2014

University Commitment: Test of a Three-Component Model

Brittany Davis
Minnesota State University - Mankato

University Commitment: Test of a Three-Component Model

By

Brittany J. Davis

A Thesis Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Arts

In

Industrial/Organizational Psychology

Minnesota State University, Mankato

Mankato, Minnesota

May, 2014

University Commitment: Test of a Three-Component Model

Brittany Davis, Minnesota State University, Mankato

This thesis has been examined and approved by the following members of the student's committee.

_____
Dr. Lisa Perez, Advisor

_____
Dr. Andrea Lassiter, Committee Member

_____
Dr. Richard Auger, Committee Member

_____
Date

ACKNOWLEDGEMENTS

I would first like to thank my advisor, Dr. Lisa Perez for her genuine interest in this thesis topic and my learning experience. Her expertise in psychometric theory and survey validation were critical in appropriately conducting this study. Dr. Perez's contributions and support were critical in the completion of this thesis.

I would also like to thank my other two committee members, Dr. Andrea Lassiter and Dr. Richard Auger. Dr. Lassiter's innovation and support were beneficial in the development of several items in the survey. Dr. Auger's insightful questions were critical to the development of a more informed study in relation to the student experience and considerations for further study.

I would like to extend many thanks to my family for their continued love and support while I pursue my passion for learning and I/O Psychology. To my I/O psychology cohort—these past two years would not have been the same without you and I look forward to celebrating our successes and professional experiences together. Finally, I cannot give enough thanks to the faculty of this program for their continued social, academic, and professional support.

UNIVERSITY COMMITMENT: TEST OF A THREE-COMPONENT MODEL

Davis, Brittany J., M. A. Minnesota State University, Mankato, 2014

Abstract

University commitment is critical to university success, as it positively impacts retention, as well as many other student attitudes and behaviors (Beil, Reisen, Zea, & Caplan, 1999; Tinto, 1987; Tinto, 2006; Woosley & Miller, 2009). Therefore, psychometrically sound measures of university commitment are of great importance to universities. The present study seeks to test the psychometric properties of a newly developed scale of university commitment. This study measured the internal consistency reliability, content validity, and construct validity of the newly created measure. Divergent validity was evaluated by comparing the new measure to the Perceived Academic Achievement Scale (Meagher, 2012) and student grade point averages (GPA); there were no significant relationships between university commitment, its components, and perceived academic ability or GPA. Convergent validity was evaluated by comparing the new measure to the University Attachment Scale (France, Finney, & Swerdzewski, 2010). Positive, significant relationships were found between this scale and university commitment, as well as its three components. Additionally, because student engagement (Schaufelil, Martinez, Pinto, Salanova, & Bakker, 2002) is a commonly measured and conceptually related construct, it was measured to examine the degree of relationship and conceptual overlap between the two constructs; a positive, significant relationship was found.

Keywords: university commitment, university attachment, perceived academic achievement, engagement

Table of Contents

LIST OF TABLES

CHAPTER I

Student retention is one of the most essential outcomes for any university (Tinto, 1987) and research has shown it to be a very challenging problem for many universities (Noel, 1985), especially in times of economic hardship (Tinto, 2006). In order to remain successful, a university must retain a number of students every year (Tinto, 2006). Research has indicated university commitment, one's psychological attachment to his or her university, may be a strong predictor of student retention (Woosley & Miller, 2009). Thus, universities face hardships when students' commitment levels are low, potentially leading to a lowering in the students' subsequent intentions to return to their university (Beil, Reisen, Zea, & Caplan, 1999; Tinto, 1987; Tinto, 2006; Woosley & Miller, 2009). Further, Terenzini, Lorang, and Pascarella (1981) suggested that individuals who are committed to graduating from a specific university are more likely to graduate than individuals who had a goal of graduating and did not demonstrate commitment to their particular institution. High levels of university commitment may serve as a positive incentive for educational persistence when other motivating forces are absent (Tinto, 1987).

Many factors, including student engagement, may contribute to student commitment (McNally & Irving, 2010). According to Kuh (2003), student engagement can be defined in both a student-central and university central way: engagement can represent both the time and the energy a student invests in educationally purposeful activities as well as the effort institutions devote to using effective practices in supporting students. Another researcher (Astin, 1985) concluded "the effectiveness of any education policy or practice is directly related to the capacity of that policy or practice to increase student involvement (p. 36)". Similarly to the research on student commitment, some

educational research has found that students who leave college prematurely are less engaged than the students who persist (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008). Given this relationship, one concern with studying commitment is its potential overlap with the construct of engagement. Therefore, in addition to measuring student commitment, we must also consider student engagement when studying student commitment.

Although a university is clearly an organization with faculty and staff comprising the employees, the student body is the lifeblood of the university and thus, it is critical to examine their commitment. Currently, there are numerous measures that evaluate university student attitudes and behaviors related to university engagement, attachment, and identification. Most of these studies attempt to assess and predict student behaviors regarding retention, yet rarely address student commitment (McNally & Irving, 2010). The lack of research in this area evidences a need for a more comprehensive, psychometrically sound scale of student commitment that could provide insight for helping universities to succeed.

Measuring Organizational Commitment

Commitment has been a topic of research interest in the organizational literature for the past forty years (Reichers, 1985). Although student commitment to a university and employee commitment to an organization are not identical, it seems reasonable to use the model provided by researchers who have measured and studied organizational commitment as a model for measuring and studying university commitment. Thus, I will review these models below.

Researchers interested in commitment have largely focused on its use as a predictive measure of organizational attitudes and behaviors. Researchers' initial efforts

to produce a global commitment model were hindered by problematic construct conceptualizations, causing researchers to focus narrowly on particular aspects of commitment. To resolve the construct's definitional confusion, Allen and Meyer (1990) re-conceptualized commitment with a multidimensional model, classified by affective, continuance, and normative components. An individual can be committed to the organization in all three ways, although one component, or components, may be more influential than others (Allen & Meyer, 1990). Allen and Meyer's model has since become the predominant measurement method for studies of organizational commitment.

This three-component model of organizational commitment (Allen & Meyer, 1990) was theoretically derived. The affective commitment component was based on a study of antecedents of emotional attachment by Mowday, Porter, and Steers (1982). The development of the continuance commitment component was based on a theory of increased costs related to work actions (Becker, 1960) and also a theory of increased perceived costs when there is a lack of employment alternatives (Farrell & Rusbult, 1981; Rusbult & Farrell, 1983). The component of normative commitment was developed based on the work of Wiener (1982), who believed an employee's feeling of obligation to an organization was influenced by the individual's experiences both prior (such as familial/cultural socialization) and following (such as organizational socialization) his or her entry into an organization.

Affective Commitment. Affective commitment reflects the most prevalent and popular definition of commitment--emotional attachment to one's organization. This definition describes a person who is highly committed to his or her organization as one who identifies with, is involved in, and enjoys membership in his or her organization.

Buchanan (1974) described an organizationally committed person as one who connects with and is dedicated to an organization's goals and values, to his or her role in relation to those goals and values, and to the organization as a whole. Mowday, Steers, and Porter (1982) summarized the definition of affective commitment as an individual's identification with and involvement in an organization (Allen & Meyer, 1990). Mowday et al. (1982) developed the Organizational Commitment Questionnaire (OCQ), which, while having psychometrically sound properties, only takes into account one's emotional attachment to his or her organization. Allen and Meyer (1990) define the component of affective commitment as an employee's want or desire to stay at an organization. Their model views affective commitment as one of the components of overall organizational commitment, distinguishing it from prior research that had focused on this single component as the all-encompassing definition.

Continuance Commitment. The second component of Allen and Meyer's (1990) three-component model of organizational commitment is continuance commitment. Continuance commitment can be described as an individual's need to stay at an organization. This component of commitment represents the perceived costs to an individual that would result from his or her discontinuation as a member of a particular organization. Kanter (1968) suggests that continuance commitment is present when an individual perceives a profit associated with continued participation and a cost associated with leaving. Before Allen and Meyer's (1990) three-component model of organizational commitment, continuance commitment was most commonly measured using a model developed by Ritzer and Trice (1969) and modified by Hrebiniak and Alutto (1972). This survey allowed respondents to indicate the likelihood they would leave the

organization given various inducements to do so, such as increases in pay, freedom, status, and promotional opportunities. However, it has been argued that this scale actually measured affective commitment rather than, or in addition to, continuance commitment. From this, there was a recognized need for the more stringent measure of continuance commitment, which Allen and Meyer provided.

