activity as assigned by the instructor.

As in any research study, your cooperation is voluntary and you may withdraw at any time with no penalty simply by not checking "submit". By completing and submitting the survey, you will have indicated your willingness to participate in this research study.

To protect confidentiality, please do not enter your name while filling out the survey. You will be asked to provide your email address which will be assigned an ID number. This ID number will be used to link your responses to the two sets of surveys. The list containing the ID numbers and email addresses will be kept separately from the surveys at all times, will be stored in locked file cabinets in a locked research facility, and will be destroyed immediately following the receipt of the second set of survey materials. A list of email addresses that are not linked to any surveys will also be used by the principle investigator for the purpose of assigning extra credit. You are asked to not provide your name or personally identifying information in the survey. All data will be reported anonymously. However, demographic information may provide identifiable information. In order to protect against this threat to confidentiality, the data will be entered only by the principal investigator. Data will be reported aggregately and not connected to any individual response. The aggregate results of this research study may be published in scientific journals and/or presented at scientific meetings.

In addition, if you should feel distressed at any time and want to talk about your experience, you may talk individually with me and/or you can contact the following resources and referrals:

University of Oregon Crisis Center (phone line available 24 hrs/day)	346-4488
White Bird Clinic (phone line available 24 hrs/day)	687-4000

Please print out this letter of information and keep it for your records. You can talk with the principle investigator at any time after you complete the survey packet, and you are encouraged to consult the list of resources above if you think that would be helpful.

Your participation is voluntary. Your decision whether or not to participate will not negatively affect your relationship with the principal investigator, the instructional team for EDLD 637, the Department of Educational Leadership, or the University of Oregon. If you decide to participate, you are free to discontinue participation at any time without penalty. Your rights as a research participant have now been explained to you. If you have any additional questions about this research study, please contact Maya O'Neil, M.S., at (541) 914-7663 ([moneil@uoregon.edu](mailto:moneil@uoregon.edu)) or Dr. Ellen H. McWhirter at (541) 346-2443 ([ellenmcw@uoregon.edu](mailto:ellenmcw@uoregon.edu)). If you have any questions concerning your rights as a research participant, contact Office for the Protection of Human Subjects at (541) 346-2510. If you are interested in receiving follow-up research and publication material after the research study has been completed, please email Maya O'Neil.

Thank you for joining us in this attempt at better understanding perceptions of multicultural competence. We greatly appreciate your time and effort in completing the questionnaires.

## APPENDIX I

## SECOND LETTER OF INFORMATION: EDLD PARTICIPANTS

EDLD 637: Diversity in Education class Multicultural Survey

Principal Investigator: Maya O'Neil, M.S. Counseling Psychology, 5251 University of Oregon, (541)914-7663

Faculty Advisor: Ellen H. McWhirter, Ph.D., Counseling Psychology, 5251 University of Oregon, (541)346-2410

This is a research study aimed at further understanding the development and fostering of multicultural competence in future teachers and human services professionals. This research study is especially important because we hope that by exploring perceptions of multicultural competence, the results from this research study may help improve efforts to promote the training of multi-culturally competent professionals. In this research study, you will be asked to complete two sets of questionnaires during the beginning and end of the EDLD 637 class that you are enrolled in. You completed the first portion of this study during the first week of the course, and this is the second portion of the study. This set of questionnaires will take approximately 20-30 minutes to complete. You may spend as much time as you need completing the questionnaires. Please answer the questions as honestly as possible.

When you have completed your survey, check "submit". Data collected on line will only be examined in spreadsheet format. Participants who complete both surveys will receive 5 extra credit points (2.5% of total points possible in the course) once both have been submitted. To receive credit, participants must complete the first survey by June 30<sup>th</sup> at 5pm and the second survey by August 20<sup>th</sup> by 5pm. People who wish to get 5 extra credit points but do not want to participate in the survey may complete an alternative extra credit activity as assigned by the instructor.

As in any research study, your cooperation is voluntary and you may withdraw at any time with no penalty simply by not checking "submit". By completing and submitting the survey, you will have indicated your willingness to participate in this research study.

To protect confidentiality, please do not enter your name while filling out the survey. You will be asked to provide your email address which will be assigned an ID number. This ID number will be used to link your responses to the two sets of surveys. The list containing the ID numbers and email addresses will be kept separately from the surveys at all times, will be stored in locked file cabinets in a locked research facility, and will be destroyed immediately following the receipt of the second set of survey materials. A list of email addresses that are not linked to any surveys will also be used by the principle investigator for the purpose of assigning extra credit. You are asked to not provide your name or personally identifying information in the survey. All data will be reported anonymously. However, demographic information may provide identifiable information.

In order to protect against this threat to confidentiality, the data will be entered only by the principal investigator. Data will be reported aggregately and not connected to any individual response. The aggregate results of this research study may be published in scientific journals and/or presented at scientific meetings.

In addition, if you should feel distressed at any time and want to talk about your experience, you may talk individually with me and/or you can contact the following resources and referrals:

University of Oregon Crisis Center (phone line available 24 hrs/day)	346-4488
White Bird Clinic (phone line available 24 hrs/day)	687-4000

Please print out this letter of information and keep it for your records. You can talk with the principle investigator at any time after you complete the survey packet, and you are encouraged to consult the list of resources above if you think that would be helpful.

