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Adam Kassem

April 15th, 2015

Social Network Diversity, Student Engagement,  
and Adaptation to College

by

Adam Kassem

Nancy Bliwise, Ph.D.

Adviser

Department of Psychology

Nancy Bliwise, Ph.D.

Adviser

Jessica Barber, Ph.D.

Committee Member

Mandy Suhr-Sytsma, Ph.D.

Committee Member

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Adam Kassem

Nancy Bliwise, Ph.D.

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A thesis submitted to the Faculty of Emory College of Arts and Sciences  
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## Abstract

### Social Network Diversity, Student Engagement and Adaptation to College

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The value of education has garnered attention as the costs of college continue to increase. Recent analyses, however, show that those who earn a college degree have better job prospects and higher incomes than those who do not. As a result, colleges actively seek innovative ways to increase student success. Researchers have identified student engagement and friendship network diversity in the academic and social life of the college as important predictors of student retention, adjustment, and graduation. Focusing on adjustment, this study examines variables that influence and mediate one's academic and social adaptation. Therefore, it was hypothesized that ethnic diversity and positive mood were positively correlated, people experience activities differently based on their adjustment and the type of activity they were participating in, and mood mediates the relationship between diversity and adjustment with activity moderating the relationship between mood and adjustment. Based on the analyses, diversity and mood were correlated with academic and social adjustment. Moreover, a two-level multilevel model revealed that participants' moods associated with social activities are typically more positive than those in academic activities, and these effects are more emphatic with higher academic adjustment scores. Process modeling found that mood does not have a mediating role in the relationship between diversity and adjustment, but mood and activity interact only when explaining academic adjustment.

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### Social Network Diversity, Student Engagement, and Adaptation to College

The Bureau of Labor Statistics (2014) reports that more education yields higher incomes and lower unemployment rates. This suggests a need to attend college for entry into the more lucrative careers, thereby creating a scenario in which young adults invest in themselves by pursuing higher education. Colleges, in turn, maintain their appeal by providing students with innovative and beneficial ways to improve the college experience. Research has explored how colleges seek to do so by examining how they attract students with what they offer, while also identifying what leads to student success (Kuh, 2003).

#### **Student Engagement**

A large body of literature has examined the predictors of student success. Much work has gone towards exploring how student engagement in extracurricular activities can lead to college adjustment. For example, Terenzini's and Pascarella's (1977) factor analysis of college freshmen's beliefs about their integration into college revealed that those who feel positive about their integration will most likely remain enrolled when compared to those with negative perceptions. The results from Mallette's and Cabrera's (1991) analysis of college freshmen alluded to dimensionality among predictors for remaining in college by finding positive correlations between this persistence, commitment to the institution, and academic performance.

Studies such as these supplement Vincent Tinto's (1975, 1997) theory of persistence. He asserts that for college students to succeed in college, they must feel integrated into their college. Academically, students should feel confident in their performance and comfortable with their interactions with faculty. Socially, students should also engage in formal extracurricular

activities and informal peer-group interactions. After doing so, students will become more likely to complete college.

Theories like this have prompted systematic examination of the relationship between Tinto's form of integration and student retention. For instance, George Kuh worked with colleagues (2001) to develop and utilized the National Survey of Student Engagement (NSSE) to measure how student engagement influences learning and social growth. With this survey, they found that participating in learning communities predicts student engagement and other factors associated with success (Zhao & Kuh, 2004).

Although numerous studies have used the NSSE, others have used different measures and found a significant association between engagement and success. The Student Adaptation to College Questionnaire (SACQ), one of the other scales, measures various forms of student success, thereby allowing for the assignment of various explanatory variables. Most notably, it allows researchers to measure academic and social adjustment by capturing various facets of each (Baker & Siryk, 1999).

Likewise, Kiyoshi Asakawa (2004) utilized experience sampling to better capture the college experience in the moment rather than relying on retrospective reports of behavior. College students wore watches programmed to alert them to a brief survey that they completed several times daily. These surveys inquired about various aspects of their current activities, including location, companions, and psychological states. This study found that high challenge and high skill situations were accompanied by optimal states of mind among the students.

Asakawa's work on flow accords with research on emotion. Fredrickson and Branigan's (2005; 2012) Broaden-and-Build Theory of Emotion asserts that when people experience

positive emotions they expand their perceptual field. They become more receptive to experiencing a wider range of events. In contrast, when people experience negative emotions, perceptual systems narrow and these people become less open to experiences.

Researchers have applied this theory to academic adjustment and found that positive emotions predicted improved academic performance and negative emotions marked decreased success (Pekrun, Elliot, & Maier, 2009). Moreover, positive emotions had similar influences on motivation and effort by making students more likely to find ways to expand their academic experience through increased academic motivation and improved learning strategies (Pekrun, Goetz, Titz, & Perry, 2002). This implies that when students experience positive emotions during academic activities, they behave in ways that can benefit their academic experience.

Likewise, mood also seems to influence social adjustment. Research indicates that positive emotional arousal improves romantic relationship quality (Aron et al, 2000). This effect also manifests in friendships. Philippe et al (2010) established emotions as a mediator in relationship quality by examining it in relation to activity quality. They found that positive emotions led to passion for activities, which subsequently improved relationships. For this reason, the present study shall adopt the framework by assigning mood as a mediating variable.

### **Student Engagement and Academic Adjustment**

Previous studies have found significant relationships between student engagement, and academic motivation, effort, performance, and satisfaction. Webber, Krylow, and Zhang (2013) explored the interactions between engagement, academic performance, and satisfaction with the academic environment. Administering the NSSE to 3,991 freshmen and seniors at a research university, the scholars' resulting regression analyses revealed a positive relationship between

engagement and grade point average. Moreover, they found that participating in academic activities with others, such as students interacting with teachers and other students, seemed to improve the predictive capabilities of engagement (Webber, Krylow, & Zhang 2013).

Complementing this study, Carini, Kuh, and Klein (2006) analyzed data gathered from the NSSE, Graduate Record Examination (GRE), and cognitive tests developed by RAND. They found a positive relationship between engagement and performance on standardized tests. Although the dependent variables differed, both studies concluded that engaging in extracurricular activities may improve academic performance.

Other research has addressed how activities may influence academic motivation and effort. One such study found that engagement in academic activities predicts students' persistence. This term encompasses both academic motivation and effort as it entails a goal students feel they must achieve. The goal, in turn, prompts the students to engage in activities that would benefit their academic performance (Kuh, et al., 2008). Moreover, Michaels and Miethe (1989) studied the relationship between effort and performance while accounting for motivation. They found that increased effort is related to improved academic performance, and that effort also correlates with aspects of motivation. Thus, academic engagement and effort are synonymous and can predict academic motivation.

### **Student Engagement and Social Adjustment**

Student engagement can also influence sociality, social relationships, nostalgia, and satisfaction with the social environment. Qualitative analyses indicate that involvement in out-of-class college experiences can improve interpersonal competence. Based on these analyses, students recognize social competence as a main outcome of such participation (Kuh, 1993).

Furthering these findings, research has specifically explored student engagements' effects on relationships to others. Ream and Rumberger (2008) examined the relationships between student engagement, social capital, and dropping out, and found that the types of activities students engage in influences their social networks. These students base their social groups on the activities they participate in, so students involved in academic activities did not associate with those who dropped out of school (Ream & Rumberger, 2008). This tendency implies that not participating in college-related activities can inhibit success in building relationships with other students.

These relationships serve as the basis for research examining satisfaction with the social environment and sense of belonging. Previous studies have explored the relationship between types of interaction and perceptions of the social environment. Meeuwse, Severiens, and Born (2010) found that study-related and personal interactions predicted a sense of belonging among most non-minority students. For students from under-represented minority groups, only study-related interactions predicted this feeling of belonging..