Normative Commitment. The final component of Allen and Meyer's (1990) measure of organizational commitment is normative commitment. Allen and Meyer (1990) describe this as an employee's perception that he or she ought to stay with the organization; this component reflects one's sense of responsibility to an organization. Wiener (1982) articulates that individuals who exhibit normative commitment believe staying with their organization is the "right" and moral thing to do. Wiener, along with colleague Vardi (1980), developed a three-item measure of this obligation-based commitment by asking employees the extent to which they feel "a person should he loyal to his organization, should make sacrifices on its behalf, and should not criticize it (p. 86)." At the time of the development of Allen and Meyer's three-component model, this scale was the only scale used to measure normative commitment (Allen & Meyer, 1990).

Organizational Commitment Outcomes

A wide array of desirable behavioral outcomes have been linked to work-related commitment including employee retention, job performance, attendance, work quality, work quantity, and even personal sacrifice on behalf of the organization (Somers & Birnbaum, 1998). Since its development, Allen and Meyer's (1990) components of organizational commitment, most commonly affective commitment, have also been found to be significant predictors of many organizational outcomes. Affective commitment to an organization is a significant predictor of turnover intentions and

boosting behaviors, a dimension of positive work behavior that refers to the act of promoting the organization to outsiders and protecting it against external criticism (Bagraim, 2010).

Furthermore, a case has also been made for multiple commitments within the workplace (Reichers, 1985) and that commitment to an organization may be influenced by these multiple factors (Meyer, Becker, & Van Dick, 2006). Researchers have also examined commitment to managers, careers, and unions (Meyer & Herscovitch, 2001). Overall, commitment to internally focused entities, such as organization, top management team, work group, supervisor, and/or co-workers should result in beneficial behavior for organizations (Bagraim, 2010; Siders, George, & Dharwadkar, 2001).

Measuring Student Commitment

Given that commitment is related to many important aspects of work behavior and is important for understanding organizational outcomes, it makes sense to apply the understanding of commitment to other domains. In particular, a model similar to Allen and Meyer's (1990) conceptualization of commitment may be useful for understanding behavior and outcomes for universities and their students as well. Maintaining strong overall commitment to an organization is crucial for its success and a lack of any of these components could contribute to failure (Allen & Meyer, 1990); the same could be said for university success (McNally & Irving, 2010).

The purpose of this study is to develop and analyze the psychometric quality of a measure of university commitment, theoretically modeled on Allen and Meyer's three-dimensional measure of organizational commitment. This new measure is titled "University Commitment Scale."

University Commitment. Similar to the Organizational Commitment Scale, the

University Commitment Scale includes three sub-dimensions of commitment: affective, continuance, and normative. In the new measure, affective commitment was defined as the student's positive emotional attachment to the university. Continuance commitment was defined as the student's need to stay at his or her university based on the costs of leaving. Normative commitment was defined as the student's belief that he or she ought to stay dedicated to the university and its pursuits. Overall student commitment is defined as a student's psychological attachment to his or her university.

University Attachment. A construct that is very similar to university commitment is university attachment. France, Finney, and Swerdzewski (2010) stated that a student's attachment to the university is composed of two parts: attachment to the members of the university and attachment to the university itself. They developed the University Attachment Scale to measure their construct of attachment. This measure is particularly relevant to the subscale of affective commitment, previously noted in Allen and Meyer's research (1990). Therefore, this scale will be used to measure the convergent validity of the proposed measure; it is hypothesized that this scale would have a significant, positive correlation with the University Commitment Scale.

Perceived Academic Ability. A concept that should be unrelated to the university commitment level is a student's perceived academic achievement. The new scale should measure a student's commitment and be unrelated to how well the student perceives he or she does in his or her courses. Therefore, the Perceived Academic Ability Scale created by Meagher (2012) was used to measure the divergent validity of the University Commitment Scale; it was hypothesized that this measure would not be significantly correlated with the University Commitment Scale.

Student Engagement. As mentioned earlier, student engagement may contribute to student commitment (McNally & Irving, 2010). Therefore, it is hypothesized that student engagement will be significantly and positively related to student commitment.

Hypotheses

- **Hypothesis 1:** A principal components analysis will result in student commitment items loading on to three different domains of commitment: affective, continuance, and normative.
- **Hypothesis 2:** University commitment will be significantly and positively related to university attachment. In particular, the affective commitment components will relate most strongly.
- **Hypothesis 3:** University commitment will have no, or a small correlational, relationship with perceived academic ability or GPA.
- **Hypothesis 4:** University commitment will have a significant, positive relationship to student engagement.

CHAPTER II
Method

Participants

The participants in this study were undergraduate students from two samples: one, a smaller, private university located in the Southeastern United States (N=69), and the second a medium-sized, public university in the Midwestern United States (N=161). Participants were offered class or extra credit as compensation for their participation.

Private University. Participants were recruited from undergraduate introduction to psychology and statistics courses; participants received class credit for participation in the study. The sample was predominantly female (M=11, F=58) with a

mean age of 19.29 (*SD*=1.36). The sample included mainly underclassmen, with 37 freshman, 19 sophomore, 11 junior, and 2 senior level students. Additionally, the student sample was predominantly white with some racial diversity, with 49 participants identifying as white, 12 as Hispanic, and the rest of the sample indicating other ethnicities.

Public University. Participants were recruited from undergraduate psychology courses using a research management system and were given class credit for participation in the study. This sample was also mostly female (M=27, F=134), with a mean age of 20.81 (*SD*=1.89). However, this sample included more upperclassmen, with 28 freshmen, 24 sophomores, 53 juniors, and 57 seniors. This sample was also predominantly white, with 135 participants identifying as white, 8 identifying as Asian/Pacific Islander, 7 identifying as Hispanic, and the rest of the sample identifying as other ethnicities or multiple ethnicities.

Procedure

Scale Development. The development of this new scale of university commitment was derived from the aforementioned theoretically based three-component model of organizational commitment developed by Allen and Meyer (1990). This scale is typically used within corporate organizations to measure employee commitment, but was chosen as a theoretical model for a new scale of student commitment to universities due to its division of dimensions of commitment. Other scales measuring university commitment focus on the affective commitment, or emotional attachment, component. Given that Allen and Meyer's (1990) three component model of commitment provides a better understanding of organizational commitment than a unidimensional construct (Hackett, Bycio, & Hausdorf, 1994) I believe that developing a scale comparable to this

model will provide a more complete understanding of student commitment.

Organizational Commitment Scale. The measure itself originally included a total of 66 items—51 items that were constructed either by the authors or were modified versions of those used in others scales, and the 15 items from the OCQ (Mowday, Steers, & Porter, 1979). All questions were measured on a 7-point scale ranging from strongly disagree (1) to strongly agree (7). After analysis of data from three employee samples, they eliminated items based on a variety of psychometric properties (Allen & Meyer, 1990). Ultimately, they created a 24 item measure with eight items measuring each of the three components. Each component had adequate internal consistency reliability (i.e., Cronbach's alpha): affective commitment scale, .87; continuance commitment scale, .75; and normative commitment scale, .79. Also, a principal components analysis conducted on all 24 items explained 58.8 (affective), 25.8 (continuance), and 15.4 (normative) percent of the variance. In all cases, the items loaded highest on the factor representing the theoretically predicted construct.

Further, convergent and discriminant validity were tested by comparing affective commitment, continuance commitment, and normative commitment to the OCQ, which measures emotional attachment (affective commitment) only. Evidence was found for convergent validity by the significant relationship between the OCQ and the affective commitment scale (r=.83, p<.001). Discriminant validity evidence was indicated by a non-significant relationship between the OCQ and the continuance commitment scale (r=-.02, p=ns). However, the affective commitment scale and the OCQ were unexpectedly significantly related to the normative commitment scale (r=.51, p<.001).

