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Self-Construal, Ethnic Identity, and Classroom Organization Preferences: Findings from Black, Hispanic, and White College Students

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Abstract

The purposes of this study were to examine whether ethnic differences in college students' self-construals exist and whether these self-construals are associated with preferences for different types of classroom organization; and also to test the validity of self-construal theory to explain psychological differences. Self-reports were colected from 197 American college students (White = 87, Hispanic = 56, Black = 54) in three different types of higher educaton institutions in the Southwest region of the U.S.. A series of MANOVA or MANCOVA models indicated that degree of identification with one's ethnic group (covariate), rather than the independent variable of ethnic group, was crucial in predicting one's independent and interdependent self-construal scores. No ethnic differences existed for any of the preferences of classroom organization. Additionally, a multiple regression mediation analysis indicated self-construals appeared not to act as mediators of students' preferences for learning organizations, as opposing to the self-construal theory. Further research is needed to test the validity of self-construal theory or the self-construal scale. (Contains 3 tables)

Key words: self-construal, ethnic identity, ethnic/racial differences, cooperative learning, diversity, multiculturalism

Self-Construal, Ethnic Identity, and Classroom Organization Preferences: Findings from Black, Hispanic, and White College Students

The importance of increasing one's knowledge regarding the cultural and ethnic differences of others has been emphasized in psychology and education in recent years, under the rubric of "multuculturalism" or "diversity." Both terms, "multuculturalism" and "diversity", have been used interchangeably to indicate a necessity to increase our understanding of others, especially ethnic minority groups (American Psychological Association, 2003). In order to better understand the experience of ethnic minority college students in the United States, the author was interested in the relationships among the constructs of independent and interdependent self-construals by Markus and Kitayama (1991), degree of ethnic identity by Phinney (1992), and classroom organization preferences by Owens (1980).

Traditionally, a number of psychological theories and a great deal of the knowledge obtained by American scholars has been based on empirical research results obtained from mostly white subjects. Much of this has been generalized as universally true (Betancourt & Lopez, 1993).

However, there are at least two main two critical issues that affect research in the area of ethnic minority studies. The first issue is the ineffectiveness of self-labeling for detecting ethnic differences. Traditionally, ethnic minority researchers have used self-ethnic labeling for measuring the effects of ethnic differences on psychological functioning. Phinney (1996) argued that such a method for identifying ethnic differences was problematic when it came to looking for differences in psychological functioning. Past investigations

into ethnic differences by self-ethnic categorization sometimes found significant differences among ethnic groups, and sometimes did not. Phinney (1992) argued that self-ethnic labeling was not the same as the degree to which one identified with one's ethnic group. Along with several colleagues, Phinney constructed the latest version of Multigroup Ethnic Identity Measure (Roberts, Phinney, Masse, Chen, Roberts, & Romero, 1999) in order to capture the degree to which one's psychological functioning included a central role for one's ethnicity.

The second issue affecting research in ethnic minority studies is the measurements of the critical values of ethnic minorities. In a review article, Betancourt and Lopez (1993) pointed out that the typical ethnic study measures several target variables among different ethnic groups. If the researchers find some significant differences among ethnic groups, they automatically assume that those differences were created by cultural differences. However, Betancourt and Lopez (1993) argued that researchers should begin by identifying cultural values and beliefs that are meaningful to a particular ethnic group, expecting that these values and beliefs may differ from one group to another. Measures that are sensitive to each group's concerns can then be used to begin the process of group comparisons without falling into an ethnocentric trap.

The work of Gaines (1997) and Gaines et al. (1997) illustrates the empirical importance of this point. In his review of the literature on close romantic relationships, Gaines (1997) identified a core value of familialism for Hispanic Americans and collectivism for Black Americans, whereas the mainstream American core value is individualism. He argued that if an ethnic minority member loses his or her core value, the person also loses his or her

ethnic identity. Subsequently, Gaines et al. (1997) studied the relationship between cultural values and beliefs (e.g., collectivism, individualism, and familialism) and ethnic identity among four U.S. ethnic groups. The results suggested that ethnic identity is of crucial importance for psychological functioning and is related to cultural values and beliefs. Initially, Gaines et al. (1997) hypothesized that whites would score higher on an individualism scale and lower in both familialism and collectivism than non-whites. The t-tests supported some of these hypotheses. Yet, when an ANCOVA was run using ethnicity as a factor and ethnic identity as a covariate, and individualism, collectivism, and familialism as dependent variables, Gaines et al. found that all ethnic differences became insignificant. In addition, they found that ethnic identity was a significant predictor of individualism, collectivism, and familialism. This result suggested that ethnic identity, not self ethnic-labeling, is the important predictor of ethnic differences in levels of individualism, collectivism, and familialism. In addition, Oyserman and Sakamoto (1997) also found that Asian Americans' ethnic identity and collectivism are positively correlated. In summary, ethnic minority research should target the critical values of ethnic minority groups in considering ethnic identity.