Your participation is voluntary. Your decision whether or not to participate will not negatively affect your relationship with the principal investigator, the instructional team for EDLD 637, the Department of Educational Leadership, or the University of Oregon. If you decide to participate, you are free to discontinue participation at any time without penalty. Your rights as a research participant have now been explained to you. If you have any additional questions about this research study, please contact Maya O'Neil, M.S., at (541) 914-7663 ([moneil@uoregon.edu](mailto:moneil@uoregon.edu)) or Dr. Ellen H. McWhirter at (541) 346-2443 ([ellenmcw@uoregon.edu](mailto:ellenmcw@uoregon.edu)). If you have any questions concerning your rights as a research participant, contact Office for the Protection of Human Subjects at (541) 346-2510. If you are interested in receiving follow-up research and publication material after the research study has been completed, please email Maya O'Neil.

Thank you for joining us in this attempt at better understanding perceptions of multicultural competence. We greatly appreciate your time and effort in completing the questionnaires.

## APPENDIX J

## SECOND EMAIL TO EDLD PARTICIPANTS

Hello EDLD 637 students!

Thank you for your participation in the first portion of the multicultural assessment project. This email will give you the link to the second portion of that project. As listed in your extra credit handout, this is the second portion of the multicultural assessment survey project for which you can receive extra credit. Please note that to receive credit, participants must have completed the first survey by **June 30<sup>th</sup> at 5pm** and must complete this second survey by **August 20<sup>th</sup> at 5pm**.

Your participation is central to this project. By participating in our assessment, you will help us gather data related to multicultural competence and the training of future teachers and human services professionals. This data will contribute to on-going research and future publications related to this important work. All data will be anonymous and confidential.

Below you will find the link to the on-line survey. The first page of the survey will provide you with a letter of information; this letter will give you more information about the study and inform you of your rights as a research participant.

If you have questions or thoughts related to this process, please contact Maya O'Neil at [moneil@uoregon.edu](mailto:moneil@uoregon.edu). Thanks!

Here's the link:

## APPENDIX K

## EMAIL TO CPHS PARTICIPANTS

Hello FHS, MFT, and CPSY students!

Participate in research related to diversity! As a student in the FHS, MFT, and CPSY programs, you have the opportunity to participate in assessment and research related to diversity.

Your participation is central to this project. By participating in our assessment, you will help us gather data related to multicultural competence and the training of future counselors, teachers, and human services professionals. This data will contribute to on-going research and future publications related to this important work. All data will be anonymous and confidential.

We hope that all students in the CPSY, MFT, and FHS programs will take part in this exciting opportunity.

Below you will find the link to the on-line survey. The first page of the survey will provide you with a letter of information; this letter will give you more information about the study and inform you of your rights as a research participant.

If you have questions or thoughts related to this process, please contact Maya O'Neil at [moneil@uoregon.edu](mailto:moneil@uoregon.edu). Thanks!

Here's the link:

[http://www.surveymonkey.com/s.aspx?sm=LywmiEW6xASoHTi92tGCCw\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=LywmiEW6xASoHTi92tGCCw_3d_3d)



## APPENDIX L

## LETTER OF INFORMATION: CPHS PARTICIPANTS

Principal Investigator: Maya O'Neil, M.S. Counseling Psychology, 5251 University of Oregon, (541)914-7663  
Faculty Advisor: Ellen H. McWhirter, Ph.D., Counseling Psychology, 5251 University of Oregon, (541)346-2410

This is a research study aimed at further understanding the development and fostering of multicultural competence in future teachers and human services professionals. This research study is especially important because we hope that by exploring perceptions of multicultural competence, the results from this research study may help improve efforts to promote the training of multi-culturally competent professionals. In this research study, you will be asked to complete two sets of questionnaires during the beginning and end of the term. Each set of questionnaires will take approximately 20-30 minutes to complete. You may spend as much time as you need completing the questionnaires. Please answer the questions as honestly as possible.

When you have completed your survey, check "submit". Data collected on line will only be examined in spreadsheet format.

As in any research study, your cooperation is voluntary and you may withdraw at any time with no penalty simply by not checking "submit". By completing and submitting the survey, you will have indicated your willingness to participate in this research study.

To protect confidentiality, please do not enter your name while filling out the survey. You will be asked to provide your email address which will be assigned an ID number. This ID number will be used to link your responses to the two sets of surveys. The list containing the ID numbers and email addresses will be kept separately from the surveys at all times, will be stored in locked file cabinets in a locked research facility, and will be destroyed immediately following the receipt of the second set of survey materials. You are asked to not provide your name or personally identifying information in the survey. All data will be reported anonymously. However, demographic information may provide identifiable information. In order to protect against this threat to confidentiality, the data will be entered only by the principal investigator. Data will be reported aggregately and not connected to any individual response. The aggregate results of this research study may be published in scientific journals and/or presented at scientific meetings.

In addition, if you should feel distressed at any time and want to talk about your experience, you may talk individually with me and/or you can contact the following resources and referrals:

University of Oregon Crisis Center (phone line available 24 hrs/day)

346-4488

White Bird Clinic (phone line available 24 hrs/day)

687-4000

Please print out this letter of information and keep it for your records. You can talk with the principle investigator at any time after you complete the survey packet, and you are encouraged to consult the list of resources above if you think that would be helpful.