Unlike academic adjustment, social adjustment includes nostalgia — a facet not easily explained by engagement. This facet refers to a student's feeling comfortable in an environment away from home. Literature surrounding this topic has shown that nostalgia explains, rather than results from, positive emotions and engagement. In one study, nostalgia-prone people had better social connections than those who did not frequently feel nostalgic, but the propensity to have nostalgia originates from positive childhood experiences (Batcho, 2013). This finding furthers the multidimensionality of adjustment to college and implies a multi-step process that explains only one facet of social adaptation.

Thus, the research surrounding social adjustment implies that engagement in group activities may lead to improved sociality, relationships with others, and satisfaction with the social environment. Nostalgia deviates from this tendency as it measures internal thoughts rather than states that result from social behavior. As a result, the literature suggests that social activities, which may include academic components, best predict social adaptation.

These studies uniformly assert that engagement in academic activities influences academic motivation, effort, performance, and satisfaction. The opportunity for social interaction may amplify these influences, thus adding another element to this field. Few studies about how purely social activities influence academic adjustment exist, which prompts the present study to focus on academic activities' effects on academic adaptation.

### **Diversity and Academic Adjustment**

Like the research on the direct link between student engagement and academic adjustment, ethnic diversity seems to influence academic adaptation. Denson and Chang's (2008) survey administered to 21,178 students attending 236 colleges attempted to elucidate the relationship between diversity and academic success. They found that campuses with a diverse populace and institutionally encouraged events associated with diversity have students with better academic skills, which include self-assessments of knowledge, critical thinking, problem-solving, and writing. Additionally, social exchanges among differing ethnicities tend to amplify these effects (Denson & Chang, 2008). In this case, self-perceptions of academic efficacy pertain to academic adjustment to college.

Moreover, interactions with diverse groups also influence performance, satisfaction with the college, and motivation. Chang and other researchers (2006) examined cross-racial

interaction on the individual and institutional level. Based on their study, such interaction predicts improved general knowledge, cognitive skills, and academic self-confidence. Another study has found that diverse friend groups seem to decrease the likelihood that minority students will drop out. Also from this study, diversity in formal interactions with professors and informal friendships can predict satisfaction with the college (Fischer, 2007).

Attempting to explain these tendencies, Bowman (2010) conducted an analysis in which he systematically analyzed the effects of racial diversity on cognitive development. He found that the greatest intellectual improvements came from interactions with people of different races rather than formal race-based programs. He asserts that the salience of racial differences induces an opportunity for exposure to novel experiences, which seems to improve basic cognitive traits. Like engagement, ethnic diversity may influence all aspects of academic adjustment by mere exposure. This, in turn, prompts the present study to include it as an explanatory variable.

### **Diversity and Social Adjustment**

Diversity and interracial contact seems to greatly benefit social adaptation. Research indicates that contact with those of other ethnicities can reduce race-based discomfort and prejudice. It follows that such contact increases knowledge about other races, reduces anxiety about the different group, and eventually leads to empathy for the out-group (Pettigrew & Tropp 2008). As a result, these tendencies allow for increased social adaptation.

McDonald and Verana (2007) test this theory by directly applying it to Black and White college students and their general social adjustment. They found that for both groups, interracial comfort positively correlated with increased general social adjustment. These findings, however,



were stronger for Black students than White students. Therefore, it follows that for diversity to influence social adjustment, students must be open to students from other ethnic groups.

With this reasoning, other studies have examined how institutions can facilitate interracial interaction. Pike and Kuh (2006) examined the role affirmative action plays on campuses and found that increasing diversity subsequently increases interactions with other ethnicities. This implies that the environment facilitates diversity and subsequently interaction.

Should the students wish to interact with their diverse peers, previous research asserts they will experience greater social adjustment. In one study, exposure to ethnic diversity correlates with socially responsible leadership. Based on this study, socially responsible leadership refers to utilizing interpersonal knowledge to win people over and subsequently use this knowledge to maintain the relationships necessary to achieve certain goals (Parker & Pascarella 2013). Therefore, exposure activities associated with racial diversity can grant college students the interpersonal skills necessary to engage in meaningful social interactions.

Scholars have also examined how diversity applies to the other aspects of social adjustment. A study in China found that when a campus includes students from various hometowns, students had a greater propensity to engage in social activities, which increased students' sense of belonging (Min & Chau 2010). These effects become apparent when those with a heightened sense of belonging become less likely to drop out of college, suggesting positive effects of social adjustment (Fischer 2007).

Unlike the previous facets of social adjustment, there is little evidence supporting the link between diversity and nostalgia. Shook and Fazio (2008) examined the effects of interracial roommates on social adjustment. Although they did not find significant relationships between

these variables, the scholars did conclude that living with a roommate decreased racial discomfort. This decrease may initiate an eventual increase in social adjustment. Supplementing this study, another concluded that when students transition to college, white students tend to be the only ones who enter into racially diverse friendships (Stearns, Buchmann, & Bonneau, 2009). Thus, in the presence of a novel social environment, most students will maintain their comfort levels by resorting to their habits from home, which suggests no significant changes in nostalgia based on ethnic diversity.

### **Statement of Problem and Hypothesis**

The large body of research surrounding college success has revolved around systematically linking student engagement and ethnic diversity to different aspects of academic and social adjustment. Based on previous work, student engagement increases the likelihood of positive student outcomes. Academically, those engaged outside the classroom will most likely have greater academic motivation, put forth more studious effort, perform better, and become more satisfied with their academic environment (Webber, Krylow, & Zhang, 2013; Michales & Miethe, 1989). Moreover, these students will become more social, engage in more fulfilling social relationships, and have a greater satisfaction with their social environment (Ream & Rumberger, 2008; Meeuwse, Severiens, & Born, 2010). Likewise, ethnic diversity seems to influence academic and social outcomes in a similar manner, as it too positively correlates with these facets (Denson & Chang, 2008; Fischer, 2007; Parker & Pascarella, 2013).

Mood has proven to influence academic and social well-being as well. Positive emotions may have the ability to modulate improvements in academic and social adjustment and negative emotions may hinder these effects. The previous literature, however, focuses mainly on direct

relationships between engagement, diversity, and adjustment while also utilizing primarily retrospective methods, such as survey-based collection (Fredrickson & Branigan, 2012; Pekrun, Goetz, Titz, & Perry, 2002, Philippe, et al., 2010).

Drawing upon this body of literature and using experience sampling methods, this study attempts to explore the relationships between diversity, activity, mood, and adjustment to college. Therefore, it is hypothesized that the more ethnically diverse a participant's friendship network, the more academically and socially adjusted he or she will be. It is also hypothesized that participants experience academic and social activities differently from each other based on their adaptation to college. Finally, mood will mediate the relationship between ethnic diversity and adjustment to college with more positive moods predicting greater adjustment. The type of activities students engage in will also moderate the relationship between mood and adjustment.

## **Methods**

### **Participants**

Two hundred and fifty Emory University Sophomore students were randomly selected from their dormitories. Ages ranged from 19 to 21 with an average age of 19.78 years. 39.5% of participants were male and 57.6% were female. Anglo, Caucasian, or White respondents accounted for the majority of the sample (see Table 1 for a more detailed breakdown of participants' ethnicities).

### **Research Design**

This study relies on a correlational design with an emphasis on experience sampling collection. Experience sampling refers to a diary-like collection method in which participants record their activities and their mood at the time of their experience.

## **Procedures**

Data collection occurred three times over three consecutive semesters. Every semester, participants underwent a two phase collection process. In the first phase, participants were recruited for this study. After providing consent to participate forms, participants completed the linear mapping worksheet, and academic and social SACQ sections. Upon completion of these tasks, participants registered their cellphones with the recruiters. For one week, participants receive three text messages daily that link to the experience sampling questionnaire.

## **Materials**

Students were given a packet that includes the consent for this study, the demographics survey, the academic and social sections of the Student Adaptation to College Questionnaire, and a worksheet based on Antonnuci's hierarchical mapping technique.

## **Measures**

### **Demographics Survey**

The demographics survey inquired about the students' age, sex, major, grade point average, ethnicity, hometown, participation in organizations, and involvement in learning communities.