Overall, the use of this test would be recommended, as this test seems to be psychometrically sound. Based on the above analyses, the test should be used to measure employee commitment in organizational settings. Further research and analyses have also supported the use of this scale as appropriate and useful (Karim & Noor, 2006; Meyer & Allen, 1997). While an adequate amount of research has been done with this scale in reference to corporate organizations, further research can be done by applying the theoretical design of this measure to other populations or settings, as this study does by measuring student feelings of commitment to the university.

Content validity. I conducted content validity analyses using a group of 15 graduate students who have studied psychometric theory who served as subject matter experts. Each expert evaluated each item's relationship to its component of commitment, as well as the item's relationship to overall university commitment. Items were rated as not necessary, useful but not essential, or essential. Although several items had content validity ratios (CVRs) below .5 for its relation to overall student commitment, ultimately only one of these items, which was in the continuance commitment component, was dropped as the other three had acceptable item statistics. These items also appeared to be consistent to the meaning of the construct.

Data collection. Students took a survey consisting of demographic information responses, as well as responses to a number of previously validated measures that are described below. For the private university sample, students were able to access the survey through a provided link. For the public university sample, students accessed the survey through the SONA system, a university-wide research participation website. This system then provided them a link to the survey, which was housed on Qualtrics, an online

survey manager. Participation in the study was voluntary.

Measures

University commitment. University commitment was measured with the newly crafted University Commitment Scale. It measures university commitment in three components: affective, continuance, and normative. Originally, the scale was composed of 24 questions total: eight for each component of commitment. However, after content validation and examining item statistics and corrected item-total correlations, three items were removed, resulting in 21 items total: 8 in affective commitment, 7 in continuance commitment, and 6 in normative commitment.

University attachment. University attachment was measured with the University Attachment Scale (France, Finney & Swerdzewski, 2010). This measure included nine items that were rated on a 5-point Likert Scale. The anchors differ for each question, yet ratings all range from "none/never" to "always/extremely." In their psychometric analysis of the survey, France, et al. (2010) performed a factor analysis to support their theory that university attachment involved the two previously stated components: attachment to members of the university and attachment to the university itself. They discovered that the two-factor model fit the data significantly better than the one-factor model ($\Delta \chi^2(1) = 42.94$; $p < .001$). Therefore, their notion of university attachment as attachment to members of the university and attachment to the university itself was supported.

For its original validation, the internal consistency reliability for this measure was tested with Cronbach's alpha. The authors measured the internal consistency of both the member attachment dimension and the university attachment dimension in two separate samples. The university attachment had Cronbach's alphas of $\alpha = .87$ and $\alpha=.84$. The member attachment was also internally consistent, ($\alpha=.71$ and $\alpha=.73$).

To test the convergent validity of their measure, they correlated feelings of morale and sense of belonging to the two dimensions of their measure. Both member attachment and university attachment were significantly correlated with feelings of morale, $r = .53$ and $r = .75$, respectively. Both member attachment and group attachment were significantly correlated with sense of belonging, $r = .61$ and $r = .72$ (all $ps < .05$), respectively. Therefore, there was evidence for the construct validity of this measure.

In the present study, the University Attachment Scale was found to be reliable for the private college, (α=.808), the public university, (α=.872), and the overall sample of students, (α=.852).

Perceived academic ability. The Perceived Academic Ability Scale (Meagher, 2012) was used to assess perceived academic ability. The measure included 10 items with a 7-point Likert response scale. The anchors for the Likert response range from "Not at all like me" to "Very much like me." The construct validity of this measure was tested using scales of self-esteem and self-efficacy as convergent constructs (Meagher, 2012). Both self-esteem ($r = .413$, $p < .05$) and self-efficacy ($r = .343$, $p < .05$) were significantly correlated with the perceived academic ability scale, supporting the scale's construct validity. While determining the psychometric qualities of this scale, Meagher (2012) also stated that the items were face valid and the internal consistency reliability, analyzed with Cronbach's alpha, was acceptable, ($\alpha = .70$).

Reliability analyses were also conducted for the present study. Perceived academic ability was found to be a reliable measure in the private college, (α=.829) and the public university, (α=.821), as well as the overall sample of students, (α=.824).

Student engagement. Student engagement was assessed with the Utrecht Work

Engagement Scale for Students (Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002)**.** This scale consisted of 14 items and was measured on a 7-point Likert scale, with possible responses ranging from "Never" to "Always." The scale consisted of three components: Vigor, Dedication, and Absorption. Vigor refers to high levels of energy and one's mental resilience while working, the willingness to invest effort in one's work, and persistence in the face of difficulties. Dedication is characterized by a sense of significance, enthusiasm, pride, inspiration, and challenge when reflecting on one's work. Absorption is one's ability to be fully concentrated and deeply engrossed in one's work. It can be characterized by time passing quickly when working as well as difficulties detaching oneself from work. The Utrecht Work Engagement Scale for Students was tested on three varying populations of university students from Spain, Portugal, and the Netherlands. Components of the Utrecht Work Engagement Scale for Students had high correlations with one another, ranging from .71 to .94.

Reliability was calculated for the engagement scale as a whole, as well as for each of its three components; all measures were found to be reliable. Statistics can be seen in Table 1.

Student Grade Point Average. In addition to measuring perceived student academic ability, the survey also asked for self-reported student grade point averages (GPA) to test the relationship between student commitment and academic ability. Students were given the option to fill in one of two boxes for their grade point average: "I am fairly sure it is" or "I am unsure, but my best guess is". However for data analyses, GPA was combined into one category.

CHAPTER III
Results

Initial Analysis of University Commitment Scale

To begin, I evaluated descriptive statistics (means, standard deviations, ranges, skewness, and kurtosis) for all items as well as corrected item-total characteristics. These results are presented in Tables 2 through 7. Based on these results, two items from the normative commitment component were deleted.. Combined with the item deleted earlier due to low content validity ratings from the continuance commitment component, the remaining analyses were conducted on 21 items: 8 from affective commitment, 7 from continuance commitment, and 6 from normative commitment. More detailed descriptions of these analyses are presented below.

Item Statistics

Private University. The means and standard deviations for each of the 24 items were computed. Overall, most means were not near the extremes of the distribution, with the exception of two items: "I feel obligated to attend MSU because my family and friends attended" (M=1.80, SD=1.41) and "I am proud to wear clothing with MSU's logo" (M=6.14, SD=1.13). Most scores, with the exception of four items, used the entire range of the scale. The statistics for each item can be seen in Table 2.

Public University. Means and standard deviations were again calculated for each item. Overall, most means were not near the extreme ends of the distribution. Again, participants used the entire range of scores for all items. Item statistics for the public university sample can be seen in Table 3.

Combined Sample. Item statistics for the combined sample can be seen in Table 4. Additionally, the skew and kurtosis of items was examined. Only two items had skewness values less than -1 (-1.205 and -1.177, SE=.160) and 4 items had kurtosis that

was either greater than +1 (1.308 and 1.090, *SE*=3.19) or less than -1 (-1.180 and -1.072, *SE*=.319). Despite the skewness and kurtosis values, these items were retained for future analyses given the newness of the measure and the fact that none of the items was far outside the -1 to +1 range generally viewed as acceptable.

An independent-samples t-test was also conducted to compare overall commitment in the private and public university samples. There was a significant difference in the scores for the private university (*M*=103.57, *SD*=18.37) and public university (*M*=90.10, *SD*=20.63) sample populations; $t(229)=4.69$, $p<.001$. The highest score possible for overall commitment was 168. Significant differences were found between the samples for all three components of commitment as well, with levels of affective commitment being highest for the private college (*M*=39.19, *SD*=8.34) and the public university (*M*=34.36, *SD*=8.98), $t(229)=3.817$, $p<.001$. Levels of continuance commitment were slightly smaller, with the private college having an average score of 35.09 (*SD*=7.05) and the public university averaging a score of 30.77 (*SD*=7.83), $t(229)=3.953$, $p<.001$. Lowest levels of commitment were found for the normative commitment component, but there was still a significant difference between the private college students (*M*=.29.29, *SD*=5.83) and the public university students (*M*=24.98, *SD*=6.23), $t(229)=4.912$, $p<.001$. The highest possible score for each component of commitment was 56. Because the samples were significantly different on the variables of interest in this study, I conducted and reported most analyses separately for the private and public university samples.