According to Markus and Kitayama (1991, 1994a, 1994b, & 1998), culture influences the self-conceptualization of individual members. Markus and Kitayama argued that there are at least two different kinds of self-conceptualizations depending on the culture to which one belongs. One is the traditional self-concept that emphasizes autonomy and independence from others (i.e., independent self-construal). The other is the non-traditional self-concept

that emphasizes relatedness to others (i.e., interdependent self-construal). Markus and Kitayama (1991) explained that cross-cultural differences in psychological functions occur, especially for emotion and cognition, because of the differences in self-systems that are molded by one's culture. Self-construal theory by Markus and Kitayama (1991) has been one of the most popular theoretical frameworks in cross-cultural psychology since its conception, hence, this theory inspired many researchers to conduct empirical cross-cultural studies for investigating different psychological functions such as communication styles (Singelis & Brown, 1995), embarassibility (Singelis & Sharkey, 1995), cross-cultural adaptation (Cross, 1995), depression and social anxiety (Okazaki, 1997), five factors of personality, self-esteem, relationship harmony, and life satisfaction (Kwan, Bond, & Singelis, 1997), collective self-esteem (Sato & Cameron, 1999), acculturation and career maturation (Hardin, Leong, & Osipow, 1999), measurement of biculturalism (Yamada & Singelis, 1999), conflict resolution strategies (Derlega, Cukur, Kuang, & Forsyth, 2002), self-enhancement (Norasakkunkit & Kalick, 2002), and gender differences (Watkins, Cheng, Mpofu, Olowu, Singh-Sengupta, Regmi, 2003).

In education, motivational theorists have identified three different kinds of goal structures in the classroom. The first one is called the cooperative learning mode, in which learners study and achieve academically with the cooperation of other learners, i.e., a teacher assigns a specific task for a group of students and a group of students try to answer the assignment as cooperative work within a group. The second mode is called the individual learning mode, in which learners study and achieve academically without any consideration of others, i.e., each

student sits in front of a computer and tries to solve math drills by himself or herself. The third mode is called the competitive learning mode, in which learners study and achieve academically while competing with others. Learners in this mode do well only when they surpass other learners, i.e., a teacher gives a test and students' grades are determined by how well individuals perform in comparison to other students (Johnson & Johnson, 1991; Lindauer & Petrie, 1997).

Although educational researchers have been conducting research on the effectiveness of cooperative learning since the 1920's (Johnson, Maruyama, Johnson, Nelson, & Skon, 1981), cooperative learning has remained a less than popular option in American education. This does not mean that all American educators endorse competitive classroom organization. The legendary educator, John Dewey asserted that students should be in cooperative classroom organizations in order to exchange ideas and develop an empathetic capacity. Dewey believed that the concept of democracy would best be learned in group settings during an individual's youth (Webb & Palincsar, 1996).

However, sociohistorically, cooperative learning has been assumed to be slightly foreign and even anti-American because it was thought to discourage individual personal achievement. As a result, the American educational system emphasized the competitive learning mode until stronger attempts to introduce cooperative and individual learning modes were made in the 1960s (Eggen & Kauchak, 1999; Webb & Palincsar, 1996).

A substantial amount of research has been conducted on the merits of the three styles of classroom organization. Johnson, Maruyama, Johnson, Nelson,

and Skon (1981) conducted a meta-analysis of 122 existing studies, published between 1924 to 1980, and using North American samples. In this analysis, they related classroom organization to achievement issues. They identified four classroom organizations: (1) cooperative learning without group competition; (2) cooperative learning with intergroup competition; (3) competitive learning; and (4) individual learning. They used three methods for their meta-analysis: (1) original authors' judgment; (2) effect size; and (3) z-score methods. Johnson et al. concluded that cooperative learning without group competition promoted better academic achievement and productivity than the other three methods. In addition, Johnson and Johnson (1998) reported results from a more recent meta-analysis of approximate 375 experimental studies relating to the effect of individualistic, competitive, and cooperative learning styles on academic achievement. They concluded that on average, learners in the cooperative learning mode performed better than those in the competitive learning mode or individualistic learning mode.

Slavin (2000) performed a meta-analysis of over 100 studies on classroom organization. Studies chosen for inclusion in this meta-analysis had to fulfill two specific conditions: (1) reward for a group, and (2) individual accountability. Slavin concluded that group study methods produced better academic achievement and productivity than traditional competitive classroom learning. This conclusion supported the motivational benefits and positive effects of cooperative learning.

Research has also investigated students' preferences for different classroom organizations among different cultures and ethnicities, including

Africans (Okebukola, 1986), Australians (Owens & Straton, 1980), Japanese (Schwalb & Schwalb, 1985), American elementary to high school students (Owens, 1985), and Black American 6th and 7th graders (Johnson & Engelhard, 1992). Conspicuously absent are studies involving Hispanic and Black American college students. If collectivistic cultures facilitate the motivation for members' self and in-group achievement, and Hispanic and Black American people are more likely to endorse a collectivistic life styles, then one would predict that Hispanic American and Black American college students should tend to show a preference for the group-oriented learning mode over the individual-based learning mode.