### **Student Adaptation to College Questionnaire**

The Student Adaptation to College Questionnaire measures overall adjustment to college by focusing specifically on academic adjustment, social adjustment, emotional adjustment, and commitment to a university, with all scores ranging from 1 to 9, with 1 indicating the lowest adjustment and 9 indicating the highest. This study utilized the 24-question academic adjustment subscale, which measured academic motivation, effort, performance, and adjustment to college.

It has items in which students would rate their agreement with statements such as, “I feel that I have been keeping up to date on my academic work.” The 20-question social adjustment subscale measures general sociality, relationships with others, satisfaction with the social environment, and nostalgia with statements such as, “I feel that I fit in well as part of the college environment” (see Figure 1 for the scales; Baker & Syrik, 1999).

The SACQ’s validity and reliability were tested across 18 colleges. For the academic adjustment scale, alpha coefficients ranged from .82 to .87 and social adjustment’s coefficients were between .83 and .89. In terms of validity, the intercorrelations between the academic and social subscales ranged from .39 to .45, which meant that the subscales measured a common construct while representing different facets of adaptation to college (Baker & Syrik, 1999).

#### **Antonucci’s Hierarchical Mapping Technique**

The study also used Antonucci’s hierarchical mapping technique, which has been used in several other studies, to measure participants’ social network characteristics (Antonucci, et al., 2001). Each worksheet had three concentric circles, and in each circle, respondents ranked their friends based on closeness by placing them in the appropriated layer. Respondents listed the initials of their closest friend in the innermost circle, general friends in the middle layer, and acquaintances in the outermost layer (Antonucci, 1986). Additionally, respondents indicated each listed individuals’ sex, ethnicity, and whether or not the respondent and listed person had a special relationship, such as being roommates or romantic partners (see Figure 2 for a representation of the mapping diagram).

Based on the descriptions of people listed in the social network measure, the proportion of different ethnicity within a participant’s friendship network was determined by dividing the

number of people who were of a different ethnicity from the participant by the total number of people listed. This yielded ethnic diversity proportions that ranged from 0 to 1. Ethnic diversity of a friendship network was found by counting the number of ethnicities represented that differed from the participant's.

### **Positive Mood Scores**

The experience sampling questionnaire gathered information at the time respondents participated in activities. These questions asked about the activities the respondents participated in, how many people they participated with, and their moods.

Positive mood scores based on activity were calculated by averaging the scores of different feelings asked on the surveys, which ranged from 1 to 5. These included positive moods: happiness, alertness, competence, and relaxedness. The scores from the negative moods, which included worry, frustration, loneliness, and guilt, were reversed to allow for a consistent measure of positive mood, so a score of 5 became 1, a score of 4 became 2, a score of 3 remained 3, a score of 2 became 4, and a score of 1 became 5. The positive mood score, therefore, reflects the average of the originally positive moods and the reversed negative moods for each activity.

### **General Activity Categories**

General activity categories, which differentiated between academic and social activities, were found by sorting participants' description of their experiences. Activities that revolved around school, classes, homework, studying, or labs were considered academic ( $n = 1418$ ). Nonacademic activities other than sleeping, employment, or traveling were considered social activities ( $n = 907$ ) as long as the participant indicated that they were with others or were engaged in social media or email.

## Results

### Missing or Duplicate Data

The study collected 3,574 observations from 349 participants. 934 observations were removed to only include participants who completed at least 4 observations. Doing so allowed the study to capture multiple experiences among participants. This left 3,414 observations from 259 participants. Three additional cases were deleted, as they were duplications that occurred after 21 experience-sampling observations, leaving 3,411. These duplications may have resulted from students who began a questionnaire, completed, but forgot they did so. As a result, they completed two observations from a single experience sampling. Finally, nine participants who did not complete the SACQ portion of the study were also removed, thus eliminating 109 incomplete cases and allowing the study to examine 3302 observations from 250 participants.

### Descriptive Statistics

The independent variables, ethnic diversity within a friendship network and the network's proportion of ethnic diversity were not normally distributed. Ethnic diversity had a truncated distribution and the proportions of different ethnicity had a plateaued distribution. Ethnic diversity scores ranged from 0 to 7 ( $M = 3.5$ ,  $SD = 0.09$ ), meaning that each friend group had between 0 or 7 ethnicities represented that differed from the participant. The proportion of different ethnicity ranged from 0 to 1 ( $M = .41$ ,  $SD = 0.30$ ), which means that each friendship network had the potential to have any proportion of friends who differed from the respondent.

Of all 8 moods measured, only alertness and relaxation were normally distributed. Feelings of happiness and competence were negatively skewed and feelings of worry, frustration, loneliness, and guilt were positively skewed. Positive mood scores ranged from 1 to 5 ( $M = 3.60$ ,

$SD = 0.59$ ). All participants, therefore, may have experienced moods that ranged from extremely positive to extremely negative. Likewise, each of the positive mood scores' sub-values resembled its mean and standard distribution (see Table 2 for details about each mood asked about in the questionnaire).

Of the 3,302 observations, academic activities ( $n = 1,280$ ) accounted for 38.8% of them and social activities ( $n = 864$ ) represented 26.2%, which leaves 1,158 (35.1%) observations not referring to either category. Therefore, 2,144 were used for subsequent analyses.

There were 250 unique SACQ scores; one set of scores for each participant with both overall academic and overall social adjustment scores being negatively skewed. Overall academic adaptation scores ranged from 3.30 to 8.65 ( $M = 6.33$ ,  $SD = 0.96$ ) and overall social adaptation scores were between 3.90 and 8.80 ( $M = 6.56$ ,  $SD = .07$ ). Each facet of the scores followed similar patterns (see Table 3 for details regarding each facet of the SACQ scores).

### **Hypothesis 1: Direct Effects of Diversity and Mood on Academic and Social Adjustment**

Correlations were used to determine the strength and direction of the relationships between the independent and dependent variables. There was no significant correlation between the proportions of different ethnicity and positive mood scores,  $r(248) = .02$ ,  $p > .05$ , or ethnic diversity values and positive mood scores,  $r(248) = .004$ ,  $p > .05$ . The proportion of different ethnicity in a friendship network had a weak to moderate positive correlation with overall social adjustment,  $r(248) = .191$ ,  $p < .01$ , but not overall academic adjustment,  $r(248) = .02$ ,  $p > .05$ . Ethnic diversity scores, however, did correlate with overall academic adjustment,  $r(248) = .130$ ,  $p < .05$ , but not with overall social adjustment,  $r(248) = .121$ ,  $p > .05$ . Positive mood scores had



weak, positive correlations with all aspects of academic and social adjustment (see Table 4 for a comprehensive list of correlations between all independent and dependent variables).

Both overall academic adjustment and overall social adjustment were explained by diversity and positive mood scores. This, in turn, suggested the existence of interactions between variables that may help better explain the variability in SACQ scores, which prompted the present study to employ analyses that could test for possible interactions.

### **Hypothesis 2: The Variation of Mood Based on Differences in Engagement and Adjustment**

Multilevel modeling (MLM) refers to a form of advanced regression that nests data within different levels to allow for more powerful analyses. It organizes data into hierarchies to account for exclusive, within-subject or within-group differences rather than analyzing all data as independent cases. Moreover, MLM also allows analyses to no longer require homogenous regression slopes and complete data (Field, 2013).

#### **3-Level Multilevel Model**

The present study first attempted to utilize a 3-level multilevel model to explore whether people, who vary in terms of academic and social adjustment and participate in academic or social activities, experience different levels of positive emotion. By exploring this question, the present study could better ascertain whether significant interactions within the data exist. Level 3, or the top level, contained all subjects. Level 2 differentiated between academic and social activities within subjects, and Level 1 ranked each instance of an activity (see Figure 3 for a diagram of the 3-level model).

Analysis first required the construction of the null model, which tests for sufficient variability within it (Hayes, 2006). By examining variability in the dependent variable without

including any moderating variables, the null, or the no predictors model, can determine the need to perform a 3-level MLM.