Your participation is voluntary. Your decision whether or not to participate will not negatively affect your relationship with the principal investigator, the FHS, MFT, or CPSY Departments, faculty, or GTF's, or the University of Oregon. If you decide to participate, you are free to discontinue participation at any time without penalty. Your rights as a research participant have now been explained to you. If you have any additional questions about this research study, please contact Maya O'Neil, M.S., at (541) 914-7663 ([moneil@uoregon.edu](mailto:moneil@uoregon.edu)) or Dr. Ellen H. McWhirter at (541) 346-2443 ([ellenmcw@uoregon.edu](mailto:ellenmcw@uoregon.edu)). If you have any questions concerning your rights as a research participant, contact Office for the Protection of Human Subjects at (541) 346-2510. If you are interested in receiving follow-up research and publication material after the research study has been completed, please email Maya O'Neil.

Thank you for joining us in this attempt at better understanding perceptions of multicultural competence. We greatly appreciate your time and effort in completing the questionnaires.

## APPENDIX M

## DEMOGRAPHIC QUESTIONNAIRE

Please describe how you identify in terms of the following cultural identities:

Ability/disability status:
Gender identity:
Nationality:
Sexual orientation:
Social class/socio-economic status:
Racial/ethnic background:
Religion:
Other cultural identity _____ :
Other cultural identity _____ :

For each of the following cultural identities, check whether you belong to majority or minority culture in regards to U.S. socio-cultural norms:

	Majority	Both	Minority
Ability/disability status			
Gender identity			
Nationality			
Sexual orientation			
Social class/socio-economic status			
Racial/ethnic background			
Religion			
Other cultural identity _____			
Other cultural identity _____			

## APPENDIX N

## RECENT CHANGE QUESTIONNAIRE

Compare your opinions *now* versus your opinions *2 weeks ago*. Given all of the activities, trainings, and conversations that I have engaged in during the past 2 weeks (even if this was just “life and work as usual”), I am:

1 = a lot less

2 = less

3 = equally

4 = more

5 = a lot more

	1	2	3	4	5
1. Excited to engage in dialogues related to diversity with colleagues.					
2. Connected to other professionals/colleagues doing diversity related work.					
3. Motivated to engage in difficult conversations related to diversity.					
4. Able to confront colleagues about personal, professional, and institutional issues related to diversity.					
5. Able to identify my own strengths and weaknesses related to diversity.					
6. Interested in learning more about populations with which I am less familiar.					
7. Committed to engage in difficult conversations related to diversity.					
8. Aware that discomfort stemming from diversity related work is likely part of growth related to multicultural competence.					
9. Knowledgeable about topics related to diversity.					
10. Skilled in terms of diversity related work.					
11. Aware of skills that I have at my disposal for handling diversity related difficulties that I may encounter at work.					
12. Comfortable consulting with colleagues or other resources when I face a diversity related situation that challenges me.					
13. Able to see that certain diversity related situations which I might not have noticed before are challenging to me.					
14. Able to make contacts with people who are doing similar diversity work.					
15. Self-aware of diversity related strengths and weaknesses.					
16. Comfortable engaging in difficult dialogues related to diversity.					
17. Willing to be uncomfortable in difficult diversity related conversations or actions.					

## APPENDIX O

## MULTICULTURAL AWARENESS, KNOWLEDGE, SKILLS SCALE

1. Promoting a client's sense of psychological independence is usually a safe goal to strive for in most counseling situations.

**Strongly Disagree**      **Disagree**      **Agree**      **Strongly Agree**

2. Even in multicultural counseling situations, basic implicit concepts such as "fairness" and "health", are not difficult to understand.

**Strongly Disagree**      **Disagree**      **Agree**      **Strongly Agree**

3. How would you react to the following statement? In general, counseling services should be directed toward assisting clients to adjust to stressful environmental situations.

**Strongly Disagree**      **Disagree**      **Agree**      **Strongly Agree**

4. While a person's natural support system (i.e., family, friends, etc.) plays an important role during a period of personal crisis, formal counseling services tend to result in more constructive outcomes.

**Strongly Disagree**      **Disagree**      **Agree**      **Strongly Agree**

5. The human service professions, especially counseling and clinical psychology, have failed to meet the mental health needs of ethnic minorities.

**Strongly Disagree**      **Disagree**      **Agree**      **Strongly Agree**

6. The effectiveness and legitimacy of the counseling profession would be enhanced if counselors consciously supported universal definitions of normality.

**Strongly Disagree**      **Disagree**      **Agree**      **Strongly Agree**

7. Persons in racial and ethnic minority groups are underrepresented in clinical and counseling psychology.

**Strongly Disagree**      **Disagree**      **Agree**      **Strongly Agree**

8. In counseling, clients from different ethnic/cultural backgrounds should be given the same treatment that White mainstream clients receive.

**Strongly Disagree**      **Disagree**      **Agree**      **Strongly Agree**

9. The criteria of self-awareness, self-fulfillment, and self-discovery are important measures in most counseling sessions.

