2017

# A Measurement of Campus Presence: The Cognitive Link Between Campus Engagement and Positive Outcomes in College Students

Daniel M. Kleiman
*University of Central Florida*

# A MEASUREMENT OF CAMPUS PRESENCE:

# THE COGNITIVE LINK BETWEEN CAMPUS ENGAGEMENT AND POSITIVE OUTCOMES IN COLLEGE STUDENTS

by

DANIEL M. KLEIMAN

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Psychology
in the College of Sciences
and in The Burnett Honors College
at the University of Central Florida
Orlando, Florida

Spring Term, 2017

Thesis Chair: Daniel McConnell, Ph.D.

# ABSTRACT

Prior research has shown that positive psychological states and attitudes are known outcomes in students who are engaged on their college campus. Although many studies prove this to be evident, literature lacks examination between these two variables. The purpose of the current study was to find a cognitive link between student engagement and the measured outcomes of self-esteem, college self-efficacy, college affiliation, and levels of optimism/pessimism. The study proposed that there is a process of developing an internal sense of presence on campus, which occurs in those students that are actively engaged in activities outside of the classroom. Individual personality traits are additionally measured as a variable for tendencies of involvement. Measurements of presence level in students were analyzed by administering a Campus Presence Scale, modified from the Witmer & Signer Presence Scale. The study subscales that examine levels of student engagement and its outcomes were measured in an online questionnaire format via Qualtrics. A total of 371 students at the University of Central Florida participated in the study through the Sona System. This study hypothesized that students who spend more time on campus engaged in co-curricular activities would display higher levels of presence development. The study also sought a flow of development in these processes, hypothesizing that campus presence mediates the actions in which students engage and their psychological well-being and attitudes towards their institution. Analyses in SPSS were used to examine these variable relationships. Results indicated that presence is significantly correlated with higher student self-esteem, self-efficacy, college affiliation, and optimism. Results also showed that those involved with student organizations and those who regularly attend campus events are significantly more extraverted and have higher levels of presence, college affiliation and self-efficacy.

# ACKNOWLEDGEMENTS

I would like to express my strong gratitude to Dr. Daniel McConnell. He has provided me the essential advice and expertise for completing this project. I am grateful for Dr. McConnell's mentorship, as he has afforded me the needed skills and knowledge for undertaking original research. I would also like to thank my committee members: Dr. Michael Preston and Dr. Doan Modianos. The contribution of their professional expertise on this topic is valued and very appreciated.

# TABLE OF CONTENTS

# LIST OF TABLES

# LIST OF FIGURES

# CHAPTER 1: INTRODUCTION

The inspiration behind this thesis stemmed from my personal experience as an undergraduate student at the University of Central Florida (UCF). Over the past four years, UCF afforded me numerous opportunities for campus involvement and leadership in which I engaged. After engaging in each campus activity, my sense of belonging to the institution significantly increased, giving UCF's "place" a new meaningful identity for myself. This personal identity that I created of my institution completely differs from the first day I walked onto the campus; prior to engaging in the available campus activities. The original study was motivated from this transformative experience of mine, and aims to examine the cognitive processes of giving significance to a place.

## An Overview on Presence Development

American Psychologist James J. Gibson is most well-known for his influence on the area of perception. Presence is defined as the subjective experience of being in one place (Witmer & Singer, 1998), which Gibson states is the result of directly perceiving and interacting with one's environment. Gibson's view on perception is most linked with place – claiming that an awareness of place is the outcome of direct perception between an organism and its environment (Gibson, 1979; Moore et al., 1971).

Gibson claims that the type of affordances present classifies a place, or what actions the environment offers individuals in it to pursue in it. Likewise, Gibson states presence occurs when

goals are reached by the use of these affordances. When an environment is able to present affordances that are relevant to the specific needs of an individual, that environment supports purposeful actions. That is, the more purpose one has in a place, the more one is present (McConnell & Fiore, 2016).

Similarly, studies on the measurement of presence in virtual environments have indicated that participants must have involvement and immersion in order to experience presence (Witmer & Singer, 1998). Involvement is defined as a psychological state that occurs when one focuses attention and energy on meaningful activities and events. Immersion occurs when one perceives themselves to be enveloped by and interacting with an environment (Witmer & Singer, 1998). These states are interdependent; as it is believed that environmental factors enable immersion by encouraging involvement.

Traditionally, it is held that attitudes are shaped by one's perception of the environment, and then, according to the theory of planned behavior, these attitudes lead to behavior (Ajzen, 1985). In contrast, Gibson (1979) states that behavior is supported by perception of the environment, and these behaviors feedback to perception of one's actions in the world. This is referred to as the perception/action cycle. This leaves little room for attitudes and cognition in action selection. It may be possible, however, to integrate the theory of planned behavior with the perception/action cycle by suggesting that attitudes arise as a consequence of certain perception/action contingencies. In the course of perceiving and acting, one acquires information about the place, especially what it affords (Gibson, 1979; McConnell & Fiore, 2016). Attitudes may be thought of as affective reactions to the place, which may in turn affect the desire to remain in, and continue to interact with, that place – that is, to become immersed within it.

What determines whether one experiences positive affect within a place? We speculate that it depends on what the place affords, in relation to the goals, needs, and desires of the agent. If the environment affords the achievement and satisfaction of these goals, then positive attitudes should develop. Following this thought, it is important to emphasize that the emergence of such attitudes requires action; purposeful movement and interaction within the environment. This would also be associated with feelings of presence, as the purposeful actions support involvement, while the emerging sense of place supports immersion. As predicted by the theory of planned behavior, this kind of presence and positive affect should predict increased feelings of self-efficacy and self-esteem (Bandura, 1977).

## Student Engagement on a College Campus

Since the advancement of Higher Education, numerous studies have been conducted on the personal benefits students achieve by being involved at their institution. Prior research supports the notion that those students who devote more time to engaging in co-curricular activities have significantly more positive outcomes overall. The term student engagement is broadly defined as the involvement, integration, and quality of effort in social and academic collegiate experiences (McClenney et al., 2012).

Kuh et al. (2008) proposed that engagement in purposeful activities at an educational institution is a key contributor to student success. In general, student engagement has been found to correlate with enhanced outcomes in learning, retention, achievement and overall experience (Gunuc & Kuzu, 2015). According to the National Survey of Student Engagement (2008), engagement in student activities has a significant contribution to cumulative GPA and positive

academic experiences. Additionally, engaged students have been found to have significantly more positive states of mental health and well-being (Bergen-Cico & Bylander, 2011; Bowman et al., 2010).

Student engagement falls on a large spectrum and can vary greatly between individuals and institutions. On one end, engagement can be considered more passive when students simply attend university-sponsored events and programs. On the other, campus engagement is more active when students take part in co-curricular activities, such as becoming involved in athletics and student organizations. Degrees of presence can vary significantly, and the amount of energy and focus that one directs toward its environment plays a major role in this development (Fontaine, 1992).

Student engagement can be broken down into two elements; behavioral and psychological. Behaviorally, students interact with university faculty and peers, as well as initiate participation in learning and social activities. Psychologically, students develop attitudes of the university, which become their perception of their institutional norms (Gonyea, 2006). The development of these attitudes and behaviors are speculated to be reinforced by the perception/action cycle.