Self-construal theory also influenced learner motivation issues in education. Boekaerts (1998) theoretically suggested learner's self-construal may influence learning behavior of the learners. Extending Boekaerts (1998), the author theorized that if collectivism facilitates an interdependent self-construal more often than an independent self-construal, then learners with an interdependent self-construal should prefer cooperative learning. The self-construal theory defined that interdependent self-construal classify people into two groups: out-group and in-group. Out-group are the people who do not belong to his or her close circle of human relationships. In-group are the people in his or her close circle of human relationships. It would seem logical because the learners who are high in interdependent self-construal might be more motivated not only for the self but for the in-group's achievement as well.

Although Matsumoto (1999) acknowledged the important contributions of Markus and Kitayama's self-construal theory to the field of culture and

psychology in the last decade, he argued that the theory has gained much more prominence than its empirical support warranted. Matsumoto (1999) argued that Markus and Kitayama (1991) cited only the studies that used country as an independent variable with psychological functions as dependent variables. According to Matsumoto (1999), those citations were inappropriate because self-construal itself, the purported mediator variable for cross-cultural differences in psychological functions, was never tested correctly. Additionally, Matsumoto (1999) cited several empirical cross-national studies that did not support Markus and Kitayama's theory. Finally, Matsumoto (1999) pointed out that the original article of Markus and Kitayama (1991) is sometimes misleading because it gives a too simplistic portrayal of how individuals construct their self-construals from their cultural experiences. In addition, the United States is rapidly becoming a multi-ethnic country (U.S. Bureau of the Census, 1996a, 1996b). Therefore, cross-national studies are becoming more and more unreliable as a valid representation of cross-cultural differences between the U.S. and other countries. Therefore, the unit of analysis in cross-cultural studies should not be nations as a whole; rather, researchers should be more sensitive to within-country ethnic make-up.

Historically, cross-cultural researchers have found many cross-cultural differences in individual behaviors and psychological functioning. However, there had been no theoretical framework to explain how culture creates those cultural differences (Matsumoto, 1999). Then, Markus and Kitayama (1991) offered their theory that cultures (e.g., individualism and collectivism) produce specific self-schemata (independent and interdependent self-construal), thereby

producing culturally different individual and psychological behaviors. This is probably why self-construal theory became one of the most popular theories in cross-cultural psychology in 1990s and today. For example, Boekaerts (1998) hypothesized that individualistic cultures emphasize autonomy and discourage group work and team production. Markus and Kitayama (1991) explained that an interdependent self-construal facilitates the achievement of the self and of others who are not too distinctively different. According to Markus and Kitayama (1991) and Boekaerts (1998), culture creates self and therefore the variances of psychological functions (e.g., learning preference for classroom organization) can be influenced by one's degree of both types of self-construal. In order to explore these ideas more fully, ethnic minority students should be involved in cross-cultural research studies.

In this study, the author has involved both Black and Hispanic American students for two reasons. First, the concept of self-construal theoretically overlaps with each ethnic minority's critical cultural values (collectivism, familialism) versus American mainstream culture's critical core value (individualism). Second, the self-construal concept may allow us to understand more clearly what biculturalism scholars have argued: that ethnic minority students are dealing with two different forces concurrently, one from mainstream culture and another from their own ethnic culture.

Research Questions

This study will test whether there are significant differences in terms of self-construal and specific psychological functions (i.e., preferences for individual, competitive, and cooperative learning environments) among various

ethnic groups (i.e., white, Black, and Hispanic Americans) within the same national culture (the United States). The research questions were derived from the current debate surrounding self-construal theory and ethnic minority issues. As well, the author was interested in testing for any sex differences that might obtain.

Research Question 1. Are there sex and/or ethnic differences (by self-ethnic labeling) in both independent and interdependent self-construal scores and preferences for different types of classroom organization?

Research Question 2. If there are sex and/or ethnic differences (by self-ethnic labeling) in the target dependent variables, could those identified ethnic differences be partially explained by differences in ethnic identity accomplishment?

Research Question 3. What is the relationship between self-construal scores and preferences for different types of classroom organization, and are there any sex and/or ethnic differences in these relationships?

Research Question 4. Is self-construal a mediating ethnic cultural factor that influences preferences for different types of classroom organization?

Method

Participants

The participants were 197 college students enrolled in three colleges/ universities within the southwestern portion of the United States. Women comprised 60.4% of the sample (119 persons) and men composed 39.6% of the sample (78 persons). White American students constituted 44.2% of the sample (87 persons), while Hispanic American students constituted 28.4% of the sample

(56 persons) and Black American students constituted 27.4% of the sample (54 persons). In terms of their current college enrollment, 34 students came from a small liberal arts college that is predominantly African American, while 58 students came from another small university that enrolls a higher percentage of Hispanic students. The rest of the students (105 persons) came from a large state university. The information regarding ethnicity, sex, and school of participants is available in Table 1. The participants ranged in age from 18 to 34, with a mean of 21.3.

Measures

Demographic Information Questionnaire. The participants first answered a few questions that established their sex and age.