Principal Components Analyses

The first hypothesis stated that items on the University Commitment Scale would create three subscale reflecting affective, continuance, and normative commitment.

Principal components analyses (PCA) were conducted to determine whether the items fit the theoretical three-component structure that guided scale development. For these analyses I used all participants rather than conduct separate analyses by sample. Neither the private college nor public university sample were large enough on their own to conduct the PCA.

A variety of PCAs were conducted but, ultimately, none led to a component structure that was consistent with the proposed theoretical model of university commitment. The initial PCA used an orthogonal rotation on the 21 remaining items and yielded a four component solution that was not immediately interpretable and yielded several low component loadings as well as high cross-loadings for several items. Because the proposed theoretical model had three components, I also ran a PCA constraining the model to extract three components. Again, the solution lacked conceptual sense and there were large cross-loadings for several items. Subsequently, I attempted several other analyses by dropping various items with high cross loadings and attempted to find an adequate solution using an oblique rotation. None of these analyses yielded a model that was satisfactory on all criteria (high component loadings, low cross-loadings, and interpretable item groupings). The results of the most satisfactory of these analyses are discussed below and presented in Table 8.

While the data seemed to fit a three-component solution, the items did not load as expected. The first component contained mostly affective commitment items, but also had two items from the continuance commitment component and one item from the normative commitment scale. The second component contained two affective commitment items and three normative commitment items. This component seemed to

contain event-related items (e.g., "I feel it is important to attend university-sponsored events" and "Students ought to support MSU's student organizations (sports, debate, theatre, etc.) regardless of their performance"). The third component was comprised of five continuance commitment items. As a whole, the items composing the three factors did not seem to fit together conceptually. In particular, I was unable to develop a common theme from the first component. Additionally, several items had to be deleted due to high cross-loadings to obtain this solution. The final three-factor model can be seen in Table 7. As a result of the unsatisfactory PCA solutions, I opted to maintain the theoretically-based subscales for future analyses.

Reliability Analyses

To examine the reliability of the University Commitment Scale and its theoretically-derived subscales I calculated internal consistency reliability. Despite the fact that the PCA did not reproduce the theoretical model, for all subscales and samples, these theoretical scales exceeded the .70 standard for internal consistency reliability.

Private University. The internal consistency of the modified University Commitment Scale was analyzed using Cronbach's alpha. This test indicated that the entire measure is internally consistent (α = .891). The affective commitment component also appeared to be highly reliable (α = .811), while the continuance commitment appeared to be moderately reliable, (α = .734), as did the normative commitment component, (α = .761).

Public University. Again, Cronbach's alpha was used to measure the internal consistency of the measure overall (α = .914), as well as each of the three components: affective commitment (α = .853), continuance commitment (α = .781), and normative commitment (α = .757).

Combined Sample. Reliabilities were again calculated using Cronbach's alpha; analyses indicated that all scales were reliable. The overall scale had the highest reliability, (α = .915). Affective commitment (α = .850) and continuance commitment (α = .778) and normative commitment (α = .776) also met reliability standards.

Component Correlations

Private University. All three theoretical components of university commitment were correlated with one another. Affective commitment and normative commitment shared the strongest relationship, r=.749, p<.001, followed by affective commitment and continuance commitment, r=.623, p<.001, then normative commitment and continuance commitment, r=.465, p<.001.

Public University. Again, affective commitment and normative commitment shared the strongest relationship, r=.829, p<.001, followed by affective commitment and continuance commitment, r=.644, p<.001. However, in this sample normative commitment and continuance commitment shared a much stronger relationship, r=.632, p<.001.

Combined Sample. Affective commitment and normative commitment shared a strong, positive relationship, r=.820, p<.001. Continuance commitment had moderate, significant correlations with both affective commitment, r=.661, p<.001, and normative commitment, r=.619, p<.001.

Construct Validity of the University Commitment Scale

Construct validity was assessed by examining convergent and divergent validity coefficients. Convergent validity was assessed by correlating scores on the University Commitment Scale with scores on the University Attachment Scale (France et al., 2010).

Convergent Validity. Hypothesis 2 predicted that the University Commitment

Scale would correlate highly and positively with the University Attachment Scale. In particular, I predicted that the affective commitment scale would correlate strongly and positively with the University Attachment Scale.

Private University. A Pearson's correlation was conducted to discover the relationship between the attachment and commitment scales. The results indicated that this hypothesis was confirmed. There was a significant, strong, positive correlation between the University Commitment Scale and the University Attachment Scale, r=.773, p<.001. Further, affective commitment shared the strongest significant relationship with university attachment, r=.747, p<.001, while continuance commitment and normative commitment had moderate, significant relationships, r=.586, p<.001 and r=.582, p<.001, respectively.

Public University. Convergent validity evidence for the public university sample was similar to that of the private sample. As hypothesized, the University Commitment Scale and University Attachment Scale were positively, significantly related, r=.774, p<.001. Additionally, university attachment was most strongly related to affective commitment, r=.776, p<.001, but was also significantly and positively related to continuance commitment, r=.578, p<.001, and normative commitment, r=.717, p<.001.

Combined Sample. As predicted, university attachment and overall university commitment were positively and significantly correlated, r=.756, p<.001. University attachment shared the strongest relationship with affective commitment, r=.763, p<.001, followed by normative commitment, r=.581, p<.001 and continuance commitment, r=.673, p<.001.

Divergent Validity. Hypothesis 3 predicted that perceived academic ability as

assessed by Meagher's (2012) measure would be unrelated to the University Commitment Scale and its subscales. Hypothesis 3 also predicted that actual self-reported grade point averages would be unrelated to the University Commitment Scale and its subscales.

Private University. Results confirmed the above hypothesis; no significant relationships existed between perceived academic ability and commitment overall, nor any of the three components of university commitment. Additionally, there were no significant relationships between grade point averages with commitment overall or any of the components of commitment. From this, we can surmise that our construct of university commitment does not measure students' academic success. Divergent validity evidence can be found in Table 9.

Public University. The hypothesis was again confirmed; there were no significant relationships between Perceived Academic Ability and university commitment, nor any of university commitment's three components. Additionally, no significant relationships were found between student grade point averages and university commitment. Divergent validity statistics can be found in Table 10.

Combined Sample. Neither perceived academic ability, nor student grade point averages, shared significant relationships with overall commitment or any of its components in the combined sample. Statistics can be found in Table 11.

Criterion-Related Validity. Assessing the relationship between university commitment and whether or not a student completes his or her degree at the current institution would provide evidence of criterion-related validity for the University Commitment Scale. However, given the cross-sectional nature of the current study, I

could not do a true assessment of criterion-related validity. Instead, I asked students the likelihood that they would finish their degree at their university. Overall commitment scores significantly predicted intent to complete one's degree, β=.218, p<.01. However, of the three components only continuance commitment seemed to significantly predict this, β=.304, p<.001, as neither affective commitment, β=.150, p=.057, nor normative commitment, β=.124, p=.116, were significant predictors.

Relationship to Engagement

Private University. A fourth hypothesis predicted that there would be a positive, significant relationship between commitment and engagement; this hypothesis was confirmed. The engagement composite variable had positive, significant relationships to the commitment composite variable, as well as each of the three components of commitment. Positive, significant relationships were also found between the dedication component of engagement and all components of university commitment, as well as the university commitment composite. Overall university commitment was also significantly related to the vigor component of engagement. Correlations can be found in Table 12.

Public University. Again, a positive, significant relationship was found between engagement and university commitment. Additionally, positive, significant correlations were found between almost all components of each scale, with the exception of affective commitment and absorption, r=.138, p=.080. Correlations can be found in Table 13.