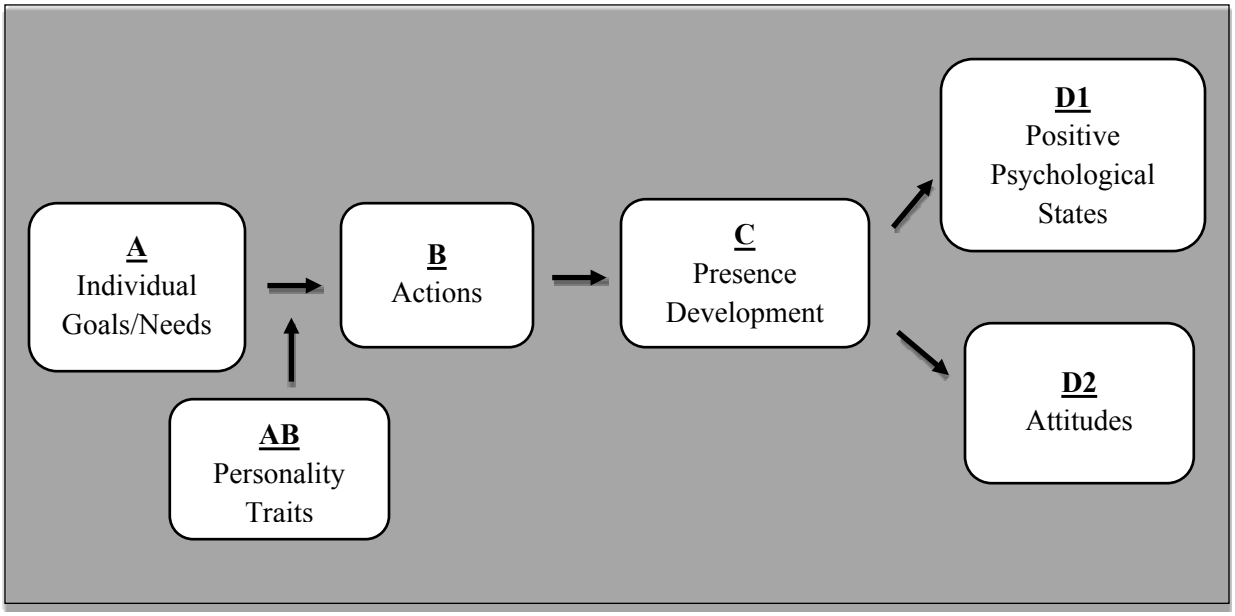
The relationship between perception and action is essential for determining which actions are supported; thus, the perception that students hold of their institution must play a key role in their receptivity for getting involved (Gonyea, 2006). In a university campus setting, co-curricular programming is able to foster these actions and psycho-social development for institutional attachment (Pascarella, Terenzini & Wolfe, 1986; Tinto, 1997). Students involved

on campus are found to develop a stronger, more meaningful attachment to their institution than those who are less involved (Edwards & Waters, 1982; Pascarella & Terenzini, 1991).

## Purpose and Significance

Although positive results in students are evident from becoming engaged on their university campus, little is known about the nature of the cognitive relationship between the two. This novel research utilizes the Gibsonian theory of presence when analyzing a student's psychosocial development from being engaged on their campus. The proposed flow of development is displayed in Figure 1, where presence mediates student actions and positive psychological states and attitudes:

Figure 1. *Proposed Campus Engagement and Presence Development Flowchart*




A. *Attend school to receive an education*
AB. *Big-Five personality traits that influence certain individual actions*
B. *Campus engagement (joining student organizations, attending events, etc.)*
C. *The Campus Presence Scale*
D1. *Self-Esteem, Self-Efficacy and optimism*
D2. *College Affiliation*

Actions in the flow chart depict the degree to which students are engaged and involved on campus. These actions are motivated by their individual goals and needs in their respective environment. Individual personality traits are factored into the chart, which prior research indicates can influence student tendencies for being engaged on campus (Bakker et al., 2015; Komarraju et al., 2009). The psychological state outcomes measured are student self-efficacy and self-esteem, and the attitudes are overall college affiliation and levels of optimism and pessimism.

## Hypothesis

The current study sought to find a link between the known positive outcomes that students develop by becoming engaged on their college campus. Based on prior research, it is hypothesized that the development of presence mediates behavioral and psychological norms for students in a university setting. In addition, prior research suggests that students who are actively engaged in campus activities will display higher levels of presence than those who are passively or non-engaged. It is proposed that the combination of these student actions and increased presence are the key predictors in developing positive psychological states (self-esteem and self-efficacy) and attitudes (college affiliation and optimism), and thus the establishment of a significant relationship to a place.

# CHAPTER 2: METHOD

## Procedures and Participants

The study was administered to students at the University of Central Florida (UCF) during the 2017 spring semester term. The data was collected through an online questionnaire created by Qualtrics and was distributed to students via the Sona research participation system and social media. This research study was submitted to the IRB for review and was determined exempt from regulation as human participant research (see Appendix I). Participation was voluntary, however some classes may have offered students credit for their respective course(s) in exchange for their time.

A total of 371 UCF students completed the study questionnaire, which took an average of 15 minutes to complete. A total of 86 participants were removed from the study because either they did not answer important questions or their responses indicated that they were not involved with the survey. The remaining 285 participants were utilized for analysis.

The majority of participants were female ($n$ = 207, 72.6%) and identified as white ($n$ = 171, 60.0%). The age of student participants ranged from 18 to 54 ($M$ = 20.7). Of these students, 41.9% ($n$ = 119) indicated that they were in their freshman year, 18.3% ($n$ = 52) were sophomores, 21.1% ($n$ = 60) were juniors, 17.3% ($n$ = 49) were seniors, and the remaining 1.4% ($n$ = 4) were graduate students.

## Measures

**Presence.** For the first measure, students were administered a Campus Presence Scale; an altered version of the renowned Witmer & Singer Presence Scale. The Campus Presence Scale consisted of nine questions and was scored using a 5-point Likert-type scale, which ranged from not at all (1) to completely (5). The questions were sorted by subgroups, which are believed to be influencing factors of presence development: sensory, distraction/isolation, and distraction/involvement (Witmer & Singer, 1998). Participants were asked to picture themselves on the UCF campus when reading each question before answering the items. The scale had a maximum presence level of 45, with participant scores ranging from 17 to 41 ($M = 30.8$). The Campus Presence Scale can be found in Appendix B.

**Self-Esteem.** For the second measure, participant self-esteem was assessed using the Rosenberg Self-Esteem Scale. This widely used scale measures overall self-worth by targeting both positive and negative feelings that oneself holds. The Rosenberg Self-Esteem Scale contains 10 items that are answered using a 4-point Likert scale, which ranges from strongly disagree to strongly agree (Rosenberg, 1965). The scale had a maximum self-esteem score of 30, with participant scores ranging from 5 to 30 ($M = 22.1$). The Rosenberg Self-Esteem Scale can be found in Appendix C.