Measure of Self-Construals. Following the definition of self-construals by Markus and Kitayama (1991), Singelis (1994) constructed the Self-Construal Scale (SCS) in order to measure a person's degree of independence and interdependence. As reported, the scale construction proceeded as follows. First, Singelis (1994) constructed 45 items that were supposed to measure each type of self-construal. Undergraduate students in Hawaii were asked to rate each item from 1 (strongly disagree) to 7 (strongly agree) on Likert-style scale. From the correlation matrix of these 45 items, he performed a principal component analysis with varimax rotation in a two-factor solution. Then, he chose only the items that loaded more than .35 on only one factor, resulting in a set of 24 items. Measured on the responses of two groups of subjects (n=360 and 160), Cronbach's alpha reliabilities for the 12 items measuring independent self-construal were .73 and .74, and for the 12 items measuring interdependent self-construal, .69 and .70.

Recently, three new items have been added to each construal, so that the number of total items is now 30. Hardin, Leong, and Osipow (1999) reported that the 30-item version (alpha for independence is .71 and interdependence is .65) had better reliability coefficients than the original 24-item version (alpha for independence is .67 and interdependence is .60). Therefore, the 30-item version was used in this study.

Measure of Classroom Organization Preferences. Owens and Straton (1980) designed the Learning Preference Scale-Students (LPSS) in order to measure the preferences students have for different kinds of classroom organization. The LPSS contains 36 items with 12 items for measuring each preference (i.e., cooperative, competitive, or individual). Participants are asked to rate each question item from 1 (completely true) to 4 (completely false) on a Likert-style scale. There are several reverse-scored items in each preference sub-scale on the LPSS. Barnes and Owens (1992) reported that this scale has been validated in previous research in Australia (n=1814 fifth to twelfth graders, 1978), in the U.S (n=1059 fourth to twelfth graders, 1981), and in England (n=2127 seventh to twelfth graders, 1991). Cronbach's alpha reliabilities ranged from .65 to .73 in these three countries. For testing the validity of the scale, intercorrelations between the three LPSS subscales were calculated. The intercorrelations between cooperative and competitive items was .00 (Australia), -.04 (the U.S), and -.06 (England). The intercorrelations between cooperative and individual items was -.46 (Australia), -.48 (the U.S), and -.44 (England). The intercorrelations between individual and competitive items was .22 (Australia),

.11 (the U.S), and .33 (England). These results confirmed that the subscales were measuring separate but somewhat related preferences.

Measure of Ethnic Identity. Phinney (1992) constructed the Multigroup Ethnic Identity Measure (MEIM) in order to capture the degree to which individuals identify with their ethnic group. On this scale, participants are asked to rate each item from 1 (strongly disagree) to 4 (strongly agree) on a Likert-style scale. The original scale included 14 items that measured three components of ethnic identity: affirmation and belonging, ethnic identity achievement, and ethnic behaviors. Cronbach's alpha reliabilities for the 14 item scale were .81 for 417 high school students, and .90 for 136 college students (Phinney, 1992); .75 for 98 high school students (Phinney & Devich-Navarro, 1997), .80 for 547 adolescents (Phinney, Ferguson, & Tate, 1997), and .83 for 669 high school students (Phinney, Cantu, & Kurtz, 1997). Recently, Roberts, Phinney, Masse, Chen, Roberts, and Romero (1999) subtracted two items from the original 14 items, for two primary reasons**.** First, factor analysis established that these two items were not loaded on appropriate factors and were difficult to interpret. Second, the 12-item version had equal reliability when compared to the 14-item version (Cronbach's alpha =.85). In addition, the latest version of MEIM demonstrated high validity because it had positive correlations with various psychological well-being measures, such as coping ($r=.23$, $p<.001$), mastery ($r=.19$, $p<.001$), self-esteem ($r=.20$, $p<.001$), and optimism ($r=.19$, $p<.001$), and negative correlations with loneliness ($r=-.09$, $p<.001$), and depression ($r=-.09$, $p<.001$). Therefore, the 12-item version was used in this study. An example of an MEIM item is, "I have

a clear sense of my ethnic background and what it means for me." There are no reverse-scored items on the MEIM.

Procedure

A cover letter was distributed to each participant in order to confirm three points: (1) that participation was voluntary, (2) that anonymity was guaranteed, and (3) that subjects had the right to withdraw from the study at any time. After reading the cover letter, participants answered the Demographic Information Questionnaire, the SCS, the LPSS, and the MEIM. Participation in the study was voluntary, although half of the participants were offered extra credit for taking part, and another half of the subjects participated in this study in order to fulfill a course requirement.

Results

In order to answer research question 1, two types of multiple analysis of variance (MANOVA) were conducted. First one was a 2 (male vs. female) X 3 (white vs. Hispanic vs. Black) MANOVA with independent-self scores and interdependent-self scores as dependent measures (see Table 2, for means and standard deviations). There was a significant multivariate effect of ethnicity ($F=2.885$, $p<.023$) and no other significant multivariate effects for sex or the interaction of sex and ethnic group. The univariate ethnic effect was significant only for the independent self-construal scores ($F=5.15$, $p<.008$). Post-hoc Tukey HSD tests revealed that Black students were significantly higher on the independent self-construal scale than both white ($p<.014$) and Hispanic students ($p<.018$). Secondly, a 2 (sex: male vs. female) by 3 (ethnicity: white vs. Black vs. Hispanic) MANOVA was performed with the three learning preference scores as

dependent variables. There was a significant multivariate effect of sex ($F=3.276$, $p<.023$) but no other significant multivariate effects. The univariate sex effect was significant only for the competitive learning preference score ($F=6.199$, $p<.015$). Male students ($M=3.05$) were significantly higher than female students ($M=2.84$) in their preference for competitive learning environments. Table 3 lists the means and standard deviations for learning preference scores for ethnic and gender groups.