**Strongly Disagree      Disagree      Agree      Strongly Agree**

10. The difficulty with the concept of “integration” is its implicit bias in favor of the dominant culture.

**Strongly Disagree      Disagree      Agree      Strongly Agree**

At the present time, how would you rate your understanding of the following terms:

11. “Culture”

**Very Limited      Limited      Good      Very Good**

12. “Ethnicity”

**Very Limited      Limited      Good      Very Good**

13. “Racism”

**Very Limited      Limited      Good      Very Good**

14. “Prejudice”

**Very Limited      Limited      Good      Very Good**

15. “Multicultural”

**Very Limited      Limited      Good      Very Good**

16. “transcultural”

**Very Limited      Limited      Good      Very Good**

17. “pluralism”

**Very Limited      Limited      Good      Very Good**

18. “mainstreaming”

**Very Limited      Limited      Good      Very Good**

19. “cultural encapsulation”

**Very Limited          Limited          Good          Very Good**

20. “contact hypothesis”

**Very Limited          Limited          Good          Very Good**

21. At this time in your life, how would you rate yourself in terms of understanding how your cultural background has influenced the way you think and act?

**Very Limited          Limited          Fairly Aware          Very Aware**

22. At this point in your life, how would you rate your understanding of the impact of the way you think and act when interacting with persons from different cultural backgrounds?

**Very Limited          Limited          Fairly Aware          Very Aware**

23. How well do you think you could distinguish “intentional” from “accidental” communication signals in a multicultural counseling situation?

**Very Limited          Limited          Good          Very Good**

24. How would you rate your ability to effectively consult with another mental health professional concerning the mental health needs of a client whose cultural background is significantly different from your own?

**Very Limited          Limited          Good          Very Good**

25. How would you rate your ability to effectively secure information and resources to better serve culturally different clients?

**Very Limited          Limited          Good          Very Good**

26. How would you rate your ability to accurately assess the mental health needs of women?

**Very Limited          Limited          Good          Very Good**

27. How would you rate your ability to accurately assess the mental health needs of men?

**Very Limited          Limited          Good          Very Good**

28. How well would you rate your ability to accurately assess the mental health needs of older adults?

**Very Limited          Limited          Good          Very Good**

29. How well would you rate your ability to accurately assess the mental health needs of gay men?

**Very Limited          Limited          Good          Very Good**

30. How well would you rate your ability to accurately assess the mental health needs of lesbian clients?

**Very Limited          Limited          Good          Very Good**

31. How well would you rate your ability to accurately assess the mental health needs of persons with disabilities?

**Very Limited          Limited          Good          Very Good**

32. How well would you rate your ability to accurately assess the mental health needs of persons who come from very poor socioeconomic backgrounds?

**Very Limited          Limited          Good          Very Good**

33. How would you rate your ability to identify the strengths and weaknesses of psychological tests in terms of their use with persons from different cultural/ethnic/racial backgrounds?

**Very Limited          Limited          Good          Very Good**



## APPENDIX P

## MULTICULTURAL COMPETENCE STAGE OF CHANGE SCALE

Please rate your level of agreement with each of the following statements on the following scale:

1 = This statement is not at all true for me

2 = This statement is not very true for me

3 = This statement is moderately true for me

4 = This statement is mostly true for me

5 = This statement is very true for me

	1: not at all true	2	3	4	5: very true
1. I do not presently engage in any activities related to diversity.					
2. I have distanced myself from people I was close to or lost friends because they do not support the work that I do related to diversity efforts.					
3. I do not see the need for activities related to diversity.					
4. I worry that if I learn too much about diversity I'll have to change my life and who I interact with.					
5. I don't usually engage people in diversity related conversations because these conversations can be uncomfortable.					
6. I am not a homophobic or heterosexist person.					
7. When I mess up in diversity conversations I try to defend myself.					
8. There have been costs and impacts to my everyday life because of diversity related conversations and activities that I engage in on a regular basis.					
9. I wish that people wouldn't emphasize differences between cultural groups as much as they do.					
10. Treating everyone as equals is one of the most important aspects of any job working with people.					
11. My dedication to doing diversity related work has changed my friendship circle to reflect this commitment.					
12. Sometimes I feel like I should try to engage other people more in diversity related conversations or activities.					
13. My understanding of diversity is a lifelong learning process.					
14. Diversity is not important to the work that I do.					
15. I don't notice people's cultural background (e.g., abilities/disabilities, race/ethnicity, sexual orientation, etc.).					
16. I currently engage in difficult conversations related to diversity in work and social environments.					
17. It might be personally useful to learn more about diversity.					
18. I don't usually engage people in diversity related conversations because it's easier to avoid these topics most of the time.					
19. I have recently begun engaging in more diversity related conversations and activities.					