**Collegiate Self-Efficacy.** The third scale measured self-efficacy of students within the campus environment by utilizing the College Self-Efficacy Inventory (CSEI). The CSEI contains 20 items that concerns student confidence levels in various aspects of college (Gore et al., 2005). The scale is measured in a 10-point Likert format, ranging from not at all confident (1) to extremely confident (10). Collegiate self-efficacy had a maximum possible score of 200, with

participants ranging from 21 to 200 ($M$ = 147.3). The College Self-Efficacy Inventory can be found in Appendix D.

**College Affiliation.** The fourth measure administered was The College Affiliation Questionnaire (CAQ), which examined the participant's personal views and attachment to their institution, as well as the overall significance of their college experience. The CAQ contained 13 questions that were scored using a 5-point Likert format, with options ranging from not at all like me to exactly like me (Crombag, 1968). Participant scores ranged from 0 to 52 ($M$ = 37.8). The College Affiliation Questionnaire can be found in Appendix E.

**Optimism/Pessimism.** The fifth scale used was the Revised Life Orientation Test (LOT-R), which measures general levels of optimism and pessimism one typically holds. The LOT-R has a total of 10 items, four of which are filler items that are not factored into the final score (Scheier et al., 1994). The remaining six items were scored using a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree), with a maximum score of 30 ($M$ = 20.9). The Revised Life Orientation Test can be found in Appendix F.

**Personality.** The sixth measurement was a 50-item Five-Factor Inventory, which examined personality traits in participants. This model tested individual tendencies for openness, conscientiousness, extraversion, agreeableness, and neuroticism (John, et al., 1991). Participants rated each statement according to how well it pertained to them using a 5-point Likert format that ranged from 1 (very inaccurate) to 5 (very accurate). Extraversion was scored out of 50 points ($M$ = 32.9), agreeableness out of 35 points ($M$ = 28.1), conscientiousness out of 45 points ($M$ = 34.7), neuroticism out of 50 points ($M$ = 25.4), and openness out of 55 points ($M$ = 41.5). The Five Factor Inventory can be found in Appendix G.

**Demographics.** The last set of items asked participants a series of 15 questions that measured their individual characteristics. A portion of the demographical questions asked was regarding personal characteristics, such as gender, age, race, and household income. Additional questions were asked that related to each individual's college experience, which included student's major, year, GPA, time spent on campus, and student organization involvement. A complete list of the demographical questions can be found in Appendix H.

## Data Analysis

After the online questionnaire closed, the data was exported into an Excel file where participant scores were calculated and organized by each subscale. A total of 86 participants were removed from the study due to their answers for infrequency questions, completion times, and for missing a question on the Campus Presence Scale. Missing data from other variables were minimal and filled using a method of mean substitution imputation (Kline, 2005). This involved replacing the missing values with the overall mean scores for the respective variable. The missing data was insignificant enough (<3%) where mean imputation would be a good representation of the data (Downey & King, 1998). The individual variable scores were also analyzed with and without the mean substitutions, which confirmed that there was no significant detectable distortion.

The total measurement scores were imported into SPSS for a series of analyses. Correlation analyses were performed to measure how presence level compares to each of the subscales (self-esteem, self-efficacy, college affiliation, optimism/pessimism, and participant

personalities). Independent t-tests and one-way ANOVAS were performed to compare presence to participant demographical data.

# CHAPTER 3: RESULTS

## Independent T-Tests of Demographic Measures

Different analyses were utilized in SPSS when comparing participant presence scores ($M$ = 30.8, $SD$ = 4.5) multiple types of variables. Independent t-tests were conducted to examine the relationships between campus presence and bivariate demographical questions. This analysis showed that students who lived on campus (51.2%) had significantly higher presence scores ($M$ = 31.73) than those who never lived on campus ($M$ = 29.77), $t(282) = 3.77$, $p < .001$.

Table 1. *Independent t-test for Presence and Living on Campus*

| Campus Residency | N | Mean | Std. Deviation | Std. Error |
|---|---|---|---|---|
| Lived on Campus | 147 | 31.73 | 4.520 | .373 |
| Never Lived on Campus | 137 | 29.77 | 4.255 | .364 |

In addition, students identified as FTIC (73.6%) displayed significantly higher presence ($M$ = 31.24) than transfer students ($M$ = 29.56), $t(282) = 2.81$, $p < .001$ (see Table 2). There was no significant relationship found with participant gender, race, year, age, and part-time/full-time enrollment status.

Table 2. *Independent t-test for Presence and TIC vs. Transfer Students*

| FTIC vs. Transfer Students | N | Mean | Std. Deviation | Std. Error |
|---|---|---|---|---|
| FTIC | 209 | 31.24 | 4.511 | .312 |
| Transfer | 75 | 29.56 | 4.281 | .494 |

## ANOVAs of Demographic Measures

One-way ANOVAs were conducted to examine the relationships between campus presence and demographic variables consisting of more than two categories. Post hoc tests using the Bonferroni correction were then used to compare the significance levels between each variable category. Results showed that the effect of presence and student organization involvement is significant $F(3,281) = 10.33$, $p < .001$. Post hoc tests revealed students that were involved with at least one campus organization (55%) had significantly higher presence ($M = 33.31$) than those who were not involved in any ($M = 29.41$), $p < .01$ (see Figure 2). Additionally, presence scores had a significant positive relationship with spending more time on campus, $F(3, 281) = 6.860$, $p < .001$. Significant correlations for time on campus categories with Post hoc results can be found in Figure 3. Furthermore, students that attended more campus events each semester had significantly higher presence scores, $F(4, 278) = 13.580$, $p < .001$. Significant correlations for categories on attending campus events with Post hoc results can be found in Figure 4.

## Correlations of Subscale Measures

Correlation analyses were performed for each of the study subscales. Each analysis exhibited significant positive correlations: self-esteem at $F(1, 283) = 6.156$, $p < .02$, $R^2 = .021$; college self-efficacy at $F(1, 283) = 25.029$, $p < .001$, $R^2 = .081$; college affiliation at $F(1, 283) = 67.607$, $p < .001$, $R^2 = .193$; optimism at $F(1, 283) = 7.504$, $p < .01$, $R^2 = .026$. The correlation results for presence and self-esteem, self-efficacy, college affiliation, and optimism/pessimism can be found in Table 3.

Table 3. *Correlations of Presence and Study Subscales*

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. Presence | 1 | .146* | .285** | .439** | .161** |
| 2. Self-Esteem | | 1 | .581** | .353** | .691** |
| 3. College Self-Efficacy | | | 1 | .446** | .470** |
| 4. College Affiliation | | | | 1 | .293** |
| 5. Optimism/Pessimism | . | | | | 1 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

In addition to the subscales, four of the Big Five personality traits showed significant positive correlations with presence scores: extraversion at $F(1, 283) = 6.165$, $p < .02$, $R^2 = .021$; agreeableness at $F(1, 283) = 15.050$, $p < .001$, $R^2 = .050$; conscientiousness at $F(1, 283) = 21.142$, $p < .001$, $R^2 = .070$; openness at $F(1, 283) = 4.486$, $p < .05$, $R^2 = .016$. Neuroticism was found to have a significant negative correlation, $F(1, 283) = 4.308$, $p < .05$, $R^2 = .015$. The correlation results for each personality variable can be found in Table 4.