In order to answer research question 2, six different models of multiple analyses of covariance (MANCOVA) were performed. First, a set of three models of 2 (sex: male vs. female) by 3 (ethnicity: white vs. Black vs. Hispanic) MANCOVA were performed with independent-self and interdependent-self scores as dependent variables. The single covariate was ethnic identity, measured by the Multigroup Ethnic Identity Measure (MEIM). The first full-model MANCOVA resulted in an insignificant three-way interaction between the two independent variables and the covariate. Therefore, the next step was to run a second MANCOVA without any interactions with the covariate. As this analysis again showed no significant interaction effects, the third step was to run a MANCOVA with only main effects as factors. Here, results indicated that ethnic background (self-ethnic labeling) became insignificant with MEIM taken into consideration as a covariate ($F=2.19$, $p<.071$). However, a significant multivariate effect of MEIM ($F=6.355$, $p<.003$) emerged and no other significant multivariate effects appeared. The univariate MEIM effect was significant in both independent self-construal scores ($F=5.371$, $p<.023$) and interdependent self-construal scores ($F=7.717$, $p<.007$).

Second, a set of three models of 2 (sex: male vs. female) by 3 (ethnicity: white vs. Black vs. Hispanic) multiple analyses of covariance (MANCOVA) was performed with classroom organization preferences (i.e., individual, cooperative, and competitive) scores as dependent variables. The single covariate was degree of ethnic identity, measured by the Multigroup Ethnic Identity Measure (MEIM).

The first full-model MANCOVA resulted in an insignificant three-way interaction between the two independent variables and the covariate. Therefore, the next step was to run a second MANCOVA without any interaction with the covariate. As this analysis again showed no significant interaction effects, the third step was to run a MANCOVA with only main effects as factors. Here, there was only a significant multivariate effect of sex ($F=3.44$, $p<.019$), and no other significant multivariate effect. The univariate sex effect was significant for the competitive learning preference scores ($F=6.35$, $p<.014$)

In order to answer research question 3, a simple matrix of zero-order Pearson correlations was examined among the two kinds of self-construals and the three types of learning preferences. Results indicated that independent-self scores and preference for individual learning scores were associated in a positive direction, but only at a weak and insignificant level ($r=.11$, $p<.12$), and the interdependent-self scores and preference for cooperative learning scores were also positively correlated but only at a marginal level ($r=.12$, $p<.10$). In order to explore the relationship between these variables within ethnic groups, the same kind of simple zero-order Pearson correlations was examined for each ethnic group. For white students ($n=87$), results indicated that independent-self scores and preference for individual learning scores were not correlated ($r=.08$, $p<.47$)

but interdependent-self scores and preference for cooperative learning scores were significantly and positively correlated ($r=.24$, $p<.026$). For the Hispanic group ($n=56$), results indicated that independent-self scores and preference for individual learning scores were not correlated ($r=-.02$, $p<.87$) nor were interdependent-self scores and preference for cooperative learning scores ($r=.12$, $p<.38$). For Black students ($n=54$), results indicated that independent-self scores and preference for individual learning scores were significantly and positively correlated ($r=.30$, $p<.030$), but interdependent-self scores and preference for cooperative learning scores were not ($r=-.12$, $p<.38$).

In order to answer research question 4, the procedure recommended by Baron and Kenny (1986) was used. Baron and Kenny wrote:

> To test for mediation, one should estimate the three following regression equations: first, regressing the mediator on the independent variable; second, regressing the dependent variable on the independent variable; and third, regressing the dependent variable on both the independent variable and on the mediator (p. 1177).

Applying the recommended procedure meant that three models would be tested:

Model 1: Self-construal scores were regressed on ethnic group memberships. (The author named Model 1a for independent self score, Model1b for interdependent self score).

Model 2: Learning preference scores were regressed on ethnic group memberships.

Model 3: Learning preference scores were regressed on ethnic group memberships and self-construal scores.

Preparing these three models (3) for each learning preference score (3) and each self-construal (2) meant that a total of 18 regression analyses were needed. If the first step of mediation testing is insignificant (Model 1a and Model 1b), the successive procedures (Model 2 and 3) do not need to be tested (Baron & Kenny, 1986). In summary, the author tested each mediator (independent self or interdependent self) for each dependent variable (preference for individual, cooperative, or competitive learning).

For the cooperative learning preference scores, independent-self construal scores were regressed on ethnic group membership for Model 1a, yielding insignificant standardized beta weights of .043 ($p<.56$) and interdependent-self construal scores were regressed on ethnic group membership for Model 1b, yielding insignificant standardized beta weights of .111 ($p<.12$). The results of Model 1a and 1b indicated that the type of self-construal (the mediator variable) did not have a significant relationship with cooperative learning preference scores (the outcome variable). Therefore, Models 2 and 3 were not tested.