The null model revealed that the first level did not have significant variance. Based on its covariance parameters, the activity time had a standard deviation of 0, meaning that when nested within a participant's activity, there was no measurable variance in mood across instances of social and academic activities (see Table 5 for the results of covariance parameter of the 3-level MLM). A one-way analysis of variance confirmed the lack of variability between activity time and mood (see Table 6 for the results of this analysis of variance). These findings suggest that there was no systematic pattern of moods within type of activity and a two-level model that examined broad activity categories (e.g. academic vs. social) would be a better fit to the data.

### **2-Level Multilevel Model**

The 2-level model resembles the 3-level model in all aspects except that it only has a participant level and an activity type level (see Figure 4 for the 2-level model). Another null model was constructed to judge whether it could capture sufficient variability for analysis. For this analysis, the intercept was fixed and the variance was partitioned between levels.

The null model was tested in phases. The first phase attempted to discern whether positive mood scores varied by within-participant differences. This time, the intercept had standard deviation of .016, which was statistically significant ( $p < .01$ ) and indicated the appropriateness of using a 2-level model. This model also yielded an interclass coefficient of .4146, which indicates that 41% of the variance in positive mood scores can be attributed to the within-participant structure of this multilevel model.

The next phase entailed adding the within-activity type level to the model to test its predictive efficacy. To test whether the addition of this level improved the model's predictive capability, the values from the second phases' -2 log likelihood (2919) was subtracted from the second phases' (3173). This yielded a difference of approximately 254, which indicated an 8% improvement in fit and signified that including the activity type improved the model.

The next step involved figuring the reduction in variance to determine the amount of variance of positive mood scores is attributed to the predictive variables. This method was used twice. This first time served to examine within-participant variability, whereas the second time explored the between-participant variance.  $(0.207 - 0.183) / 0.207 = .116$ , which meant that 12% of the within-person variability in positive mood is attributed to the type of activity. Moreover,  $(0.147 - 0.138) / 0.157 = 0.06$ , so this marked a 6% decrease in variance in initial variability between people by knowing the type of activity they engaged in.

The next step entailed adding the level-2 predictors, which included the SACQ scores, the proportions of ethnic diversity in a friendship network, and ethnic diversity scores. To do so, two forms of models were used. In the first model, all predictors were fixed, and in the second, the within-person activity type was considered random. This allowed for a comparison between the two assignments of the activity type to discern the most effective form of it.

The fixed model was repeated four times to capture each combination of explanatory variables. Each model included activity type, either form of ethnic diversity variables, either form of adjustment, the interactions between academic activity type and diversity, and the interaction between activity type and academic or social adjustment as parameters for affecting mood. These variables were all measured within participants, placing them in level 1.

The first model explored how people, who differ in terms of academic adjustment and ethnic diversity, experience moods when performing activities. Based on the results of the fixed effect estimates, activity type,  $b = .35$ ,  $t(1949.97) = 16.47$ ,  $p < .01$ , and overall academic adjustment,  $b = -0.18$ ,  $t(286.23) = -6.60$ ,  $p < .01$ , were significant moderators of mood within the model. Moreover, the interaction between activity type and overall academic adjustment,  $b = 0.08$ ,  $t(1915.51) = 3.88$ ,  $p < .01$ , also had a significant effect on mood (see Table 7 for the results of this model).

The second model also examined academic adjustment, but replaced ethnic diversity with the proportion of different ethnicities. Unlike the previous model, only activity type,  $b = .35$ ,  $t(1855.31) = 16.1$ ,  $p < .01$ , and overall academic adjustment,  $b = 0.01$ ,  $t(269.81) = 0.15$ ,  $p < .01$ , had a significant effect on mood scores (see Table 8 for the results of this model).

The next two models included social adaptation as a predictor, and the first of these two utilized ethnic diversity as a moderator. In this model, activity type,  $b = 0.45$ ,  $t(1950.33) = 16.40$ ,  $p < .01$ , and overall social adjustment,  $b = 0.01$ ,  $t(295.02) = 0.70$ ,  $p < .01$ , were significant predictors of mood scores (see Table 9 for the results of this model).

The final model included the proportion of different ethnicity and social adjustment as predictor variables. This model was consistent with the previous two models as activity type,  $b = 0.35$ ,  $t(1856.50) = 16.05$ ,  $p < .01$ , and overall social adjustment,  $b = -0.13$ ,  $t(284.86) = -4.94$ ,  $p < .01$ , predicted mood scores (see Table 10 for the results of this model).

The second type of model assigned the activity type within participants as a random effect. These models followed the same pattern as the fixed models by testing the 4 combinations of diversity and adjustment variables. The first random model found that activity type,  $b = 0.34$ ,

$t(190.39) = 14.35, p < .01$ , overall academic adjustment,  $b = -0.18, t(282.01) = -6.54, p < .01$ , and the interaction between activity type and overall academic adjustment,  $b = 0.08, t(172.55) = 3.34, p < .01$ , all had significant effects on mood (see Table 11 for the results of this model).

The second model also included academic adjustment, but replaced ethnic diversity with the proportion of different ethnicity variable. The results were similar to the previous model, because mood scores within participants were influenced by activity type,  $b = 0.34, t(182.95) = 14.06, p < .01$ , overall academic adjustment,  $b = -0.18, t(256.66) = -6.37, p < .01$ , and the interaction between the aforementioned predictors,  $b = 0.08, t(164.34) = 3.36, p < .01$  (see Table 12 for the results of this model).

The latter two models, which replaced academic adjustment with social adjustment, were also similar to their respective fixed models. The first model included ethnic diversity as a predictor and found that only activity type,  $b = 0.34, t(193.27) = 14.21, p < .01$ , and overall social adjustment,  $b = -0.13, t(278.15) = -5.04, p < .01$  influenced mood scores (see Table 13 for the results of this model). Likewise, the model including social adjustment and proportions of different ethnicity had similar results. Only activity type,  $b = 0.35, t(184.25) = 13.9, p < .01$ , and overall social adjustment,  $b = -0.13, t(268.50) = -4.90, p < .01$ , affected mood scores (see Table 14 for the results of this model).

Based on these findings, overall academic adjustment and activity seemed to produce the greatest effect on mood scores within participants. This, in turn, led to the construction of a graph that correlated activity type with positive mood, while accounting for how this relationship differs based on different levels of academic adjustment. To do this, participants were divided by a single standard deviation split, in which participants were categorized based on if their

academic adjustment scores below one standard deviation of the mean, within one standard deviation of the mean, or above one standard deviation of the mean. After grouping, a graph that shows the marginal means of mood was constructed to judge the relationship between activity category and positive mood scores (see Figure 5 for this graph).

Based on this graph, students who were below one standard deviation of overall academic adjustment scores started generally had the highest positive mood scores. Students with academic adjustment scores within one standard deviation of the mean had the second highest, leaving students with the highest adjustment scores with the most negative moods. Because these slopes were positive, students typically had higher positive mood scores when they participated in social activities. Additionally, the discrepancy in moods between activity types was greatest among participants with the highest academic adjustment scores, with the differences decreasing as the adjustment scores decreased.

### **Hypothesis 3: The Mediating and Moderating Roles of the Explanatory Variables**

Process models were used to test the mediating and moderating roles of the variables. The significant interactions found by the 2-level MLM's suggest that diversity, mood, and activity type can interact to better predict overall academic and social adaptation to college. To test this, the mood scores were first divided by the activity type from which they originated. These scores were then averaged into a single score and then centered on the grand mean of all averaged mood scores. This yielded two cases per participant: one case for academic activities and one case for social activities, thereby leaving 500 cases.

In these models, it was hypothesized that diversity's ability to predict adaptation was mediated by positive mood scores. The relationship between positive mood scores and

adaptation was moderated by activity type (see Figure 6 for a diagram of this model). Four models tested all combinations of diversity and adaptation. The first two models test how the participant's proportion of ethnic diversity in his or her friendship network influences academic and social adjustment respectively. The latter two models focus on the networks' ethnic diversity and how it affects both forms of adjustment.