Table 4. *Correlations of Presence and Personality Factors*

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Presence | 1 | .146* | .225** | .264** | -.122* | .125* |
| 2. Extraversion | | 1 | .387** | .309** | -.471** | .267** |
| 3. Agreeableness | | | 1 | .522** | -.419** | .387** |
| 4. Conscientiousness | | | | 1 | -.415** | .239** |
| 5. Neuroticism | | | | | 1 | -.164** |
| 6. Openness | | | | | | 1 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

# CHAPTER 4: DISCUSSION

## Developing a Relationship with a College Campus

The goal of this study was to find a link between student engagement on a college campus and the known overall positive outcomes the average involved student has. It was hypothesized that the theory of presence mediates behavioral actions and psychological norms that a student develops on their campus. Based on prior research, it was proposed that a combination of campus involvement and increased presence are the key predictors in developing positive outcomes in student self-esteem, self-efficacy, optimism, and overall college affiliation.

The majority of the results fell in line with the hypothesis of the study. Each of the subscale results came back significant, with college affiliation and self-efficacy displaying the strongest positive correlations. In addition, results for each of the Big Five personality traits exhibited low to moderate significant correlations, with conscientiousness displaying the strongest positive correlation, followed by agreeableness. Neuroticism was the only personality trait that showed a negative correlation.

A significant correlation was found between incoming student type (FTIC or Transfer) and presence development. This showed that first time in college students reported higher levels of presence than students who transferred from another institution. A significant correlation was also found between student residency and presence development. This relationship show that students who have lived on campus for at least one year reported higher presence scores than commuter students.

Also in line with the hypothesis, significant correlations were found between presence development and both joining student organizations and attending campus events. The results showed that students who attend campus events and students that are active members in a student organization reported higher presence scores. These findings were expected because taking action outside of the classroom allows students to perceive their campus in another capacity. In addition, ANOVAs conducted between these variables and the study subscales reported that both members of student organizations and those who attend campus events have significantly higher college affiliation scores ($p < .01$), higher college self-efficacy ($p < .01$), and were more extraverted ($p < .01$). The other study subscales and personality factors displayed no significant correlations.

Furthermore, engaged students are more likely to spend more time on campus each day to take part in their activities, which was also found to have a significant correlation with student presence. The number of days spent on campus each week, however, was insignificant. This is believed to be true because students who commute to campus four days a week for only class are likely to spend less time on campus than students who are commute three days a week for both class and to engage in their respective campus activities. ANOVAs conducted between time on campus and these variables confirmed this thought by showing that more time spent on campus is significantly correlated with both student organization membership ($p < .01$) and campus event attendance ($p < .01$).

## Limitations

There are a few limitations to the current study that should be addressed. The first is that the lack of equal representation of participants for each variable category may have interfered with the results. The second issue comes with the novelty of the study, in which a new measure had to be created. The Campus Presence Scale was made by altering properties from the Witmer & Signer Presence Scale, which was originally made to measure presence in virtual reality environments. Although each measurement shared the same presence factors, the difference in use may question the validity of the new scale. The last limitation to be addressed is that although the study findings were significant, the results from each type of analysis show no cause and effect relationship between presence and the tested variables.

## Future Research

It is first recommended that future researchers address the previously stated limitations. Research that utilizes this new Campus Presence Scale should conduct exploratory factor analyses to validate the scale for their respective study goals. Additionally, researchers can examine the cause and effect relationship between each variable by implementing structural equation modeling. It is also suggested that future research samples other institutions with different environments and affordances, such as a smaller campus size or a private institution. If the resources are available, researchers may want to conduct a longitudinal study to analyze how perceptions and attitudes towards campus change between the first year and the last year on campus.

## Conclusion

The current study analyzed the relationship between campus engagement and the known positive outcomes in students. The majority of the results aligned with the study hypothesis by displaying significant positive correlations between the Campus Presence Scale and the subscale measurements of self-esteem, college self-efficacy, college affiliation, and overall optimism. Findings also supported the hypothesis by exhibiting significant positive correlations between presence and campus engagement variables.

This literature previously discussed Gibson's take on perception and how the process is intimately related to the environment in which one is immersed. Presence was defined as the subjective experience of being in a place and occurs when the environment affords purposeful action. It is believed that presence occurs when goals of an individual are achieved by the use of these affordances. Results of the current study displayed significant positive correlations between campus engagement, presence, and college self-efficacy. These findings help make sense of the previous statement by showing students who take part in meaningful action through campus events and organizations have higher college self-efficacy. This supports Gibson's view by showing those students who believe in their ability to accomplish more goals and tasks end up spending more time on campus engaged in purposeful activities, and thus are overall more present.

The theory of planned behavior links attitudes that one holds to the behaviors that one engages in. Attitudes analyzed in the study were examined by measuring college affiliation, which was also significantly higher with increased behaviors of student engagement. According to the perception/action cycle model, this campus engagement behavior is supported by how

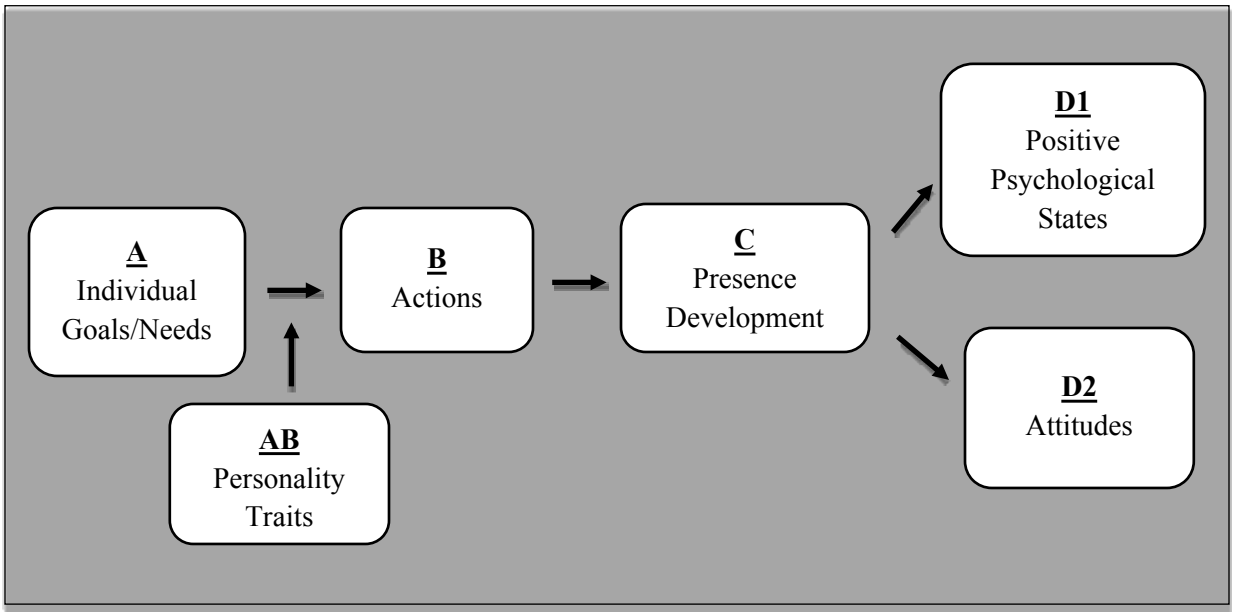
each student perceives their environment (college affiliation), and that each purposeful behavior on campus feeds back into the perception of their institutional norms.