For the competitive learning preference scores, independent-self construal scores were regressed on ethnic group membership for Model 1a, yielding insignificant standardized beta weights of -.053 ($p<.47$) and interdependent-self construal scores were regressed on ethnic group membership for Model 1b, yielding insignificant standardized beta weights of .046 ($p<.52$). The results of Model 1a and 1b indicated that the type of self-construal (the mediator variable)

did not have a significant relationship with competitive learning preference scores (the outcome variable). Therefore, Models 2 and 3 were not tested.

For the individual learning preference scores, independent-self construal scores were regressed on ethnic group membership for Model 1a, yielding insignificant standardized beta weights of .123 ($p<.10$) and interdependent-self construal scores were regressed on ethnic group membership for Model 1b, yielding insignificant standardized beta weights of -.048 ($p<.51$). The results of Model 1a and 1b indicated that the type of self-construal (the mediator variable) did not have a significant relationship with individual learning preference scores (the outcome variable). Therefore, Models 2 and 3 were not tested.

Discussion

There were several major findings in this study. One of the most interesting findings was the many non-significant effects found for the most of group comparisons. Participants in this study, regardless of their ethnicity or sex, showed more within-group than between-group variability in the self-construal and preference for classroom organization measures. There were no ethnic or sex differences in terms of interdependent self-construal scores, individual learning preference scores, and cooperative learning preference scores.

One possible explanation of this lack of differences between and among the groups might argue that most college students, having experienced the homogenizing effect of the American educational system and having shown themselves to succeed within that system, have become more similar than different from those early educational experiences. The one significant difference occurred for Black American students who scored significantly higher on the

measure of independent self-construal than their white and Hispanic counterparts. This result seemed to support Ward (1995) who claimed that contemporary Black American youth do not follow Black Americans' traditional collectivistic values. Or, one might argue that the Black college students participating in this study must be high in independent self-construal scores because they have to "go their own way" to make it to college when compared to the majority of Black youth who do not go to college. However, such an ethnic difference became insignificant when degree of ethnic identity was taken into account. This would seem to point to the need for researchers interested in ethnic minority issues to consider degree of ethnic identity as crucial variables in their research. More needs to be said about the variable of ethnic identity as measured by Phinney's (1992) MEIM. The degree to which participants identified with their ethnic group appeared to be an essential factor in explaining the effects of ethnic group membership on both independent and interdependent self-construals. The degree of one's ethnic identity is related to both self-construals positively: ethnic identity and independent self-construal and ethnic identity and interdependent self-construal. This fact could mean that self-construal may explain how ethnic culture and self-systems may be related. However, the current self-construal scale may need revision because it may be insensitive to social contexts, as will be discussed later.

Typically, ethnic minority research has not been very sensitive to within-group differences. In much of the existing literature, ethnic minorities are presented as homogeneous groups. For example, it is claimed that Black Americans emphasize collectivistic values and Hispanic Americans emphasize

family-oriented values. The existing literature argues for the ethnic uniqueness of Black Americans (Allen, Dawson & Brown, 1989; Baldwin & Hopkins, 1990; Gaines, 1997; Jones, 1980; McCombs, 1985; Oyserman, Gant, & Ager, 1995) and Hispanic Americans (Dabul, Bernal, & Knight, 1995; Freeberg & Stein, 1996; Marin & Marin, 1991; Padilla, 1995; Triandis, Marin, Hui, Lisansky, & Ottati, 1984) in psychological functioning. Other ethnic minority scholars however have argued that there are significant within-group differences with the group of individuals under the umbrella of the Hispanic label (Keefe & Padilla, 1987; Phinney, 1996). However, the results of this study suggest that ethnic identity may be as important as ethnic sub-groupings to explain individual differences among members of an ethnicity. It is probably misleading to say, for example, that "African Americans are collectivistic," or "Hispanic Americans are family-oriented people," because degree to which one identifies with one's ethnic group can make a difference. The results of this study supported those scholars (Davis, 1997; Eschbach & Gomez, 1996; Fox, 1996) who have argued that ethnic difference is a contemporary myth in the U.S. To investigate theoretical implication, this study initially tried to use a smaller unit of analysis (i.e., ethnic culture) than the traditional unit (i.e., national culture) typically used in cross-cultural research. However, ethnic culture itself seems to be too general as a classification variable in cross-cultural research. Psychologists should consider such factors as sex and degree of ethnic identity in future research.

Next, the constructs of independent-self and interdependent-self construals can help to describe the way American college students manage the complex process of dealing with two forces pushing on their self-concept, independence

and interdependence. The results of this study indicated that independent and interdependent self-construal scores were not significantly correlated with each other, yet both were significantly correlated with degree of ethnic identity. Although existing literatures often argue that ethnic minority members have to deal with the two forces of independence and interdependence (Gaines, Rios, & Buriel, 1997; Phelan, Davidson, & Cao, 1991; Phelan, Yu, & Davidson, 1994), it seems that even white students have to negotiate an integration of these two forces. It may be a sign that a universal issue for mental health involves achieving a high level of both independence and interdependence in the same way as androgyny has often been portrayed as the ideal integration of both feminine and masculine characteristics. This result may provide support for Guisinger and Blatt (1994) who argued that healthy human development needs to achieve both individuality and relatedness to others.