Combined Sample. Significant relationships were found between engagement and university commitment, as well as between all of the components of each scale. Correlations are displayed in Table 14.

Exploratory Analyses.

Exploratory analyses were conducted on the overall sample of university students

to examine potential demographic variables that should be examined in future research. Males had higher average scores of overall commitment (M=97.58, SD=18.28) than females (M=93.45, SD=21.28), although this difference was not significant, $t(238)=1.11$, p=.268. Additionally, there were no significant differences found between males and females for levels of affective commitment, $t(228)=.589$, p=.557, continuance commitment, $t(228)=.788$, p=.432, nor normative commitment, $t(228)=1.831$, p=.068. There was also no significant difference in overall level of commitment depending on what year of school a student was in, $F(3, 227)=1.682$, p=.172, nor for any of the three components: affective, $F(3, 227)=2.255$, p=.083, continuance, $F(3, 227)=.418$, p=.740, or normative, $F(3, 227)=2.500$, p=.060. While it would be of interest to compare levels of commitment of full-time and part-time students, this sample only contained 5 students who were part-time, thus, these analyses were not conducted.

However, the difference between those living on or off campus was examined; no significant difference was found for overall commitment, $t(229)=1.288$, p=.199, nor affective, $t(229)=1.688$, p=.093, continuance, $t(229)=.263$, p=.793, or normative, $t(229)=1.496$, p=.136, commitment. Interestingly, there was no significant difference in levels of commitment between transfer students (M=87.07, SD=22.18) and non-transfer students (M=91.24, SD=19.99), $t(160)=-1.145$, p=.229. Additionally, there were no significant differences between these groups for any of the components of commitment either: affective, $t(160)=-1.722$, p=.087, continuance, $t(160)=-.285$, p=.776, or normative, $t(160)=-.962$, p=.338. However, there were only 44 transfer students in this sample.

As a final exploratory analysis, I examined the relationship between commitment levels and various behavioral indicators of campus involvement. I found that overall

student commitment levels were predicted by athletic event attendance, β=.274, p<.001, but broken down into components, athletic event attendance only significantly predicted affective commitment, β=.373, p<.001, and normative commitment, β=.305, p<.001, not continuance commitment, β=.049, p=.461. Attendance at non-athletic campus events significantly predicted overall commitment, β=.224, p<.001, as it did for all three components of commitment: affective, β=.245, p<.001, continuance, β=.142, p<.05, and normative commitment, β=.208, p<.001. Other campus involvement such as clubs and intramurals also significantly predicted overall commitment, β=.276, p<.001, as well as affective, β=.270, p<.001, continuance, β=.210, p<.001, and normative commitment, β=.261, p<.001.

CHAPTER IV
Discussion

In the current study, I attempted to develop and validate a measure of university commitment that was theoretically-based on Allen and Meyer's (1990) three component model of organizational commitment that consists of affective, continuance, and normative commitment. Support for this three-component model of university commitment was found through content, convergent, and divergent validity tests, as well as reliability analyses on the overall scale as well as each of its components. Additionally, an evaluation of criterion-related validity suggested this measure of student commitment predicts students' intentions to finish their degree at their university. Students who attended university events and participated in extracurricular activities were more committed to the university. This implies that universities can foster student commitment

to the university, and potentially increase student retention, by encouraging event attendance through announcements, posters, and student-friendly prices.

However, this particular three-component model of university commitment was not supported by a principal components analysis, so further examination of its items is warranted. Many items were drafted by a small group of students; additional student, faculty, or other expert opinions may be necessary when developing items. For example, student affairs employees or other university employees who deal with student retention issues may have useful ideas to help better understand the issue of student commitment.

An additional concern is the high cross-loadings found in the PCA and the high correlations between components that were observed in the current study. These results suggest that there was not a clear distinction between the three forms of commitment in this study. It is possible that the items created for this new measure did not adequately capture the independence of those commitment forms. It is also possible that further consideration of this three-component model is needed. It may be the case that this model applies to organizational settings, but it does not translate to student populations and their commitment to the university. This may be one of the reasons measures of student commitment focus solely on the emotional, or affective, component of commitment. Or perhaps, the way that these particular components manifest themselves in student populations is different. For example, normative commitment reflects a sense of duty, obligation, and loyalty to an institution. This may look different to an employee than it does to a student seeking an education.

Another concern with the present results is an issue specific to the public university sample. This particular university is part of a larger statewide system of

universities that aims to make transfers from one school to another within the system seamless in order to promote more diverse educational opportunities and higher education degree attainment. However, this type of environment may foster a lack of student commitment to one university in particular.

Qualitative comments were also recorded from this university, asking students to share reasons they would leave the university, if any. The largest portion of students, 27.1%, reported they would not leave, or would only leave after graduation to pursue a graduate degree not offered at their current university. Similarly, 25.3% reported they would leave to pursue a different major not currently offered at their present university. An additional 19.8% reported they would leave because of location, while 13.6% stated they would leave due to financial reasons. The remaining participants, 14.2%, gave other reasons for potentially leaving, such as a family emergency or transferring to a school with nice buildings and facilities. While it was not the largest reason for potentially leaving, these comments do indicate that finances do play a role in student retention. Additionally, continuance commitment, which includes the financial costs of leaving a university, was predictive of a student's intent to finish. From this, universities can conclude that offering competitive tuition rates, as well as scholarship or work opportunities, is an important factor for students' commitment levels. Related to this, it may also be of interest to measure commitment differences, specifically in regard to continuance commitment, in students of varying socioeconomic statuses or amounts of financial aid (e.g., loans, grants, work study) received. Also of interest from these comments is that nearly 20% of students reported wanting to leave due to location. This could be examined further by comparing levels of commitment based on the distance

students live from home.

Limitations and Future Directions

The sample in this study was predominantly female, and white, so a more diverse population of students is desirable when testing this model of university commitment. A larger sample could also be attained by gathering data from additional private and public universities. It may also be of interested to examine commitment levels of students who virtually attend a university; these students may take the majority of their classes online, therefore spending less time on the university campus. Examining levels of commitment in graduate students could be interesting as well. Replicating this study with other student populations would increase the confidence in this measure as a reliable and valid measure of university commitment.

Further evaluation regarding some of the exploratory analyses should also be considered. This sample did not have enough responses from part-time students to analyze levels of commitment between these students and students with a full-time enrollment status. Based on the indication of increased levels of commitment through event attendance, it may also be interesting to compare the levels of commitment of students who are student athletes or student actors and those who are not. In this student sample, no significant differences were found between students who had different class standing, or between those who lived on or off campus, so it would be recommended to retest these relationships on other student populations.

Additional testing of this three-component model of university commitment on other populations is necessary for validation of this scale. As discussed previously, student commitment is important to university success. As in organizations, student

commitment can indicate attitudes and behaviors related to absenteeism, engagement, and satisfaction. Most importantly, student commitment levels can help to predict student retention. Therefore, having a valid and reliable measure of student commitment as has been tested in the present study, is critical in understanding student behaviors and maintaining university success. Once validated, this scale could be used across a variety of university campuses to determine what type of commitment is most critical in retaining students, and what each school could focus its recruiting and campus-related efforts on. If continuance commitment seems to be the strongest, universities may want to focus on advertising employment opportunities on campus, but if affective commitment was the greatest predictor of student retention, universities would want to focus their efforts on promoting campus and university-sponsored events. This scale of university commitment did seem to be predictive of student retention, and arguably can provide a more comprehensive understanding of student intentions to remain at their university to finish their degree, as well as remaining loyal to the university after graduation.

CHAPTER V
References

Allen, N. J. & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology, 63,* 1-18.

Astin, A. W. (1985). Involvement: The cornerstone of excellence. *Change, 17*(4), 35-39.

Bagraim, J. (2010). Multiple affective commitments and salient outcomes: The improbable case of information technology knowledge workers. *The Electronic Journal Information Systems Evaluation, 13*(2), 97-106.

Becker, H. S. (I960). Notes on the concept of commitment. *American Journal of Sociology, 66*, 32-42.