The first process model tests whether the proportion of ethnic diversity in a participant's friendship network influences academic adaptation to college. The proportion of ethnic diversity did not predict positive mood scores,  $b(500) = 0.01$ ,  $p > .05$ . In terms of predicting academic adjustment, mood,  $b(500) = .72$ ,  $p < .01$ , and activity,  $b(500) = .21$ ,  $p < .03$ , only had direct effects, as there was no interaction between these variables,  $b(500) = -.026$ ,  $p > .05$  (see Table 15 for the results from this model).

The second process model explores how ethnic diversity within a friend group influence academic adjustment. Like in the previous model, the explanatory variable, ethnic diversity did not predict positive mood scores,  $b(500) = 0.00$ ,  $p > .05$ . In contrast, all three explanatory variable has direct effects on academic adaptation, but there was no interaction between the mood and activity type,  $b(500) = -.024$ ,  $p > .20$  (see table 16 for the results from this model).

The third model examined the relationship between proportion of different ethnicities in a friendship network and social adjustment. Like the others, there was no significant relationship between the diversity proportions and mood,  $b(500) = 0.01$ ,  $p > .89$ . In the second step, there were only two main effects. Social adaptation was predicted by positive mood score,  $b(500) = 0.59$ ,  $p < .01$ , and the proportion of different ethnicity,  $b(500) = .36$ ,  $p < .05$  (see Table 17 for the results from this model).

Finally, the last model explored how ethnic diversity scores predicted social adjustment. The only significant relationships occurred between ethnic diversity and overall social adjustment,  $b(500) = .06$ ,  $p < .05$ , and mood and adjustment,  $b(500) = .62$ ,  $p < .01$  (see Table 18 for the results from this model).

### **Discussion**

The present study explored the relationships between friendship network diversity, positive mood, student engagement, and academic and social adjustment to college. The three tests used for the hypotheses yielded consistent results with both each other and from the previous literature. In general, it was found that students' network diversity and positive mood individually predicted academic and social adjustment, but mood and diversity were not correlated. Students also differed in the way they experienced mood when engaging in academic and social activities based on their academic adaptation to college. Mood, however, neither mediated the relationship between diversity and adjustment, nor interacted with activity type to better predict the dependent variables.

#### **Hypothesis 1: Direct Effects of Diversity and Mood on Academic and Social Adjustment**

The simple linear regressions provided support for the first hypothesis, which stated that friendship network diversity and positive mood scores were positively correlated with academic and social adjustment. Originally, both forms of network diversity were expected to explain academic and social adjustment, but ethnic diversity scores only predicted overall academic adjustment whereas the proportions of different ethnicity correlated with overall social adjustment. Mood, however, positively correlated with both academic and social adjustment and had stronger correlations with the dependent variables than either form of ethnic diversity.



These findings correspond well with the previous literature as most studies explored the direct relationships between the explanatory and dependent variables. For instance, Denson and Chang (2008) measured the relationship between exposure to diversity and academic performance – a measure that also appears in the SACQ. Likewise, Min and Chau's (2010) results examined the relationship between diversity and an increased sense of belonging, which is also measured in the SACQ (Baker & Siryk 1999). Thus, the results from the first hypothesis do not deviate from the existing body of knowledge. Rather, it uses a standardized measure of academic and social adjustment to better test how they are influenced by diversity and mood.

The results from the linear regressions also support Fredrickson's (2005) Broaden and Build Theory, which revolves around the interplay between activities and emotion. Research surrounding this theory has linked it to academic performance and social relationships by finding positive correlations between mood and the different facets of adjustment (Pekrun, Elliot, & Maier, 2009; Aron et al, 2000). The present study further substantiated these findings by utilizing an experience sampling methodology, which gathered mood data at the time of an event. In doing so, this methodology effectively captures the mood associated with activities that potentially precedes adjustment to college.

### **Hypothesis 2: The Variation of Mood Based on Differences in Engagement and Adjustment**

Building upon the direct relationships between variables, the second hypothesis served to expand this study's focus to include student engagement as a variable. Taking the dependent, hierarchical nature of the data into account, it was hypothesized that students, who differed in terms of their adjustment, engagement, and network diversity, experience different levels of positive moods. This hypothesis was partially supported as the fixed and random models only

found an interaction between academic adjustment and activity type. This model found differences in positive mood scores based on within-subject variation, meaning that participants did experience academic or social activities differently based on their level of adaptation.

Based on this test, when students participated in social activities, they tended to have higher positive mood scores than when they participated in academic activities. Those with the highest academic adjustment scores had both the lowest positive mood scores and the greatest discrepancy between mood scores based on which activity they participated in.

By capturing the interactions between activity type and academic adjustment, this study expanded upon previous research, which typically examined direct relationships between these two variables. Webber, Krylow, and Zhang's (2013) study links student engagement to the multiple facets of academic engagement, whereas Ream and Rumberger's (2008) correlates activities with social adjustment. Studies such as these have not accounted for the possible interactions between the two variables.

### **Hypothesis 3: The Mediating and Moderating Roles of the Explanatory Variables**

The final hypothesis tested whether or not mood mediated the relationship between diversity and adjustment, with activity type moderating the relationship between mood and adjustment. This hypothesis was not supported as models revealed only direct relationships between the variables. No matter which combination of the variables a model tested, diversity and mood always predicted adjustment independently. Mood and activity type, however, never interacted to predict adjustment, and activity type only correlated with academic adjustment. This correlation indicated that if students participated in social activities, they tended to be better academically adjusted than those who indicated that they only engage in academic activities.

This suggests that academic adjustment results not from participating in activities dedicated solely to one's studies, but a balance between work and socialization.

Because there was no interaction among any of the variables, these results resembled the findings from the first hypothesis. The only difference was the inclusion of the activity type variable as a predictor of adjustment. Unlike the other studies, which quantify activity participation and correlate it with various forms academic or social adjustment, the present study categorized activity by type and determined how each influences adaptation (Carini, Kuh, & Klein, 2006; Chang, et al., 2006). Doing so provided the ability to compare how the differences in the activities college students participate in may explain the variability in academic and social well-being.

### **Implications**

Based on these results, mood, diversity, and activity type influence academic and social adjustment in various ways. By understanding how involvement can improve one's college experience, students could become more likely to engage in activities as they attempt to better adapt to their academic and social environment. As a result, colleges can assist students by creating new opportunities for students to do so.

Because mood is associated with both social and academic adjustment, it follows that colleges could institute programs aimed at improving students' moods when performing certain activities. The results revealed that when people participate in academic activities, they will most likely have less positive moods than those who participate in social activities. This suggests that the availability of social activities could serve as a response to high-stress academic

environments. Therefore, colleges could attempt to reduce the negative emotions associated with academic activities by facilitating social activities.

The present study also substantiates the academic and social benefits of interactions with different ethnicities. Since interactions with a racially diverse groups or involvement in activities that focus on racial diversity can improve one's academic and social adaptation to college, colleges could implement programs that promote such exposure (Chang, et al., 2006; Bowman, 2010). In doing so, colleges could improve the college experience by facilitating engagement that could lead to students to become more adjusted (Parker & Pascarella, 2013).

### **Limitations**

Although the high sample size and the diversity in terms of participants' ethnicity and college majors bolster this study's generalizability, the college from which the samples were gathered may have biased the results. This sample's university may have imposed a culture that emphasizes academic and social excellence, which may have influenced the responses. For instance, performing academic activities may have instilled stress that results from the desire for success in a competitive and achievement oriented college. Social activities may have increase positive mood scores as they distracted students from the stress-inducing academic activities.

Furthermore, the study only recruited sophomore students from their dormitories. Whereas doing so allowed for the collection from a centralized data pool, it did not capture the effects associated with one's adjustment after spending several years at college. Junior or senior students, who have spent more time at college, may have become more acclimated to it, whereas sophomores have spent relatively little time at the university.