One of the few significant effects found were that male students preferred competitive learning classroom organization more than did female students, whether ethnic identity was taken into account or not. This result may be replicating a typical gender difference of male preference for competition and aggression. This is one area in research comparing men and women on different aspects of psychological functioning in which results have been clear and reliable (Bussey & Bandura, 1999). Overall, the results did not indicate significant correlations between specific self-construal scores and specific learning preference scores. However, separating the analyses by sex, results from the male students clearly supported Boekaerts (1998) whereas those from the female students did not. Such sex differences could be interpreted as showing a

difference in cognitive systems in men and women. Somehow, the logic of Boekaerts (1998) seems to apply to how men function but not women. Future research may fruitfully explore the sex differences hinted at in this study.

The final major finding was that self-construal did not seem to function as a mediator of cultural differences in psychological functioning. Markus and Kitayama (1991) claimed that observed cross-cultural differences in target psychological functions occur because different cultures facilitate or suppress either an independent or an interdependent self-construal. Boekaerts (1998) wrote that such self-construals may relate to preferences for individualistic learning and cooperative learning in education. In an important theoretical analysis, Matsumoto (1999) argued that we should empirically test whether self-construals do or do not serve a true mediating function between cultural differences and psychological outcomes. The results did not show a mediating function of self-construals between ethnic groupings and preferences for certain types of learning in classrooms. The failure of this study to support the mediating role of self-concepts may be due to the fact that no significant relations between ethnic group membership and preference for classroom organizations was found. In addition, the negative results from this study could be due to the selection of measures. In future research, one might want to conduct more theoretically literal measurements of the constructs and to use a research design that might more directly address predictions from the theory. For example, one might want to use an established individualism-collectivism scale to measure cultural differences more directly, the SCS scale to measure self-construals, and the individual-social motivation scale to measure culturally different psychological functioning.

Nevertheless, these scales may need revisions in order to be sensitive to social contexts before testing the validity of self-construal theory. Such a test would more closely adhere to Markus and Kitayama's original claim (1991). In using the mediation analysis for these scales, one could then test self-construal theory again more literally than was possible in this study.

Although the initial intent of this study was to look for ethnic differences in self-construal and psychological functioning, the results indicated that traditional arguments of ethnic differences might need some refinement, because ethnic differences in psychological functioning and self-construals were easily erased when degree of ethnic identity was considered. The mediating function of self-construal between ethnic culture and psychological functions in self-construal theory was not in any way supported. This is a serious question about the self-construal theory because self-construal obviously did not function as a mediator of ethnic culture. Or it may simply indicate that the scales that were used in this study do not have high validity in terms of sensitivity of determining the social contexts.

There are several limitations to this study. First, this study used quantitative self-report instruments with a sample of college students. If a researcher were to use different scales for measuring these constructs, results might be quite different. Results could also be different if the data were collected through laboratory observation or through personal interviews. The second limitation is that this study did not investigate the generational differences within subjects. Hurtado, Gurin, and Peng (1994) compared Chicano (i.e., long-term Americans with Mexican decent) and Mexicanos (first generation immigrants

from Mexico) about their identity structure. Exploratory factor analysis found that Mexicanos have only five main factors in their identity structure (Working Class, Middle Class, Family Cultural Identity, Binational, & Panraza), even though Chicanos have seven main factors (Farm Worker, Working Class, U.S./Middle Class, Family, Binational, Latino, & Political Raza). The results of Hurtado, Gurin, and Peng (1994) may suggest that there could be immigration-generational differences in Hispanic American participants' self-conceptualization

Third, this study did not investigate sub-group differences within traditional ethnic categories. As mentioned previously, some ethnic minority scholars have argued that there are significant sub-group differences within the group of individuals under the umbrella of the Hispanic or Black label (Keefe & Padilla, 1987; Phinney, 1996).

A fourth limitation of this study is that it used college students in a specific city from a specific state. If the same study were to be conducted in a different city in a different state, results might be different. Thus, the results of this study may not generalize beyond college students in Texas. The subjects in this study were recruited from three different higher education institutions. Therefore, different college students might have produced different results from those of this study. For example, Castaneda-English (1999) found a strong school environmental impact upon ethnic identity in two different middle schools. In this study, the school factor was not fully investigated, because ethnicity and school overlap in one of the institutions was nearly 100%.

The fifth limitation is that the results of this study may not applicable to older generations because the ethnic and cultural experiences of individuals from

different generations, as for example from more isolated or segregated school systems, may be very different.

This study suggests two major implications for future research. First, future psychological research should explore whether the construct of self-concept is better understood when individuals are represented as multiple identities rather than the unitary perspective of the self-concept that is traditionally accepted. From the perspective of multiple identities, human beings are said to have many different identities and to use different aspects of identities according to different social contexts (Frable, 1997). The current study was conducted following the existing framework of ethnic minority research and found that ethnic differences tended to be insignificant for the two self-construals and three learning preferences measured. Although Black students were higher in independent self-construal scores than white and Hispanic students, such ethnic differences tended to become insignificant when degree of ethnic identity was considered. Future research needs to capture views of the self-concept to include the newer ideas of multiple identities.