Beil, C., Reisen, C. A., Zea, M. C., & Caplan, R. C. (1999). A longitudinal study of the effects of academic and social integration and commitment on retention. *NASPA Journal, 37*(1), 376-385.

Buchanan, B. (1974). Building organizational commitment: The socialization of managers in work organizations. *Administrative Science Quarterly, 19*, 533-546.

Farrell, D. & Rusbult, C. E. (1981). Exchange variables as predictors of job satisfaction, job commitment, and turnover: The impact of rewards, costs, alternatives, and investments. *Organizational Behavior andHuman Performance, 27*, 78-95.

France, M. K., Finney, A. J., & Swerdzewski, P. (2010). Students' group and member attachment to their university: A construct validity study of the university attachment scale. *Educational and Psychological Measurement*, *70*, 440-458.

Hackett, R. D., Bycio, P., & Hausdorf, P. A. (1994). Further assessments of Meyer and

Allen's (1991) three-component model of organizational commitment. *Journal of Applied Psychology, 79*(1), 15-23.

Hrebiniak, L. G. & Alutto, J. A. (1972). Personal and role-related factors in the development of organizational commitment. *Administrative Science Quarterly, 17*, 555-573.

Kanter, R. M. (1968). Commitment and social organization: A study of commitment mechanisms in Utopian communities. *American Sociological Review, 33,* 499-517.

Karim, N. H. A. & Noor, N. H. N. M. (2006). Evaluating the psychometric properties of Allen and Meyer's organizational commitment scale: A cross cultural application among Malaysian academic librarians. *Malaysian Journal of Library & Information Science, 11*(1), 89-101.

Kim, S. & Mueller, C. W. (2011). Occupational and organizational commitment in different occupational contexts: The case of South Korea. *Work and Occupations, 38*(3), 3-36.

Kuh, G. D. (2003). What we're learning about student engagement from NSSE. *Change, 35*(2), 24-32.

Kuh, G. D., Cruce, T. M., Shoup, R., Kinzie, J., & Gonyea, R. M. (2008). Unmasking the effects of student engagement on first-year college grades and persistence. *The Journal of Higher Education, 79*(5), 540-563.

McNally, J. J., & Irving, P. G. (2010). The relationship between university student commitment profiles and behavior: Exploring the nature of context effects. *Journal of Leadership & Organizational Studies, 17*(2), 201-215.

Meagher, P. (2012). Perceived Academic Ability Scale [Database record]. Retrieved from PsycTESTS. doi: 10.1037/t14245-000.

Meagher, P. (2009). Early School Leavers and Secondary School Teenagers: Analysis of Self-Esteem and Other Psychological Variables. *Journal of Quantitative Psychology, 454*(1)*,* 1-6. doi:10.1037/t14245-000.

Meyer, J. P. & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application.* Thousand Oaks, CA: Sage.

Meyer, J. P. & Herscovitch, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review, 11*(3), 299-326.

Meyer, J. P., Becker, T. E., & Van Dick, R. (2006). Social identities and commitments at work: Toward an integrative model. *Journal of Organizational Behavior, 27,* 665-683.

Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee-organization linkages: The psychology of commitment, absenteeism, and turnover.* New York: Academic Press.

Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior, 14*(2), 224-247.

Noel, L. (1985). Increasing student retention: New challenges and potential. In L. Noel, R. Levitz, & D. Saluri (Eds.), *Increasing student retention: Effective programs and practices for reducing the dropout rate* (1-27). San Francisco: Jossey-Bass.

Pike, G. R. & Kuh, G. D. (2005). A typology of student engagement for American colleges and universities. *Research in Higher Education, 46*(2), 185-209.

Reichers, A. E. (1985). A review and reconceptualization of organizational commitment.

The Academy of Management Review, 10(3), 465-476.

Ritzer, G. & Trice, H. M. (1969). An empirical study of Howard Becker's side-bet theory. *Social Forces, 47,* 475-79.

Rusbult, C. E. & Farrell, D. (1983). A longitudinal test of the investnient model: The impact on job satisfaction, job commitment, and turnover of variations in rewards, costs, alternatives, and investments. *Journal of Applied Psychology, 68*, 429-38.

Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology, 33,* 464-481.

Siders, M. A., George, G., & Dharwadkwar, R. (2001). The relationship of internal and external commitment foci to objective job performance measures. *The Academy of Management Journal, 44*(3), 570-579.

Somers, M. J. & Birnbaum, D. (1998). Work-related commitment and job performance: It's also the nature of the performance that counts. *Journal of Organizatioal Behavior, 19*, 621-634.

Terenzini, P. T., Lorang, W. G., Pascarella, E. T. (1981). Predicting freshman persistence and voluntary dropout decisions: A replication. *Research in Higher Education, 15*(2), 109-127.

Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition.* Chicago: University of Chicago Press.

Tinto, V. (2006). Research and practice of student retention: What next? *Journal of College Student Retention, 8*(1), 1-19.

Wiener, Y. (1982). Commitment in organizations: A normative view. *Academy of*

Management Review, *7*, 418-28.

Wiener, Y. & Vardi, Y. (1980). Relationships between job, organization, and career commitments and work outcomes: An integrative approach. *Organizational Behavior and Human Performance, 26*, 81-96.

Woosley, S. A., & Miller, A. L. (2009). Integration and institutional commitment as predictors of college student transition: Are third week indicators significant? *College Student Journal, 43*(4), 1260-127.

CHAPTER VI

Table 1

Utrecht Work Engagement Scale for Students Reliabilities

	Private College	Public University	Overall Sample
Overall Engagement	α=.926	α=.908	α=.914
Engagement-Vigor	α=.837	α=.814	α=.820
Engagement-Dedication	α=.842	α=.804	α=.816
Engagement-Absorption	α=.803	α=.777	α=.783

Table 2

Item Analysis for the University Commitment Scale, Private University

Item	**Mean**	**Standard Deviation**	**Min**	**Max**
Affective Commitment				
I get upset when the athletics teams at MSU lose	3.78	1.92	1	7
I will feel a sense of loss when I leave [university name]	4.67	1.80	1	7
I am proud to wear clothing with [university name] logo	6.14	1.13	3	7
I feel it is important to attend university-sponsored events	4.70	1.31	1	7
I enjoy discussing my university with people outside of it *	5.84	1.29	2	7
I could easily become attached to another university (R) *	4.20	1.57	1	7
I feel emotionally attached to [university name] *	4.94	1.71	1	7
I do not feel a strong sense of belonging to [university name] (R) *	4.91	1.78	1	7
Continuance Commitment				
It would be very hard for me to leave [university name] right now, even if I wanted to *	4.86	1.78	1	7
Right now, staying at [university name] is a matter of necessity as much as desire *	4.94	1.62	1	7
The opportunities at [university name] are not worth staying for (R) *	5.96	1.38	1	7
The opportunities offered at [university name] would make me hesitate to transfer	5.52	1.34	2	7
The negative consequences of leaving [university name] are too high to consider leaving	4.54	1.69	1	7
I am afraid of what might happen if I leave [university name] *	4.01	1.79	1	7
I believe my progress toward a degree would be disrupted if I transferred from [university name]	5.20	1.71	1	7
The financial support [university name] provides is preventing me from leaving	*3.26*	*1.94*	*1*	*7*
Normative Commitment				
In the future, I see myself contributing time and money to [university name]	4.75	1.47	1	7
Students ought to support [university name] student organizations (sports, debate, theatre, etc.) regardless of their performance	5.68	1.05	3	7
Supporting [university name] rival university would seem disloyal to me	4.80	1.75	1	7
I feel obligated to attend [university name] because my family and friends attended	*1.80*	*1.41*	*1*	*7*
If I were to attend another university, I would feel obligated to support [university name] in some way	3.90	1.60	1	7

There is value in remaining loyal to one university after graduating *	5.29	1.26	1	7
I would transfer to another university just to be with my friends (R)	*5.42*	*1.67*	*1*	*7*
Staying loyal to only [university name] is not sensible (R) *	4.87	1.40	1	7