The main takeaway from this study is that there may in fact be a measureable cognitive process that establishes how present a student is on their college campus. Findings from the study revealed that involvement in student organizations and attending campus events shared significant correlations with presence and positive outcomes in college affiliation, college self-efficacy, and extraversion. The collective relationships between these results show possible merit in support of the original proposed flow of development (see Figure 1). It is also possible that this development may occur through an integration of the planned behavior theory and perception/action cycle.

In close, this study leaves with the notion that perception of a place can be transformed by engaging in purposeful actions that the environment affords. It is hoped that the significant results from this study encourage future research to further examine this topic by assessing the cause and effect relationship between perception and engagement variables.

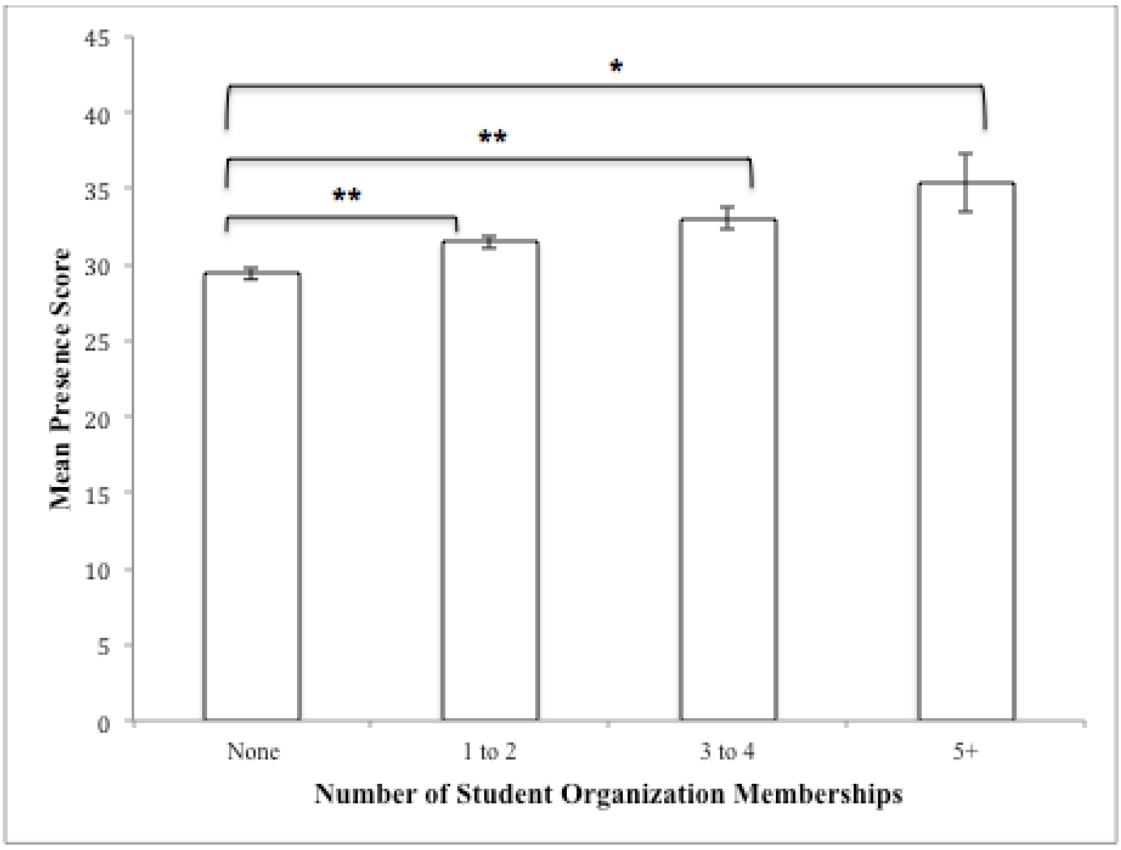
# APPENDIX A: FIGURES AND TABLES

Figure 1. *Proposed Campus Engagement and Presence Development Flow Chart*




A. *Attend school to receive an education*
AB. *Big-Five personality traits that influence certain individual actions*
B. *Campus engagement (joining student organizations, attending events, etc.)*
C. *The Campus Presence Scale*
D1. *Self-Esteem and Self-Efficacy*
D2. *College Affiliation and Optimism/Pessimism*

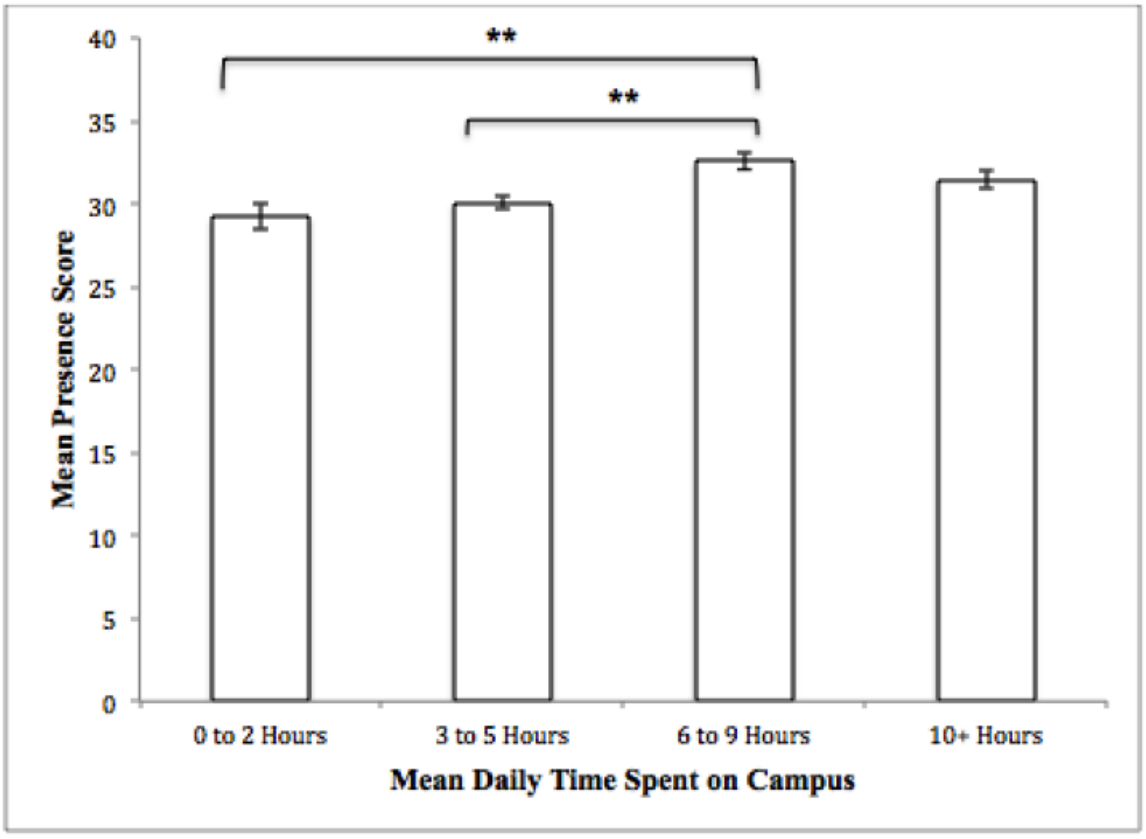
Figure 2. *Student Organization Membership and Mean Presence Scores*




*. Correlation is significant at the 0.05 level (2-tailed).