These limitations all revolve around variables that could have increased the strength of the multilevel model. Had the study included samples from other schools, it may have constructed an institution level that could have controlled for the school culture and allowing students from other years to participant may have alluded to more effects that can result from time spent at college.

### **Future Directions**

The present study was one of the first to include positive mood levels as a mediator for the relationship between diversity and adjustment. The results, however, revealed that mood does not influence this relationship, but other variables that do so may exist. Therefore, future studies can replace positive mood with variables such as social competency.

Aside from improving the generalizability by expanding the sample size to include more schools and college years, or including the rest of the SACQ's constructs, future research can also build upon this profile by measuring how adjustment in college predicts post-graduate adaptation. Doing so would entail adding another level to the present study by examining how the variables that underlie college adjustment translate into objective measures of post-graduate success, such as income or scales that measure happiness.

Another route would entail examining whether friendship network diversity differently influences adjustment based on the specific ethnicities that make up the network. By specifying which races make up a network, one could determine whether different proportions of a certain ethnicity in a friend group influences adjustment.

### **Conclusion**

Society's emphasis on a college education has prompted universities to examine innovative ways to improve the college experience. Research has indicated that student engagement, the moods associated with such engagement, and exposure to ethnically diverse populations influence academic and social adaptation to college. Following this research, the present study sought to determine whether these variables interacted with each other to better predict academic and social adjustment to college. The results indicate that mood and diversity independently influence academic and social adaptation. Additionally, people experience academic and social activities differently based on their academic adjustment. Specifically, academic activities tend to be associated with less positive moods. Therefore, students would benefit from universities that encourage engagement in various activities and a diverse student body.

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Table 1

*Demographics Characteristics of Participants (N=349)*

Characteristic	n	%
<b>Sex</b>		
Female	201	57.6
Male	138	39.5
<b>Ethnicity</b>		
African American/Black	29	8.3
Anglo/Caucasian/White	136	39.0
Caribbean	3	0.9
East Asian	84	24.1
Hispanic/Latino/Latina	14	4.0
Middle Eastern	4	1.1
Native American	1	0.3
Pacific Islander	2	0.6
South Asian	32	9.2
Mixed	34	9.7
<b>Major Category</b>		
Humanities	67	19.2
Physical and Life Sciences	89	25.5
Social Sciences	89	21.8
Math/Econ/Computer Science	76	11.2
Business	39	16.3
Nursing	57	2.0
Undecided	5	1.4

*Note.* Percentages may not add up to 100%, because not all participants completed the demographics survey

Table 2  
*Means of Mood Scores*

Mood	M	SD	n
Happy	3.19	1.02	3561
Alert/Focused	2.80	1.11	3556
Competent	2.94	1.02	3555
Relaxed	2.96	1.17	3554
Worried/Anxious	2.35	1.21	3560
Frustrated	1.93	1.13	3559
Lonely	1.58	0.90	3555
Guilty	1.38	0.77	3553
Positive Mood Score	3.58	0.59	3566

*Note.* Possible scores ranged from 1 to 5

Table 3

*Means of SACQ Scores (N=3482)*

SACQ Facet	M	SD
Academic Adjustment		
Overall Academic Adjustment	6.30	1.13
Academic Motivation	7.16	1.35
Academic Application	6.45	1.43
Academic Performance	5.48	1.35
Academic Environment	6.72	1.34
Social Adjustment		
Overall Social Adjustment	6.49	1.20
General Sociality	6.60	1.45
Social Relationships	6.41	1.28
Social Nostalgia	6.53	1.86
Social Environment	6.64	1.55

*Note.* n=3482. All possible scores ranged from 1 to 9.

Table 4

*Correlations between Ethnic Diversity, Proportion of Ethnic Diversity, Mood, and SACQ Scores (df = 248)*

SACQ Facet	Proportion of Different Ethnicity	Ethnic Diversity	Positive Mood
Academic Adjustment			
Overall Academic Adjustment	.081	.130*	.256**
Academic Motivation	.038	.128*	.209**
Academic Application	.109	.118	.143*
Academic Performance	.076	.095	.211**
Academic Environment	.032	.076	.254**
Social Adjustment			
Overall Social Adjustment	.191**	.121	.233**
General Sociality	.166**	.129*	.151*
Social Relationships	.188**	.069	.227**
Social Nostalgia	.079	.039	.161*
Social Environment	.120	.109	.177*

*Note.* \* =  $p < .05$ , \*\* =  $p < .01$



Table 5

*Estimates of Covariance Parameters of the 3-Level Null Model*

Parameter	b	Standard Deviation	p
Residual	0.035	0.007	0
Intercept [participant id]	0.147	0.016	0
Intercept [participant id * activity time]	0.172	0	

Table 6

*One-Way Analysis of Variance of Activity Time and Mood*

Source	df	SS	MS	F	p
Between-group	15	2.21	0.148	0.416	.98
Within-group	2123	752.94	0.355		
Total	2138	755.15			

Table 7

*Estimate of Fixed Effects for the Model of Ethnic Diversity and Academic Adjustment*

Parameter	<i>b</i>	Standard Deviation	df	t	p
Intercept	3.43	0.03	287.82	133.56	.00**
Activity Type	0.35	0.02	1949.97	16.47	.00**
Ethnic Diversity	0.01	0.02	275.69	0.49	.63
Overall Academic Adjustment	-0.18	0.03	286.23	-6.60	.00**
Activity Type * Ethnic Diversity	0.01	0.01	1943.09	0.39	.70
Activity Type * Overall Academic Adjustment	0.08	0.02	1915.51	3.88	.00**

Note. \* =  $p < .05$ , \*\* =  $p < .01$ . "Activity Type \* Ethnic Diversity" refers to the interaction between Activity Type and Ethnic Diversity. "Activity Type \* Overall Academic Adjustment" refers to the interaction between Activity Type and Overall Academic Adjustment.

Table 8

*Estimate of Fixed Effects for the Model of the Proportions of Different Ethnicities and Academic Adjustment*

Parameter	<i>b</i>	Standard Deviation	df	t	p
Intercept	3.43	0.03	276.22	129.68	.00**
Activity Type	0.35	0.02	1855.31	16.10	.00**
The Proportion of Different Ethnicity	0.00	0.09	272.37	-0.01	.99
Overall Academic Adjustment	0.18	0.03	269.81	-6.43	.00**
Activity Type * Proportion of Different Ethnicity	0.01	0.07	1842.37	0.15	.88
Activity Type * Overall Academic Adjustment	0.08	0.02	1819.30	3.82	0**

Note. \* =  $p < .05$ , \*\* =  $p < .01$ . "Activity Type \* Proportion of Different Ethnicity" refers to the interaction between Activity Type and The Proportion of Different Ethnicity. "Activity Type \* Overall Academic Adjustment" refers to the interaction between Activity Type and Overall Academic Adjustment.

Table 9

*Estimate of Fixed Effects for the Model of Ethnic Diversity and Social Adjustment*

Parameter	<i>b</i>	Standard Deviation	df	t	p
Intercept	3.44	0.03	286.72	132.01	.00**
Activity Type	0.45	0.02	1950.33	16.40	.00**
Ethnic Diversity	0.00	0.02	274.43	0.24	.81
Overall Social Adjustment	-0.13	0.03	295.02	-5.11	.00**
Activity Type * Ethnic Diversity	0.01	0.01	1942.42	0.70	.49
Activity Type * Overall Social Adjustment	0.03	0.02	1954.84	1.45	.15

Note. \* =  $p < .05$ , \*\* =  $p < .01$ . "Activity Type \* Ethnic Diversity" refers to the interaction between Activity Type and Ethnic Diversity. "Activity Type \* Overall Social Adjustment" refers to the interaction between Activity Type and Overall Social Adjustment.