Note. = (R) indicates that the item is reversely scored. * indicates items that were simply adapted from Allen and Meyer's Organizational Commitment Scale (1990), all other items were created. *Italicized items have been deleted from the measure.*

Table 3

Item Analysis for the University Commitment Scale, Public University

Item	**Mean**	**Standard Deviation**	**Min**	**Max**
Affective Commitment				
I get upset when the athletics teams at [university name] lose	3.09	1.69	1	7
I will feel a sense of loss when I leave [university name]	4.09	1.77	1	7
I am proud to wear clothing with [university name] logo	5.68	1.35	1	7
I feel it is important to attend university-sponsored events	4.07	1.52	1	7
I enjoy discussing my university with people outside of it *	4.95	1.67	1	7
I could easily become attached to another university (R) *	3.60	1.51	1	7
I feel emotionally attached to [university name] *	4.08	1.68	1	7
I do not feel a strong sense of belonging to [university name] (R) *	4.80	1.58	1	7
Continuance Commitment				
It would be very hard for me to leave [university name] right now, even if I wanted to *	4.59	1.86	1	7
Right now, staying at [university name] is a matter of necessity as much as desire *	4.54	1.66	1	7
The opportunities at [university name] are not worth staying for (R) *	5.33	1.52	1	7
The opportunities offered at [university name] would make me hesitate to transfer	3.91	1.53	1	7
The negative consequences of leaving [university name] are too high to consider leaving	3.88	1.72	1	7
I am afraid of what might happen if I leave [university name] *	3.48	1.79	1	7
I believe my progress toward a degree would be disrupted if I transferred from [university name]	5.04	1.78	1	7
The financial support [university name] provides is preventing me from leaving	*2.90*	*1.56*	*1*	*7*
Normative Commitment				
In the future, I see myself contributing time and money to [university name]	3.38	1.66	1	7
Students ought to support [university name] student organizations (sports, debate, theatre, etc.) regardless of their performance	4.96	1.41	1	7
Supporting [university name] rival university would seem disloyal to me	4.22	1.64	1	7
I feel obligated to attend [university name] because my family and friends attended	*2.23*	*1.51*	*1*	*7*
If I were to attend another university, I would feel obligated to support [university name] in some way	3.57	1.64	1	7
There is value in remaining loyal to one university after	4.32	1.53	1	7

graduating *				
I would transfer to another university just to be with my friends (R)	*5.19*	*1.61*	*1*	*7*
Staying loyal to only [university name] is not sensible (R) *	4.53	1.36	1	7

Note. = (R) indicates that the item is reversely scored. * indicates items that were simply adapted from Allen and Meyer's Organizational Commitment Scale (1990), all other items were created. *Italicized items have been deleted from the measure.*

Table 4

Item Analysis for the University Commitment Scale, Combined Sample

		Item Statistics			
Item	**CVR**	**Mean**	**Standard Deviation**	**Min**	**Max**
Affective Commitment					
I get upset when the athletics teams at MSU lose #	.33	3.29	1.78	1	7
I will feel a sense of loss when I leave [university name]	.80	4.26	1.79	1	7
I am proud to wear clothing with [university name] logo #	.40	5.82	1.30	1	7
I feel it is important to attend university-sponsored events	.40	4.26	1.48	1	7
I enjoy discussing my university with people outside of it *	.33	5.22	1.61	1	7
I could easily become attached to another university (R) *	.73	3.78	1.55	1	7
I feel emotionally attached to [university name] *	.67	4.34	1.73	1	7
I do not feel a strong sense of belonging to [university name] (R) *	.87	4.84	1.64	1	7
Continuance Commitment					
It would be very hard for me to leave [university name] right now, even if I wanted to *	.20	4.67	1.84	1	7
Right now, staying at [university name] is a matter of necessity as much as desire *	.33	4.66	1.65	1	7
The opportunities at [university name] are not worth staying for (R) * #	.53	5.52	1.51	1	7
The opportunities offered at [university name] would make me hesitate to transfer	.40	4.39	1.65	1	7
The negative consequences of leaving [university name] are too high to consider leaving #	.27	4.07	1.73	1	7
I am afraid of what might happen if I leave [university name] *	.13	3.65	1.81	1	7
I believe my progress toward a degree would be disrupted if I transferred from [university name]	.27	5.09	1.76	1	7
The financial support [university name] provides is preventing me from leaving	*.33*	*3.01*	*1.68*	*1*	*7*
Normative Commitment					
In the future, I see myself contributing time and money to [university name]	.47	3.79	1.73	1	7
Students ought to support [university name] student organizations (sports, debate, theatre, etc.) regardless of their performance #	.40	5.17	1.35	1	7
Supporting [university name] rival university would seem disloyal to me	.67	4.39	1.69	1	7
I feel obligated to attend [university name] because my family and friends attended	*.33*	*2.10*	*1.49*	*1*	*7*
If I were to attend another university, I would feel obligated to support [university name] in some way	.47	3.67	1.63	1	7
There is value in remaining loyal to one university after graduating *	.53	4.61	1.52	1	7
I would transfer to another university just to be with my friends (R)	*.40*	*5.26*	*1.62*	*1*	*7*
Staying loyal to only [university name] is not sensible (R) *	.33	4.63	1.38	1	7

Note. = (R) indicates that the item is reversely scored. * indicates items that were simply adapted from Allen and Meyer's Organizational Commitment Scale (1990), all other items were created. # indicates items that had high skewness or kurtosis. *Italicized items have been deleted from the measure.*

Table 5

Reliability Analyses for the University Commitment Scale, Private University

Item	Item-Total Correlations
Affective Commitment	
I get upset when the athletics teams at MSU lose	.299
I will feel a sense of loss when I leave [university name]	.673
I am proud to wear clothing with [university name] logo	.613
I feel it is important to attend university-sponsored events	.516
I enjoy discussing my university with people outside of it *	.614
I could easily become attached to another university (R) *	.464
I feel emotionally attached to [university name] *	.799
I do not feel a strong sense of belonging to [university name] (R) *	.518
Continuance Commitment	
It would be very hard for me to leave [university name] right now, even if I wanted to *	.458
Right now, staying at [university name] is a matter of necessity as much as desire *	.343
The opportunities at [university name] are not worth staying for (R) *	.501
The opportunities offered at [university name] would make me hesitate to transfer	.472
The negative consequences of leaving [university name] are too high to consider leaving	.566
I am afraid of what might happen if I leave [university name] *	.268
I believe my progress toward a degree would be disrupted if I transferred from [university name]	.476
The financial support [university name] provides is preventing me from leaving	*.166*
Normative Commitment	
In the future, I see myself contributing time and money to [university name]	.546
Students ought to support [university name] student organizations (sports, debate, theatre, etc.) regardless of their performance	.453
Supporting [university name] rival university would seem disloyal to me	.482
I feel obligated to attend [university name] because my family and friends attended	*-.171*
If I were to attend another university, I would feel obligated to support [university name] in some way	.445
There is value in remaining loyal to one university after graduating *	.602
I would transfer to another university just to be with my friends (R)	*.298*
Staying loyal to only [university name] is not sensible (R) *	.525

Note. = (R) indicates that the item is reversely scored. * indicates items that were simply adapted from Allen and Meyer's Organizational Commitment Scale (1990), all other items were created. *Italicized items have been deleted from the measure.*