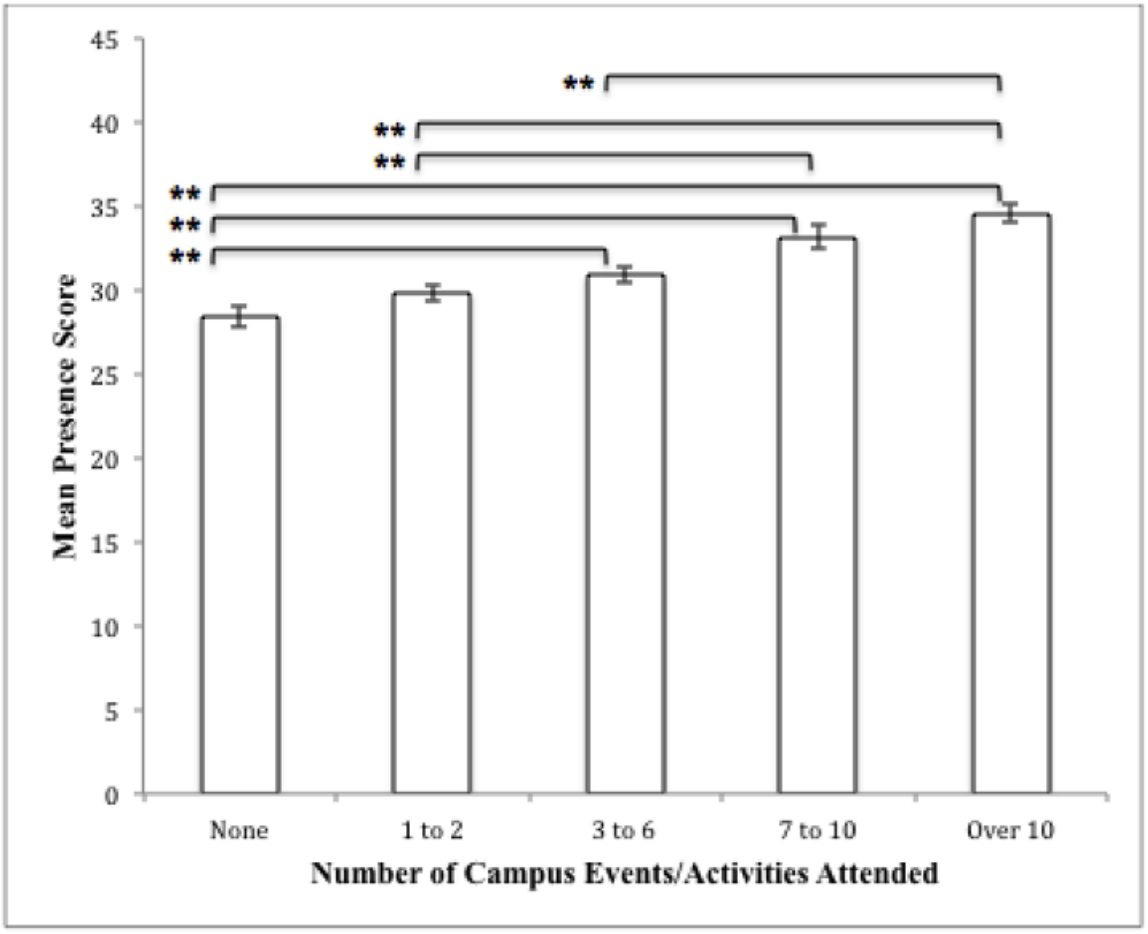
**. Correlation is significant at the 0.01 level (2-tailed).

Figure 3. *Time Spent on Campus and Mean Presence Scores*




**. Correlation is significant at the 0.01 level (2-tailed).

Figure 4. *Attending Campus Events and Mean Presence Scores*




**. Correlation is significant at the 0.01 level (2-tailed).

Table 1. *Independent t-test for Presence and Living on Campus*

| Campus Residency | N | Mean | Std. Deviation | Std. Error |
|---|---|---|---|---|
| Lived on Campus | 147 | 31.73 | 4.520 | .373 |
| Never Lived on Campus | 137 | 29.77 | 4.255 | .364 |

Table 2. *Independent t-test for Presence and FTIC vs. Transfer Students*

| FTIC vs. Transfer Students | N | Mean | Std. Deviation | Std. Error |
|---|---|---|---|---|
| FTIC | 209 | 31.24 | 4.511 | .312 |
| Transfer | 75 | 29.56 | 4.281 | .494 |

Table 3. *Correlations of Presence and Study Subscales*

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. Presence | 1 | .146* | .285** | .439** | .161** |
| 2. Self-Esteem | | 1 | .581** | .353** | .691** |
| 3. College Self-Efficacy | | | 1 | .446** | .470** |
| 4. College Affiliation | | | | 1 | .293** |
| 5. Optimism/Pessimism | . | | | | 1 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4. Correlations of Presence and Personality Factors

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Presence | 1 | .146* | .225** | .264** | -.122* | .125* |
| 2. Extraversion | | 1 | .387** | .309** | -.471** | .267** |
| 3. Agreeableness | | | 1 | .522** | -.419** | .387** |
| 4. Conscientiousness | | | | 1 | -.415** | .239** |
| 5. Neuroticism | | | | | 1 | -.164** |
| 6. Openness | | | | | | 1 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

# APPENDIX B: CAMPUS PRESENCE SCALE

**Instructions:** When answering the questions below, think about how you feel on a typical day attending classes on the UCF campus.

**(Not at all) 1 2 3 4 5 (Completely)**

1. How completely were all of your senses engaged on campus at UCF?
2. How much did the visual aspects of the campus environment engage you?
3. How much did the auditory aspects of the campus environment engage you?
4. How much did you think about events happening off-campus?
5. How aware were you that you were on the UCF campus?
6. How aware were you that you were in the city of Orlando?
7. How involved were you in the experience?
8. How well could you concentrate on the activities or events taking place at UCF?
9. Were you involved in the activities to the extent that you lost track of time?

*Items 1-3: Sensory subscale*

*Items 4-6: Distraction/isolation subscale*

*Items 7-9: Distraction/involvement subscale*

*Negative scoring items: 4, 6.*

# APPENDIX C: ROSENBERG SELF-ESTEEM SCALE

**Instructions:** Please read the following statements and rate how they pertain to you.

**Strongly Agree Agree Disagree Strongly Disagree**

1. I feel that I am a person of worth, at least on an equal plane with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself.
9. I certainly feel useless at times.
10. At times I think I am no good at all.

*For items 1, 2, 4, 6, and 7:*

Strongly agree = 3

Agree = 2

Disagree = 1

Strongly disagree = 0

*For items 3, 5, 8, 9, and 10 (revered in valence):*

Strongly agree = 0

Agree = 1

Disagree = 2

Strongly disagree = 3

The scale ranges from 0-30. Scores between 15 and 25 are within normal range; scores below 15 suggest low self-esteem.