Table 10

*Estimate of Fixed Effects for the Model of the Proportions of Different Ethnicity and Social Adjustment*

Parameter	<i>b</i>	Standard Deviation	df	t	p
Intercept	3.43	0.03	274.86	128.29	.00**
Activity Type	0.35	0.02	1856.50	16.05	.00**
Proportion of Ethnic Diversity	0.01	0.09	273.19	0.17	.87
Overall Social Adjustment	-0.13	0.03	284.86	-4.94	.00**
Activity Type * Proportion of Ethnic Diversity	0.02	0.07	1839.35	0.28	.78
Activity Type * Overall Social Adjustment	0.02	0.02	1861.28	0.98	.33

Note. \* =  $p < .05$ , \*\* =  $p < .01$ . "Activity Type \* Ethnic Diversity" refers to the interaction between Activity Type and The Proportion of Different Ethnicity. "Activity Type \* Overall Social Adjustment" refers to the interaction between Activity Type and Overall Social Adjustment.

Table 11

*Estimate of Fixed Effects for the Random Model of Ethnic Diversity and Academic Adjustment*

Parameter	<i>b</i>	Standard Deviation	df	<i>t</i>	<i>p</i>
Intercept	3.44	0.03	273.54	133.30	.00**
Activity Type	0.34	0.02	190.39	14.35	.00**
Ethnic Diversity	0.01	0.02	262.15	0.47	.64
Overall Academic Adjustment	-0.18	0.03	272.01	-6.54	.00**
Activity Type * Ethnic Diversity	0.01	0.02	185.80	0.38	.70
Activity Type * Overall Academic Adjustment	0.08	0.02	172.55	3.34	.00**

Note. \* =  $p < .05$ , \*\* =  $p < .01$ . "Activity Type \* Ethnic Diversity" refers to the interaction between Activity Type and Ethnic Diversity. "Activity Type \* Overall Academic Adjustment" refers to the interaction between Activity Type and Overall Academic Adjustment.

Table 12

*Estimate of Fixed Effects for the Random Model of the Proportions of Different Ethnicities and Academic Adjustment*

Parameter	<i>b</i>	Standard Deviation	df	<i>t</i>	<i>p</i>
Intercept	3.43	0.03	262.72	129.13	.00**
Activity Type	0.34	0.02	182.95	14.06	.00**
The Proportion of Different Ethnicity	0.00	0.09	259.02	-0.05	.96
Overall Academic Adjustment	-0.18	0.03	256.66	-6.37	.00**
Activity Type * Proportion of Different Ethnicity	0.01	0.08	187.29	0.17	.87
Activity Type * Overall Academic Adjustment	0.08	0.02	164.34	3.36	.00**

Note. \* =  $p < .05$ , \*\* =  $p < .01$ . "Activity Type \* Proportion of Different Ethnicity" refers to the interaction between Activity Type and Ethnic Diversity. "Activity Type \* Overall Academic Adjustment" refers to the interaction between Activity Type and Overall Academic Adjustment.



Table 13

*Estimate of Fixed Effects for the Random Model of Ethnic Diversity and Social Adjustment*

Parameter	<i>b</i>	Standard Deviation	df	<i>t</i>	<i>p</i>
Intercept	3.44	0.03	270.63	130.88	.00**
Activity Type	0.34	0.02	193.27	14.21	.00**
Ethnic Diversity	0.00	0.02	259.33	0.23	.82
Overall Social Adjustment	-0.13	0.03	278.15	-5.04	.00**
Activity Type * Ethnic Diversity	0.01	0.02	188.64	0.64	.52
Activity Type * Overall Academic Adjustment	0.03	0.02	210.80	1.25	.21

*Note.* \* =  $p < .05$ , \*\* =  $p < .01$  *Note.* \* =  $p < .05$ , \*\* =  $p < .01$ . “Activity Type \* Ethnic Diversity” refers to the interaction between Activity Type and Ethnic Diversity. “Activity Type \* Overall Social Adjustment” refers to the interaction between Activity Type and Overall Social Adjustment.

Table 14

*Estimate of Fixed Effects for the Random Model of the Proportions of Different Ethnicity and Social Adjustment*

Parameter	<i>b</i>	Standard Deviation	df	<i>t</i>	<i>p</i>
Intercept	3.43	0.03	259.45	127.03	.00**
Activity Type	0.35	0.02	184.25	13.90	.00**
Proportion of Ethnic Diversity	0.01	0.09	257.84	0.11	.91
Overall Social Adjustment	-0.13	0.03	268.50	-4.90	.00**
Activity Type * Proportion of Different Ethnicity	0.02	0.08	194.12	0.27	.79
Activity Type * Overall Social Adjustment	0.02	0.02	207.26	0.95	.35

*Note.* \* =  $p < .05$ , \*\* =  $p < .01$  *Note.* \* =  $p < .05$ , \*\* =  $p < .01$ . “Activity Type \* Ethnic Diversity” refers to the interaction between Activity Type and The Proportion of Different Ethnicity. “Activity Type \* Overall Social Adjustment” refers to the interaction between Activity Type and Overall Social Adjustment.

Table 15

*The Effects of the Proportion of Different Ethnicity on Academic Adjustment*

Variables	b	p
Step 1: Positive Mood Score		
Proportion of Different Ethnicity	0.01	.89
Step 2: Overall Academic Adjustment		
Positive Mood Score	0.72	.00**
Proportion of Different Ethnicity	0.21	.14
Activity Type	0.21	.03*
Interaction between Positive Mood Score and Activity Type	-0.26	.17

*Note.* \* =  $p < .05$ , \*\* =  $p < .01$ . Positive mood scores and overall academic adjustment were the dependent variables explained by the variables beneath them.

Table 16

*The Effects of Ethnic Diversity on Academic Adjustment*

Variables	b	p
Step 1: Positive Mood Score		
Ethnic Diversity	0.00	.83
Step 2: Overall Academic Adjustment		
Positive Mood Score	0.73	.00**
Ethnic Diversity	0.06	.03*
Activity Type	0.20	.03*
Interaction between Positive Mood Score and Activity Type	-0.24	.20

*Note.* \* =  $p < .05$ , \*\* =  $p < .01$ . Positive mood scores and overall academic adjustment were the dependent variables explained by the variables beneath them.

Table 17

*The Effects of the Proportion of Different Ethnicity on Social Adjustment*

Variables	b	p
Step 1: Positive Mood Score		
Proportion of Different Ethnicity	0.01	.89
Step 2: Overall Social Adjustment		
Positive Mood Score	0.59	.00**
Proportion of Different Ethnicity	0.36	.03*
Activity Type	0.18	.07
Interaction between Positive Mood Score and Activity Type	0.00	.99

*Note.* \* =  $p < .05$ , \*\* =  $p < .01$ . Positive mood scores and overall social adjustment were the dependent variables explained by the variables beneath them.

Table 18

## The Effects of Ethnic Diversity on Social Adjustment

Variables	b	p
Step 1: Positive Mood Score		
Ethnic Diversity	0.00	.83
Step 2: Overall Social Adjustment		
Positive Mood Score	0.62	.00**
Ethnic Diversity	0.06	.05*
Activity Type	0.19	.07
Interaction between Positive Mood Score and Activity Type	-0.02	.94

*Note.* \* =  $p < .05$ , \*\* =  $p < .01$ . Positive mood scores and overall social adjustment were the dependent variables explained by the variables beneath them.