Table 6

Reliability Analyses for the University Commitment Scale, Public University

Item	Item-Total Correlations
Affective Commitment	
I get upset when the athletics teams at MSU lose	.344
I will feel a sense of loss when I leave [university name]	.703
I am proud to wear clothing with [university name] logo	.700
I feel it is important to attend university-sponsored events	.476
I enjoy discussing my university with people outside of it *	.760
I could easily become attached to another university (R) *	.476
I feel emotionally attached to [university name] *	.772
I do not feel a strong sense of belonging to [university name] (R) *	.587
Continuance Commitment	
It would be very hard for me to leave [university name] right now, even if I wanted to *	.592
Right now, staying at [university name] is a matter of necessity as much as desire *	.524
The opportunities at [university name] are not worth staying for (R) *	.518
The opportunities offered at [university name] would make me hesitate to transfer	.586
The negative consequences of leaving [university name] are too high to consider leaving	.447
I am afraid of what might happen if I leave [university name] *	.549
I believe my progress toward a degree would be disrupted if I transferred from [university name]	.314
The financial support [university name] provides is preventing me from leaving	*.165*
Normative Commitment	
In the future, I see myself contributing time and money to [university name]	.589
Students ought to support [university name] student organizations (sports, debate, theatre, etc.) regardless of their performance	.522
Supporting [university name] rival university would seem disloyal to me	.474
I feel obligated to attend [university name] because my family and friends attended	*.099*
If I were to attend another university, I would feel obligated to support [university name] in some way	.623
There is value in remaining loyal to one university after graduating *	.717
I would transfer to another university just to be with my friends (R)	*.122*
Staying loyal to only [university name] is not sensible (R) *	.370

Note. = (R) indicates that the item is reversely scored. * indicates items that were simply adapted from Allen and Meyer's Organizational Commitment Scale (1990), all other items were created. *Italicized items have been deleted from the measure.*

Table 7

Reliability Analyses for the University Commitment Scale, Combined Sample

Item	Item-Total Correlations
Affective Commitment	
I get upset when the athletics teams at MSU lose	.361

I will feel a sense of loss when I leave [university name]	.698
I am proud to wear clothing with [university name] logo	.688
I feel it is important to attend university-sponsored events	.512
I enjoy discussing my university with people outside of it *	.745
I could easily become attached to another university (R) *	.495
I feel emotionally attached to [university name] *	.791
I do not feel a strong sense of belonging to [university name] (R) *	.546
Continuance Commitment	
It would be very hard for me to leave [university name] right now, even if I wanted to *	.550
Right now, staying at [university name] is a matter of necessity as much as desire *	.483
The opportunities at [university name] are not worth staying for (R) *	.538
The opportunities offered at [university name] would make me hesitate to transfer	.600
The negative consequences of leaving [university name] are too high to consider leaving	.501
I am afraid of what might happen if I leave [university name] *	.489
I believe my progress toward a degree would be disrupted if I transferred from [university name]	.352
The financial support [university name] provides is preventing me from leaving	*.184*
Normative Commitment	
In the future, I see myself contributing time and money to [university name]	.618
Students ought to support [university name] student organizations (sports, debate, theatre, etc.) regardless of their performance	.539
Supporting [university name] rival university would seem disloyal to me	.494
I feel obligated to attend [university name] because my family and friends attended	*-.014*
If I were to attend another university, I would feel obligated to support [university name] in some way	.574
There is value in remaining loyal to one university after graduating *	.715
I would transfer to another university just to be with my friends (R)	*.181*
Staying loyal to only [university name] is not sensible (R) *	.424

Note. = (R) indicates that the item is reversely scored. * indicates items that were simply adapted from Allen and Meyer's Organizational Commitment Scale (1990), all other items were created. *Italicized items have been deleted from the measure.*

Table 8

Principal Components Analysis, Varimax Rotation

	Factor		
Item	**1**	**2**	**3**
Affective Commitment			
I get upset when the athletics teams at MSU lose		**.670**	
I will feel a sense of loss when I leave [university name]	*.452*	*.332*	*.507*
I am proud to wear clothing with [university name] logo	**.710**	.369	.171
I feel it is important to attend university-sponsored events	.123	**.837**	
I enjoy discussing my university with people outside of it *	**.705**	.406	.242
I could easily become attached to another university (R) *	**.703**		.182
*I feel emotionally attached to [university name] *	*.519*	*.425*	*.486*

I do not feel a strong sense of belonging to [university name] (R) *	**.721**	.200	
Continuance Commitment			
It would be very hard for me to leave [university name] right now, even if I wanted to *	.419		**.647**
Right now, staying at [university name] is a matter of necessity as much as desire *	.121	.215	**.623**
The opportunities at [university name] are not worth staying for (R) *	**.710**		.241
The opportunities offered at [university name] would make me hesitate to transfer	**.560**	.377	.195
The negative consequences of leaving [university name] are too high to consider leaving	.125	.100	**.774**
I am afraid of what might happen if I leave [university name] *		.260	**.676**
I believe my progress toward a degree would be disrupted if I transferred from [university name]	.122		**.640**
The financial support [university name] provides is preventing me from leaving			
Normative Commitment			
In the future, I see myself contributing time and money to [university name]	*.477*	*.415*	*.263*
Students ought to support [university name] student organizations (sports, debate, theatre, etc.) regardless of their performance	.212	**.593**	.284
Supporting [university name] rival university would seem disloyal to me	.236	**.639**	
I feel obligated to attend [university name] because my family and friends attended			
If I were to attend another university, I would feel obligated to support [university name] in some way	*.417*	*.311*	*.350*
There is value in remaining loyal to one university after graduating *	.386	**.641**	.320
I would transfer to another university just to be with my friends (R)			
Staying loyal to only [university name] is not sensible (R) *	**.478**	.344	

Note. = (R) indicates that the item is reversely scored. * indicates items that were simply adapted from Allen and Meyer's Organizational Commitment Scale (1990), all other items were created. *Italicized items have been deleted from the measure.*

Table 9

Divergent Validity Evidence for the University Commitment Scale, Private University

Measure	Overall Commitment	Affective Commitment	Continuance Commitment	Normative Commitment
Perceived Academic Ability	*r*=.159, *p*=.192	*r*=.088, *p*=.470	*r*=.191, *p*=.116	*r*=.144, *p*=.239
GPA	*r*=.104, *p*=.398	*r*=.078, *p*=.527	*r*=.044, *p*=.722	*r*=.164, *p*=.182

Table 10

Divergent Validity Evidence for the University Commitment Scale, Public University

Measure	Overall Commitment	Affective Commitment	Continuance Commitment	Normative Commitment
Perceived Academic Ability	*r*=.047, *p*=.556	*r*=.038, *p*=.629	*r*=.004, *p*=.961	*r*=.094, *p*=.232
GPA	*r*=.029, *p*=.712	*r*=.020, *p*=.801	*r*=.056, *p*=.479	*r*=-.003, *p*=.974

Table 11

Divergent Validity Evidence for the University Commitment Scale, Combined Sample

Measure	Overall Commitment	Affective Commitment	Continuance Commitment	Normative Commitment
Perceived Academic Ability	r=.064, p=.334	r=.042, p=.527	r=.047, p=.477	r=.091, p=.167
GPA	r=.007, p=.917	r=.001, p=.989	r=.014, p=.834	r=.004, p=.949

Table 12

University Commitment and Engagement, Private University

	Overall Commitment	Affective Commitment	Continuance Commitment	Normative Commitment
Overall Engagement	r=.295*	r=.255*	r=.250*	r=.253*
Engagement-Vigor	r=.244*	r=.205	r=.201	r=.225
Engagement-Dedication	r=.331**	r=.271*	r=.275*	r=.313**
Engagement-Absorption	r=.228	r=.221	r=.207	r=.148

*p<.05, **p<.01

Table 13

University Commitment and Engagement, Public University

	Overall Commitment	Affective Commitment	Continuance Commitment	Normative Commitment
Overall Engagement	r=.287***	r=.226**	r=.239**	r=.315***
Engagement-Vigor	r=.224**	r=.176*	r=.170*	r=.267***
Engagement-Dedication	r=.331***	r=.293***	r=.288***	r=.306***
Engagement-Absorption	r=.215*	r=.138	r=.186*	r=.270***

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

Table 14

University Commitment and Engagement, Combined Sample

	Overall Commitment	Affective Commitment	Continuance Commitment	Normative Commitment
Overall Engagement	r=.282***	r=.233***	r=.239***	r=.290***
Engagement-Vigor	r=.231***	r=.188**	r=.183**	r=.255***
Engagement-Dedication	r=.322***	r=.283***	r=.280***	r=.302***
Engagement-Absorption	r=.207**	r=.156*	r=.183**	r=.223***

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