# APPENDIX D: COLLEGE SELF-EFFICACY INVENTORY (CSEI)

**Instructions:** The following 20 items concern your confidence in various aspects of college. Using the scale below, please indicate how confident you are as a student at UCF that you could successfully complete the following tasks. Levels of confidence vary and there are no right or wrong answers; just answer honestly.

**(Not at all confident) 1 2 3 4 5 6 7 8 9 10 (Extremely confident)**

1. Make new friends at UCF.
2. Divide chores with others you live with.
3. Talk to UCF staff.
4. Manage time effectively at UCF.
5. Ask a question in class.
6. Participate in class discussions.
7. Get a date when you want one.
8. Research a term paper.
9. Do well on your exams.
10. Join a student organization at UCF.
11. Talk to your professors.
12. Join an intramural sports team.
13. Ask a professor a question.
14. Take good class notes.
15. Get along with others you live with.
16. Divide space in your residence.
17. Understand your textbooks.
18. Keep up to date with your schoolwork.
19. Write course papers.
20. Socialize with others you live with.

**Scoring:** Each item scale is added together and totaled for a maximum score of 200.

# APPENDIX E: COLLEGE AFFILIATION QUESTIONNAIRE (CAQ)

**Instructions:** Read each statement carefully and decide which response best applies to you.

**A = Not at all like me, B = A little like me, C = Like me, D = Very much like me, E = Exactly like me**

1. It is important for me to get a degree from UCF.
2. I am confident I have made the right decision in choosing to attend UCF.
3. My close friends rate UCF as a quality institution.
4. I have performed academically as well as I anticipated I would at UCF.
5. I am satisfied with my course curriculum here at UCF.
6. My education at UCF will help me secure future employment.
7. I am satisfied with the amount of financial support (grants, loans, family, jobs) I have received while attending UCF.
8. I am satisfied with my academic experience.
9. It is very important for me to graduate from UCF as opposed to graduating from some other school.
10. Since coming to UCF I have developed close personal relationships with other students.
11. It is important for me to finish my program of study.
12. It has been easy for me to meet and make friends with other students at UCF.
13. I feel I belong at UCF.

**Scoring:** Each item scale is added for a total maximum score of 52. Items consist of the following college affiliation subscales:

a. *Institutional Commitment (Items 1, 2, 3, 6, 9, and 11)*
b. *Social Adjustment (Items 10 and 12)*
c. *Academic Adjustment (Items 4, 5, and 8)*
d. *College Adjustment (Items 1, 2, 3, 4, 5, 6, 8, 9, and 11)*

# APPENDIX F: REVISED LIFE ORIENTATION TEST (LOT-R)

**Instructions:** Please answer the following questions about yourself by indicating the extent of your agreement. Be as honest as you can throughout, and try not to let your responses to one question influence your response to other questions. There are no right or wrong answers.

**(0 = Strongly disagree, 1 = Disagree, 2 = Neutral, 3 = Agree, 4 = Strongly agree)**

1. (___) In uncertain times, I usually expect the best.
2. (___) It's easy for me to relax.
3. (___) If something can go wrong for me, it will.
4. (___) I'm always optimistic about my future.
5. (___) I enjoy my friends a lot.
6. (___) It's important for me to keep busy.
7. (___) I hardly ever expect things to go my way.
8. (___) I don't get upset too easily.
9. (___) I rarely count on good things happening to me.
10. (___) Overall, I expect more good things to happen to me than bad.

**Scoring:**

1. Reverse code items 3, 7, and 9 prior to scoring (0=4) (1=3) (2=2) (3=1) (4=0).
2. Sum items 1, 3, 4, 7, 9 and 10 to obtain an overall score.

*Note:* Items 2, 5, 6, and 8 are filler items. They are not scored as part of the revised scale.

# APPENDIX G: FIVE-FACTOR INVENTORY

**Instructions:** Rate each statement according to how well it describes you. Base your rating on how you really are, not how you would like to be.

**1 = Very Inaccurate, 2 = Inaccurate, 3 =Neutral, 4 = Accurate, 5 = Very Accurate**

1. I often feel blue.
2. I feel comfortable around people.
3. I believe in the importance of art.
4. I have a good word for everyone.
5. I am often down in the dumps.
6. I make friends easily.
7. I tend to vote for liberal political candidates.
8. I believe that others have good intentions.
9. I am always prepared.
10. I dislike myself.
11. I don't talk a lot.
12. I have a vivid imagination.
13. I make people feel at ease.
14. I pay attention to details.
15. I have frequent mood swings.
16. I am skilled in handling social situations.
17. I carry the conversation to a higher level.
18. I respect others.

19. I get chores done right away.

20. I panic easily.

21. I am the life of the party.

22. I enjoy hearing new ideas.

23. I accept people as they are.

24. I carry out my plans.

25. I rarely get irritated.

26. I know how to captivate people.

27. I am not interested in abstract ideas.

28. I have a sharp tongue.

29. I make plans and stick to them.

30. I seldom feel blue.

31. I have little to say.

32. I do not like art.

33. I cut others to pieces.

34. I waste my time.

35. I feel comfortable with myself.

36. I keep in the background.

37. I avoid philosophical discussions.

38. I suspect hidden motives in others.

39. I find it difficult to get down to work.

40. I am not easily bothered by things.

41. I would describe my experiences as somewhat dull.

42. I do not enjoy going to art museums.

43. I get back at others.

44. I do just enough work to get by.

45. I am very pleased with myself.

46. I will select neutral for this

47. I don't like to draw attention to myself.

48. I tend to vote for conservative political candidates.

49. I insult people.

50. I don't see things through.

51. I shirk my duties.

**Scale scoring ("R" denotes reverse-scored items):**

*Extraversion:* 2 + 6 + 11R + 16 + 17 + 21 + 26 + 31R + 36R + 46R

*Agreeableness:* 4 + 8 + 13 + 18 + 23 + 43R + 48R

*Conscientiousness:* 9 + 14 + 19 + 24 + 29 + 34R + 39R + 44R + 50R

*Neuroticism:* 1 + 5 + 10 + 15 + 20 + 25R + 35R + 38 + 40R + 45R

*Openness:* 3 + 7 + 12 + 22 + 27R + 32R + 37R + 41R + 42R + 47R + 49R

**Note:** Items 28, 30, 33, and 46 were not factored into the final scores

# APPENDIX H: DEMOGRAPHIC QUESTIONNAIRE

**Instructions:** Please answer the following anonymous demographical questions.

1. What gender do you identify as?
    a) Male
    b) Female
    c) Other: _____

2. What is your age? _____

3. What year are you in?
    a. Freshman
    b. Sophomore
    c. Junior
    d. Senior
    e. Graduate Student

4. What is your major? _____

5. What is your household income range?
    a. Less than $24,999
    b. $25,000 to $49,999
    c. $50,000 to $99,999
    d. Over $100,000

6. What is your race?
    a. American Indian or Alaskan native
    b. Asian or Pacific Islander
    c. Black/African American
    d. Hispanic/Latino
    e. White/Caucasian
    f. Other _____