20. I currently don't engage in activities related to diversity, but I would like to in the future.					
21. Sometimes I avoid conversations about diversity because I don't want to be judged by others even though I think these conversations are important.					
22. I try to treat people the same way regardless of their culture or background.					
23. I am motivated to increase my participation in diversity related activities and conversations.					
24. Engaging in diversity related work as much as I do has made it hard to have close relationships with people who do not support these efforts.					
25. I have recently had to examine and change some of my beliefs related to cultural groups of which I am not a member.					
26. I am sometimes confused about why I might want to notice people's culture when I try to treat everyone as equals.					
27. I know that I have both strengths and weaknesses when it comes to diversity work.					
28. I am not a racist person.					
29. I engage in diversity related activities and dialogues but not on a regular basis.					
30. When I mess up or say the wrong thing in a conversation about diversity I stay engaged in the conversation, even if I'm getting negative feedback.					
31. I'd prefer to watch a video or read a book about difficult dialogues related to diversity rather than engage in those dialogues myself.					
32. I think diversity is important but it gets too much attention right now.					
33. I currently engage in many activities (such as reading, coursework, and events) related to diversity.					
34. I have a community of close friends and colleagues who are all engaged in social justice and diversity efforts.					
35. I put myself on the spot when I engage in conversations related to diversity issues even though this leaves me open to criticism from others.					
36. Though I frequently engage in activities related to diversity, I am always in need of more diversity related education and experiences.					
37. People are too fixated on diversity.					
38. I try hard to be aware of my own biases, racism, homophobia, and discriminatory or stereotyping thoughts and actions.					
39. People should focus on being individuals rather than focusing on what cultural groups they belong to.					
40. I would talk about diversity more if people weren't so sensitive about it.					
41. I am trying to find activities (such as reading, coursework, and events) related to diversity that I am interested in participating in.					
42. I don't hold stereotypes about people based on culture or background.					
43. Sometimes I wonder if I need to learn more about culture and					

diversity.					
44. After a difficult discussion about diversity I keep thinking about what else I could have said.					
45. I don't know what to do about biased, racist, homophobic, discriminatory, or stereotyping thoughts that I have about people sometimes.					
46. Engaging in difficult dialogues related to diversity may include letting myself be judged but I continue to engage in these dialogues.					
47. Engaging in diversity related work has changed me as a person.					

## REFERENCES

- Allison, K. W., Echemendia, R. J., Crawford, I., & Robinson, W. L. (1996). Predicting cultural competence: Implications for practice and training. *Professional Psychology: Research and Practice, 27*(4), 386-393.
- American Association for Marriage and Family Therapy (n.d.). *AAMFT code of ethics*. Retrieved September 29, 2008, from [http://www.aamft.org/resources/lrm\\_plan/ethics/ethicscode2001.asp](http://www.aamft.org/resources/lrm_plan/ethics/ethicscode2001.asp).
- American Counseling Association (2005). *ACA Code of Ethics*. Alexandria, VA: Author.
- American Psychological Association (1990). *Guidelines for providers of psychological services to ethnic, linguistic, and culturally diverse populations*. Washington DC: Author.
- American Psychological Association (2000). Guidelines for psychotherapy with lesbian, gay, and bisexual clients. *American Psychologist, 55*, 1440-1451.
- American Psychological Association (2002). *Ethical principles of psychologists and code of conduct*. Retrieved November 3, 2007, from <http://www.apa.org/ethics>.
- American Psychological Association (2003). Guidelines on multicultural education, training, research, practice, and organizational change for psychologists. *American Psychologist, 58*(5), 377-402.
- American Psychological Association (2004). *Guidelines and principles for accreditation of programs in professional psychology*. Washington, DC: Author.
- American Psychological Association (2008). *Guidelines and principles for accreditation of programs in professional psychology*. Retrieved November 3, 2007, from <http://www.apa.org/ed/accreditation/G&P0522.pdf>.
- American Psychological Association (1982). *Survey of graduate departments of psychology*. Washington, DC: Author.
- Bandura, A. (n.d.). Guide for constructing self-efficacy scales. Unpublished manuscript.
- Bernal, M.E., & Castro, F. G. (1994). Are clinical psychologists prepared for service and research with ethnic minorities? A decade of progress. *American Psychologist, 49*, 797-805.
- Bernal, M. E., & Padilla, A. M. (1982). Status of minority curricula and training in clinical psychology. *American Psychologist, 37*, 780–787.

- Bluestone, H. H., Stokes, A., & Kuba, S. A. (1996). Toward an integrated program design: Evaluating the status of diversity training in a graduate school curriculum. *Professional Psychology: Research and Practice, 27*(4), 394-400.
- Boxley, R., & Wagner, N. N. (1971). Clinical psychology training programs and minority groups: A survey. *Professional Psychology, 2*, 75 – 81.
- Boyle, D. P., & Springer, A. (2001). Toward a cultural competence measure for social work with specific populations. *Journal of Ethnic & Cultural Diversity in Social Work, 9*(3-4), 53-71.
- Brown v. Board of Education, 347 U.S. 483 (1954).
- Constantine, M. G. (2002). Predictors of satisfaction with counseling: Racial and ethnic minority clients' attitudes toward counseling and ratings of their counselors' general and multicultural counseling competence. *Journal of Counseling Psychology, 49*(2), 255-263.
- Constantine, M. G. (2000). Social desirability attitudes, sex, and affective and cognitive empathy as predictors of self-reported multicultural counseling competence. *The Counseling Psychologist, 28*(6), 857-872.
- Constantine, M. G. & Gainor, K. A. (2001). Emotional intelligence and empathy: Their relation to multi-cultural counseling knowledge and awareness. *Professional School Counseling, 5*(2), 131-138.
- Constantine, M. G., Gloria, A. M., & Ladany, N. (2002). The factor structure underlying three self-report multicultural counseling competence scales. *Cultural Diversity and Ethnic Minority Psychology, 8*(4), 334-354.
- Constantine, M. G., & Ladany, N. (2000). Self-Report multicultural counseling competence scales: Their relation to social desirability attitudes and multicultural case conceptualization ability. *Journal of Counseling Psychology, 47*(2), 155-164.
- Constantine, M. G., & Ladany, N. (1996). Students' perceptions of multicultural training in counseling psychology programs. *Journal of Multicultural Counseling & Development, 24*(4), 241-253.
- D'Andrea, M. (2005). Continuing the cultural liberation and transformation of counseling psychology. *The Counseling Psychologist, 33*(4), 524-537.
- D'Andrea, M. J., & Daniels, J. (1991). Exploring the different levels of multicultural counseling training in counselor education. *Journal of Counseling & Development, 70*, 78-85.