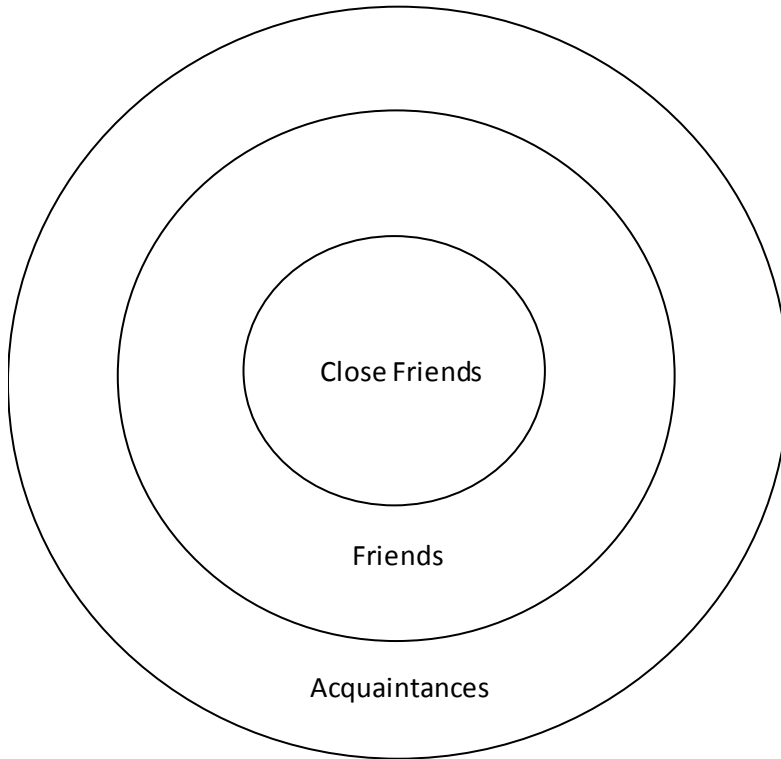
Figure 1  
Student Adaptation to College Questionnaire

This Student Adaptation to College Questionnaire is copyrighted by its creator. See the following citation to locate the scale:

Baker, R. W. & Siryk, B. (1999). SACQ: Student adaptation to college questionnaire manual:

Los Angeles: Western Psychological Services.

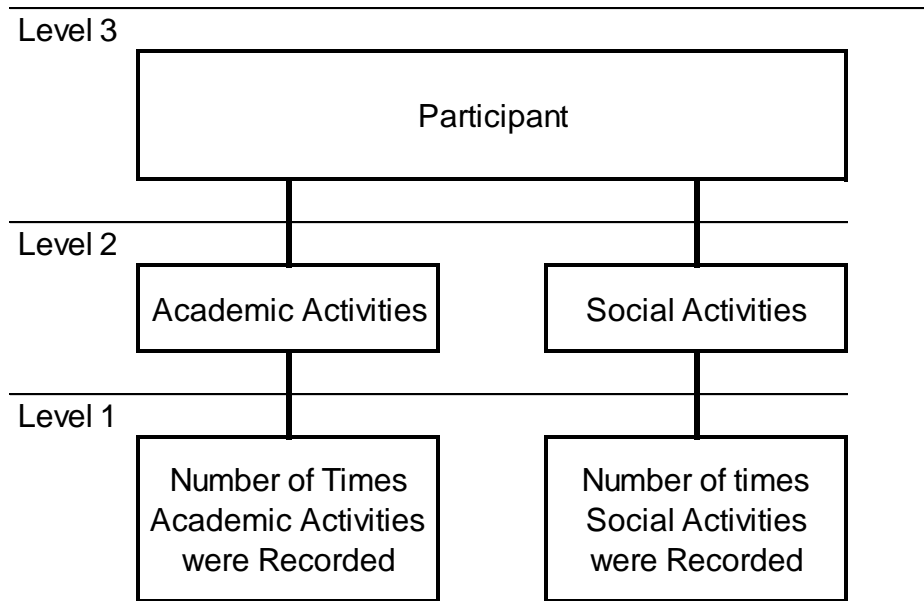
Figure 2  
Antonucci's Hierarchical Mapping Circles



*Note.* Participants listed their friends' initials, ethnicities, and their relationship to the participant in each circle. Participants were limited to 5 entries in the center circle, 10 entries in the inner ring, and 15 entries in the outermost ring.

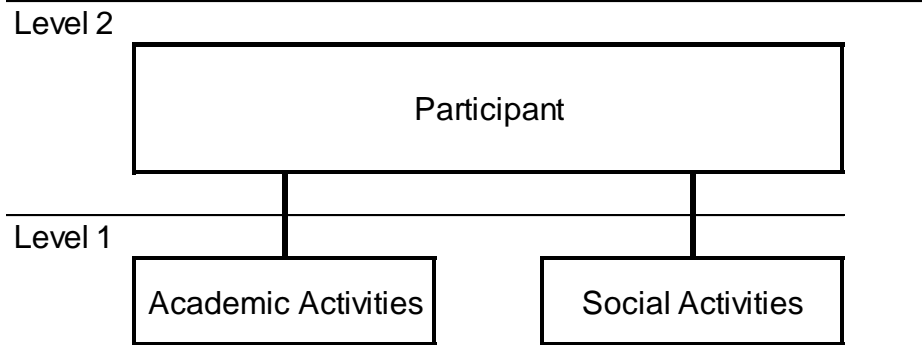


Figure 3  
*3-Level Multilevel Model*



*Note.* The study repeated this model once for each of the 250 participants.

Figure 4  
*2-Level Multilevel Model*



*Note.* The study repeated this model once for each of the 250 participants.

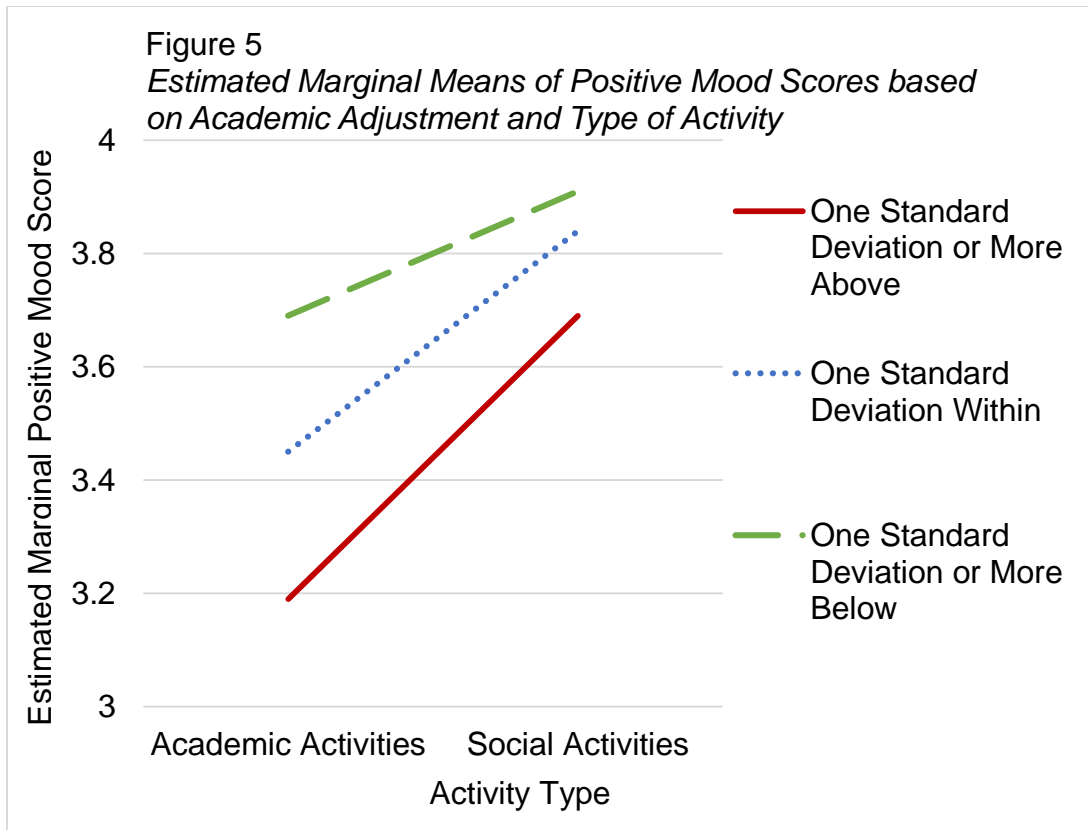


Figure 6  
*Mediating and Moderating Interactions between Variables*