Ethnic minority research needs to do further research on the heterogeneity to be found within traditional ethnic categories. Although differences within sub-groups (e.g., Mexican, Cuban, Puerto Rican, Colombian, etc., within the Hispanic category) are likely important, this study reconfirmed the importance of ethnic identity and sex. It is common in the literature to describe ethnic groups as uniquely different from other groups as, for example, Black Americans described as collectivistic or sharing of Afrocentric worldviews, or Hispanic Americans having family-oriented values. However, every ethnic group including white

Americans, is made up of individuals representing different socioeconomic status, different sex, and different emphases upon their ethnic identity. For example, wealthy individuals can do many things without the help of others, because they can buy various services (e.g., hiring a nanny for childcare) and enjoy their independence. However, less affluent individuals need to rely mutually on one another (e.g., asking relatives for help with childcare). In addition, every individual places a different importance on ethnic identity. Also, sex differences appeared in the results in this research. Therefore, future ethnic minority research definitely should involve factors of socioeconomic status, sex, and ethnic identity, as well as other variable. For example, Frable (1997) argued that typical psychological research fails to capture the person as a whole.

> Gender identity research excludes racial and ethnic minorities and those who are not middle class. Racial and ethnic identity research often avoids gender and sexuality. Sexual identity research focuses on white middle-class gay men and lesbians. Class identity research attends to the wealthy (usually white) or the poor (usually women and ethnic minorities).
>
> (p. 155).

Every human being simultaneously belongs to multiple social categories (e.g., woman, white, Texan, Christian, middle-class, third-generation American, heterosexual, mother, wife, teacher, yoga-practitioner, middle age adult, etc.). Existing research paradigms usually do not capture the person as a whole but only observe partial characteristics of a person. However, existing scale may be revised to be sensitive to the social context of a person because a specific social context retrieves some specific identity of a person among one's multiple

identities. For example, a woman identifies herself as a mother when she is talking to her child, as a wife when she is talking to her husband, as a teacher when she is talking to her students. In other words, a person changes his or her "contextual self" according to one's social context. One future direction for psychological research should seek how such a person's "contextual self" is retrieved from one's multiple identities. In short, we need to create new scales that allow a person to have multiple identities and that are sensitive to social context.

Second, future research on self-construal should test the mediation function of self-construals posited by Markus and Kitayama (1991). Although self-construal theory has been tremendously popular in cross-cultural research in the last decade and today, the validity of this theory has actually not been thoroughly investigated. Unfortunately, in this study, the mediation function of self-construal was not supported because no relation was found to exist between ethnic group membership and classroom organization preference scores. This could possibly mean that the self-construal scale that was used in this study is not sensitive to the social contexts of the participants. Therefore, further research is needed to test the validity of self-construal theory or the self-construal scale.

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Table 1.

Ethnicity, Sex, and School of Participants

	Large State University	Small Liberal Arts University	Small Predominantly Black College	Total
White Women	29	24	0	53
White Men	21	11	2	34
Hispanic Women	22	16	0	38
Hispanic Men	11	6	1	18
Black Women	14	0	14	28
Black Men	8	1	17	26
Total	105	58	34	197

Table 2

Means, Standard Deviations, and F Values for Self-Construal Measures for Three Ethnic Groups

Variable	White (n=87)	Hispanic (n=56)	Black (n=54)	F
Independent Self-Construal				
Mean	5.07	5.05	5.39	5.15**
S.D.	.62	.63	.72	
Interdependent Self-Construal				
Mean	4.69	4.78	4.74	.74
S.D.	.62	.60	.69	

*p<.05. **p<.01. ***p<.001

Table 3

Means and Standard Deviations for Learning Preference Scores for Ethnic and Gender Groups

Variable	White Men (n=34)	Hispanic Men (n=18)	Black Men (n=26)	Men Total (n=78)
Cooperative				
Mean	3.22	3.41	3.39	3.32
S.D.	.50	.31	.36	.42
Competitive				
Mean	3.04	2.97	3.10	3.05
S.D.	.41	.46	.54	.46
Individual				
Mean	2.79	2.71	2.70	2.74
S.D.	.546	.317	.584	.513

Table 3 (continued)

Variable	White Women (n=53)	Hispanic Women (n=38)	Black Women (n=28)	Women Total (n=119)
Cooperative				
Mean	3.11	3.28	3.32	3.21
S.D.	.47	.48	.41	.47
Competitive				
Mean	2.82	2.77	2.98	2.84
S.D.	.47	.50	.52	.50
Individual				
Mean	2.86	2.73	2.81	2.80
S.D.	.47	.52	.44	.48

Table 3 (continued)

Variable	White (n=87)	Hispanic (n=56)	Black (n=54)	Subject Total (n=197)
Cooperative				
Mean	3.15	3.32	3.35	3.26
S.D.	.47	.48	.41	.45
Competitive				
Mean	2.90	2.84	3.04	2.92
S.D.	.46	.50	.53	.49
Individual				
Mean	2.83	2.72	2.76	2.78
S.D.	.50	.46	.51	.49