- D'Andrea, M. J., Daniels, J., & Heck, R. (1991). Evaluating the impact of multicultural counseling training. *Journal of Counseling and Development, 70*, 143-150.
- D'Andrea, M., Daniels, J., Noonan, M., Pope-Davis, D. B. (2003). New developments in the assessment of multicultural competence: The multicultural awareness-knowledge-skills survey--teachers form. In H. Coleman, W. M. Liu, & R. L. Toporek (Eds.) *Handbook of multicultural competencies: In counseling & psychology* (pp. 154-167). Thousand Oaks, CA, US: Sage Publications
- DiClemente, C. C. & Hughes, S. O. (1993). Stages of change profiles in outpatient alcoholism treatment. *Journal of Substance Abuse, 2*, 217-235.
- DiClemente, C. C., Prochaska, J. O., Fairhurst, S. K., Velicer, W. F., Velasquez, M. M., & Rossi, J. S. (1991). The process of smoking cessation: An analysis of precontemplation, contemplation, and preparation stages of change. *Journal of Consulting and Clinical Psychology, 59*, 295-304.
- DiClemente, C.C., Schlundt, D., & Gemmell, L. (2004). Readiness and stages of change in addiction treatment. *American Journal on Addictions, 13*(2), 103-119.
- Ducker, D. G., & Tori, C. D. (2001). The reliability and validity of a multicultural assessment instrument developed for a graduate program in psychology. *Professional Psychology: Research and Practice, 32*(4), 425-432.
- Dunn, T. W., Smith, T. B., & Montoya, J. A. (2006). Multicultural competence instrumentation: A review and analysis of reliability generalization. *Journal of Counseling and Development, 84*, 471-482.
- Fassinger, R. E. (2008). Workplace diversity and public policy: Challenges and opportunities for psychology. *American Psychologist, 63*(4), 252-268.
- Faulkner, V. (2001). Making multicultural education 'real'. *Teaching in Higher Education, 6*(4), 473-485.
- Flowers, L. A. (2003). National study of diversity requirements in student affairs graduate programs. *NASPA Journal 40* (4), 2003.
- Fouad, N.A., & Arredondo, P. (2007). *Becoming culturally oriented: Practical advice for psychologists and educators*. Washington, DC: American Psychological Association.
- Fouad, N. A. (2006). Multicultural guidelines: Implementation in an urban counseling psychology program. *Professional Psychology: Research and Practice, 37*(1), 6-13.

- Gall, M.D., Gall, J.P. & Borg, W.R. (2003). *Educational Research: An Introduction* (7<sup>th</sup> Ed.). New York: Pearson Education.
- Grove, R., Schmersahl, K., Perry, R., & Henry, R. (2002). A knowledge base for cultural diversity in administrator training. *Journal of Instructional Psychology*, 29 (3), 205-212.
- Halualani, R. T., Chitgopekar, A. S., Morrison, J. H., & Dodge, P. S. (2004). Diverse in name only? Intercultural interaction at a multicultural university. *Journal of Communication*, 270-286.
- Hansen, N. D., Randazzo, K. V., Schwartz, A., Marshall, M., Kalis, D., Frazier, R., et al. (2006). Do we practice what we preach? An exploratory survey of multicultural psychotherapy competencies. *Professional Psychology: Research and Practice*, 37(1), 66-74.
- Hays, P. A. (2008). *Addressing cultural complexities in practice: Assessment, diagnosis, and therapy* (2nd ed.). Washington, DC, US: American Psychological Association.
- Henson, R. K. (2001). Understanding internal consistency reliability estimates: A conceptual primer on coefficient alpha. *Measurement and Evaluation in Counseling and Development*, 34, 177-189.
- Hills, H. I., & Strozier, A. L. (1992). Multicultural training in APA-approved counseling psychology programs: A survey. *Professional Psychology: Research and Practice*, 23(1), 43-51.
- Holcomb-McCoy, C. C., & Myers, J. E. (1999). Multicultural competence and counselor training: A national survey. *Journal of Counseling & Development*, 77, 294-301.
- Holvino, E., Ferdman, B. M., & Merrill-Sands, D. (2004). Creating and sustaining diversity and inclusion in organizations: Strategies and approaches. In Stockdale, M.S. & Crosby, F. J. (Eds.), *The psychology and management of workplace diversity*. Blackwell Publishing.
- Johnson, V. D. (2003). Cultural group perceptions of racial climates in residence halls.
- Johnson, V. D., & Kang, Y. (2006). Assessing differences in resident assistant confidence in addressing issues of cultural diversity between in three predominantly white universities.
- Keim, J., Warring, D. F., & Rau, R. (2002). Impact of multicultural training on school psychology and education students. *Journal of Instructional Psychology*, 28 (4), 249-252.

- Kim, B. S. K., Cartwright, B. Y., Asay, P. A., & D'Andrea, M. J. (2003). A revision of the Multicultural Awareness, Knowledge, and Skills Survey – Counselor Edition. *Measurement and Education in Counseling and Development, 36*, 161-180.
- Kitaoka, S. K. (2005). Multicultural counseling competencies: Lessons from assessment. *Journal of Multicultural Counseling and Development, 33*, 37-47.
- LaFromboise, T. D., Coleman, H. L., & Hernandez, A. (1991). Development and factor structure of the Cross-Cultural Counseling Inventory–Revised. *Professional Psychology: Research and Practice, 22*, 380–388.
- Levesque, D. A., Prochaska, J. M., Prochaska, J. O., Dewart, S. R., Hamby, L. S., & Weeks, W. B. (2001). Organizational stages and processes of change for continuous quality improvement in health care. *Consulting Psychology Journal, Practice and Research, 53* (3), 139-153.
- Lopez-Mulnix, E. E., & Mulnix, M. W. (2006). Models of excellence in multicultural colleges and universities. *Journal of Hispanic Higher Education, 5*(4), 4-21.
- McConaughy, E. A., Prochaska, J. O., & Velicer, W. F. (1983). Stages of change in psychotherapy: Measurement and sample profiles. *Psychotherapy: Theory, Research, and Practice, 20*, 368-375.
- Mertler, C. A., & Vannatta, R. A. (2002). *Advanced and multivariate statistical methods*. Los Angeles: Pyrczk.
- Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change* (2<sup>nd</sup> ed.). New York: The Guilford Press.
- Milner, H. R. (2006). Preservice teachers' learning about cultural and racial diversity: Implications for urban education. *Urban Education, 41*(4), 343-375.
- Morelli, P. T. T. & Spencer, M. S. (2000). Use and support of multicultural and antiracist education: Research-informed interdisciplinary social work practice. *Social Work, 45* (2), 166-175.
- National Association of Social Workers (n.d.). *NASW code of ethics*. Retrieved September 29, 2008, from <http://www.socialworkers.org/pubs/code/code.asp>.
- National Education Association (n.d.). *NEA code of ethics*. Retrieved September 29, 2008, from <http://www.nea.org/aboutnea/code.html>.
- National Organization of Human Services (n.d.). *NOHS code of ethics*. Retrieved September 29, 2008, from <http://www.nationalhumanservices.org/ethical-standards-of-human-service-professionals>.



- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- O'Connor, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instrumentation, and Computers*, 32, 396-402.
- Pewewardy, C., & Frey, B. (2002). Surveying the landscape: Perceptions of multicultural support service and racial climate at a predominantly white university. *The Journal of Negro Education*, 71(1/2), 77-95.
- Ponterotto, J. G. (1997). Multicultural counseling training: A competency model and national survey. In D. B. Pope-Davis & H. L. K. Coleman (Eds.), *Multicultural counseling competencies: Assessment, education and training, and supervision* (pp. 111-130). Thousand Oaks, CA: Sage Publications, Inc.
- Ponterotto, J. G., & Alexander, C. M. (1996). Assessing the multicultural competence of counselors and clinicians. In L. A. Suzuki, P. J. Meller, & J. G. Ponterotto (Eds.), *Handbook of multicultural assessment* (pp. 651-672). San Francisco: Jossey-Bass.
- Ponterotto, J. G., Alexander, C. M., & Greiger, I. (1995). A multicultural competency checklist for counseling training programs. *Journal of Multicultural Counseling and Development*, 23(1), 11-20.
- Ponterotto, J. G., Gretchen, D., Utsey, S. O., Rieger, B. P., & Austin, R. (2002). A revision of the Multicultural Counseling Awareness Scale. *Journal of Multicultural Counseling and Development*, 30, 153-180.
- Ponterotto, J. G., Rieger, B. P., Barrett, A., Harris, G., Sparks, R., Sanchez, C. M., et al. (1996). Development and initial validation of the Multicultural Counseling Awareness Scale. In G. R. Sodowsky & J. C. Impara (Eds.), *Multicultural Assessment in Counseling and Clinical Psychology* (pp. 247-282). University of Nebraska-Lincoln: Buros Institute of Mental Measurements.
- Ponterotto, J. G., Rieger, B. P., Barrett, A., & Sparks, R. (1994). Assessing multicultural counseling competence: A review of instrumentation. *Journal of Counseling & Development*, 72, 316-322.
- Pope, R. L. & Mueller, J. A. (2005). Faculty and curriculum: Examining multicultural competence and inclusion. *Journal of College Student Development*, 46 (6), 679-688.

- Pope-Davis, D. B., & Dings, J. G. (1995). The assessment of multicultural counseling competencies. In J. G. Ponterotto, J. M. Casas, L. Suzuki, & C. Alexander (Eds.), *Handbook of multicultural counseling* (pp. 287–311). Thousand Oaks, CA: Sage.
- Pope-Davis, D.B., Liu, W.M., Nevitt, J., & Toporek, R.L. (2000). The development and initial validation of the Multicultural Environmental Inventory: A preliminary investigation. *Cultural Diversity and Ethnic Minority Psychology, 6*(1), 57-64.
- Pope-Davis, D. B., Liu, W. M., Toporek, R. L., & Brittan-Powell, C. S. (2001). What's missing from multicultural competency research: Review, introspection, and recommendations. *Cultural Diversity and Ethnic Minority Psychology, 7*(2), 121-138.
- Preacher, K. J. & MacCallum, R. C., (2003). Repairing Tom Swift's electric factor analysis machine. *Understanding Statistics 2*(1), 13-43.
- Prochaska, J. M., (2000). A transtheoretical model for assessing organizational change: A study of family service agencies' movement to time-limited therapy. *Families in Society, 81*, 76-84.
- Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist 47*(9), 1102-1114.
- Prochaska, J. O., & Norcross, J. C. (2001). Stages of change. *Psychotherapy, 38*(4), 443-448.
- Rakowski, W., Ehrich, B., Goldstein, M. G., Rimer, B. K., Pearlman, D. N., Clark, M. A., Velicer, W. F., & Woolverton, H. (1998). Increasing mammography screening among women aged 40-74 by use of a stage-matched, tailored intervention. *Preventive Medicine, 27*, 748-756.
- Ridley, C. R. (1995). *Overcoming unintentional racism in counseling and therapy: A practitioner's guide to intentional intervention*. Thousand Oaks, CA: Sage.
- Ridley, C. R., Mendoza, D. W., & Kanitz, B. E. (1994). Multicultural training: Reexamination, operationalization, and integration. *Counseling Psychologist, 22*(2), 227-289.
- Rogers, M. R. (2006). Exemplary multicultural training in school psychology programs. *Cultural Diversity and Ethnic Minority Psychology, 12* (1), 115-133.
- Roysircar, G. (2004). Cultural self-awareness assessment: Practice examples from psychology training. *Professional Psychology: Research and Practice, 35*(6), 658-666.

- Smith, T. B., Constantine, M. G., Dunn, T. W., Dinehart, J. M., & Montoya, J. A. (2006). Multicultural education in the mental health professions: A meta-analytic review. *Journal of Counseling Psychology, 53*(1), 132-145.
- Sodowsky, G. R., Taffe, R. C., Gutkin, T. B., & Wise, S. L. (1994). Development of the Multicultural Counseling Inventory: A self-report measure of multicultural competencies. *Journal of Counseling Psychology, 41*, 137-148.
- SPSS for Windows Graduate Student Version, Rel. 15.0.1.1. (2007). Chicago: SPSS Inc.
- Stevens, J. P. (2001). *Applied multivariate statistics for the social sciences* (4<sup>th</sup> Ed.). Mahwah, NJ: Earlbaum.
- Sue, D. W., Arredondo, P., & McDavis, R. J. (1992). Multicultural counseling competencies and standards: A call to the profession. *Journal of Counseling and Development, 70*, 477-483.
- Sue, D. W., Carter, R. T., Casas, J. M., Fouad, N. A., Ivey, A. E., & Jensen, M., et al. (1998). *Multicultural counseling competencies: Individual and organizational development*. Thousand Oaks, CA: Sage Publications, Inc.
- Sue, D. W., & Sue, D. (2003). *Counseling the culturally diverse: Theory and practice* (4<sup>th</sup> Ed.). NY: John Wiley & Sons, Inc.
- Tabachnick, B. G., Fidell, L. S. (2001). *Using multivariate statistics* (4<sup>th</sup> Ed.). New York: Harper & Row.
- Tori, C. D., & Ducker, D. G. (2004). Sustaining the commitment to multiculturalism: A longitudinal study in a graduate psychology program. *Professional Psychology: Research and Practice, 35*(6), 649-657.
- Velicer, W. F., Prochaska, J. O., Fava, J. L., Norman, G. J., & Redding, C. A. (1998). Smoking cessation and stress management: Applications of the Transtheoretical Model of behavior change. *Homeostasis, 38*, 216-233.
- White, H. L. (2002). Implementing the multicultural education perspective into the nursing education curriculum. *Journal of Instructional Psychology, 30* (4), 326-332.
- Wirth, L. (1945). The problem of minority groups. In R. Linton (Ed.), *The science of man in the world crisis* (pp. 347-372). New York: Columbia University Press.
- Worthington, R. L., & Whittaker, T. A. (2006). Scale development research: A content analysis and recommendations for best practices. *The Counseling Psychologist, 34*(6), 806-838.

Worthington, R. L., Mobley, M., Franks, R. P., & Tan, J. A. (2000). Multicultural counseling competencies: Verbal content, counselor attributions, and social desirability. *Journal of Counseling Psychology, 47*, 460–468.