7. Are you a traditional or transfer student?
    a. Traditional
    b. Transfer

8. Are you considered a part-time or full-time student?
    a. Part-time
    b. Full-time

9. What is your overall GPA? _____

10. Have you lived on campus?
    a. Yes (If yes → How many years? _____)
    b. No

11. How many UCF events or activities do you attend each semester?
    a. 0-2
    b. 3-6
    c. 7-10
    d. 11+

12. How many days per week are you on campus?
    a. 0
    b. 1
    c. 2
    d. 3
    e. 4
    f. 5+

13. On average, how much time do you spend on a typical day?
    a. 0 to 2 hours
    b. 3 to 5 hours
    c. 6 to 9 hours
    d. Over 10 hours

14. How many student organizations are you an active member of?
    a. None
    b. 1 to 2
    c. 3 to 4
    d. 5+

15. Are you employed?
    a. Yes (If yes → Where are you employed? → How many hours a week do you work?)
    b. No

# APPENDIX I: IRB OUTCOME LETTER

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

# Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
**FWA00000351, IRB00001138**

To: **Daniel S. McConnell** and Co-PI: **Daniel Martin Kleiman**

Date: **January 17, 2017**

Dear Researcher:

On 01/17/2017, the IRB approved the following activity as human participant research that is exempt from regulation:

| | |
|---|---|
| Type of Review: | Exempt Determination |
| Project Title: | Presence as a Mediator with Campus Engagement Outcomes in Higher Education Students |
| Investigator: | Daniel S. McConnell |
| IRB Number: | SBE-16-12774 |
| Funding Agency: | |
| Grant Title: | |
| Research ID: | N/A |

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Kanille Chay

IRB Coordinator

# REFERENCES


Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39). Springer Berlin Heidelberg.

Bakker, A. B., Vergel, A. I. S., & Kuntze, J. (2015). Student engagement and performance: A weekly diary study on the role of openness. *Motivation and Emotion*, *39*(1), 49-62.

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, *84*(2), 191.

Bergen-Cico, D., & Bylander, J. (2011). Student well-being and psychosocial development.

Bergen-Cico, D., & Viscomi, J. (2012). Exploring the association between campus co-curricular involvement and academic achievement. *Journal of college student retention: Research, theory & practice*, *14*(3), 329-343.

Bowman, N., Brandenberger, J., Lapsley, D., Hill, P., & Quaranto, J. (2010). Serving in College, Flourishing in Adulthood: Does Community Engagement During the College Years Predict Adult Well-Being?. *Applied Psychology: Health and Well-Being*, *2*(1), 14-34.

Crombag, H. F. M. (1968). *Studiemotivatie en studieattitude* (No. 4). Wolters-Noordhoff.

Downey, R. G., & King, C. V. (1998). Missing data in Likert ratings: A comparison of replacement methods. *The Journal of general psychology*,*125*(2), 175-191.

Drew-Branch, V. L. (2011). *Student Engagement, Alumni Satisfaction, and Alumni Donations at a Public Four Year Institution: An Analysis of How the Undergraduate Experience Influences Alumni Donations*. ProQuest LLC. 789 East Eisenhower Parkway, PO Box 1346, Ann Arbor, MI 48106.

Edwards, J. E., & Waters, L. K. (1982). Involvement, ability, performance, and satisfaction as predictors of college attrition. *Educational and Psychological Measurement*, *42*(4), 1149-1152.

Fontaine, G. (1992). The experience of a sense of presence in intercultural and international encounters. *Presence: Teleoperators & Virtual Environments*, *1*(4), 482-490.

Gibson, E. J. (1969). Principles of perceptual learning and development.

Gibson, J. (1986). The Ecological Approach to Visual Perception (Earlbaum.*Hillsdale, NJ*.

Gonyea, R. M. (2006, May). The relationship between student engagement and selected desirable outcomes in the first year of college. In *46th Annual Association for Institution Research Forum Chicago may*.

Gore Jr, P. A., Leuwerke, W. C., & Turley, S. E. (2005). A psychometric study of the College Self-Efficacy Inventory. *Journal of College Student Retention: Research, Theory & Practice*, *7*(3), 227-244.

Gunuc, S., & Kuzu, A. (2015). Student engagement scale: development, reliability and validity. *Assessment & Evaluation in Higher Education*, *40*(4), 587-610.

John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The big five inventory—versions 4a and 54.

Kline, R. B. (2005). Principles and Practice of Structural Equation Modeling (Guilford, New York).

Komarraju, M., Karau, S. J., & Schmeck, R. R. (2009). Role of the Big Five personality traits in predicting college students' academic motivation and achievement. *Learning and individual differences*, *19*(1), 47-52.

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.

McAlexander, J. H., & Koenig, H. F. (2001). University experiences, the student-college relationship, and alumni support. *Journal of Marketing for Higher Education*, *10*(3), 21-44.

McClenney, K., Marti, C. N., & Adkins, C. (2012). Student Engagement and Student Outcomes: Key Findings from. *Community College Survey of Student Engagement*.

McConnell, D.S. & Fiore, S.M. (2017). A Place for J.J. Gibson. In B. Janz (Ed.), *Place, Space and Hermeutics*, Springer International Publishing.

Moore, M. R., Gibson, E. J., Piaget, J., & Seagrim, G. N. (1971). Principles of Perceptual Learning and Development.

Pascarella, E., Terenzini, P., & Wolfe, L. (1986). Orientation to college as anticipatory socialization: Indirect effects on freshman year persistence.*Journal of Higher Education*, *57*, 155-175.

Terenzini, P. T., & Pascarella, E. T. (1991). Twenty years of research on college students: Lessons for future research. *Research in Higher Education*,*32*(1), 83-92.

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): a reevaluation of the Life Orientation Test. *Journal of personality and social psychology*, *67*(6), 1063.

Slater, M. (1999). Measuring presence: A response to the Witmer and Singer presence questionnaire. *Presence: Teleoperators and Virtual Environments*,*8*(5), 560-565.

Solberg, V. S., OíBrien, K., Villareal, P., Kennel, R., & Davis, B. (1993). Self-efficacy and Hispanic college students: Validation of the College Self-Efficacy Instrument. Hispanic Journal of Behavioral Sciences, 15, 80-95.

Sulea, C., Van Beek, I., Sarbescu, P., Virga, D., & Schaufeli, W. B. (2015). Engagement, boredom, and burnout among students: Basic need satisfaction matters more than personality traits. *Learning and Individual Differences*, *42*, 132-138.

Strayhorn, T. L. (2008). How college students' engagement affects personal and social learning outcomes. *Journal of College and Character*, *10*(2).

Terenzini, P. T., & Pascarella, E. T. (1991). Twenty years of research on college students: Lessons for future research. *Research in Higher Education*,*32*(1), 83-92.

Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *Journal of higher education*, 599-623.

Webber, K. L., Krylow, R. B., & Zhang, Q. (2013). Does involvement really matter? Indicators of college student success and satisfaction. *Journal of College Student Development*, *54*(6), 591-611.

Witmer, B. G., & Singer, M. J. (1998). Measuring presence in virtual environments: A presence questionnaire. *Presence: Teleoperators and virtual environments*, *7*(3), 225-240.

Yorke, M. (2016). The development and initial use of a survey of student 'belongingness', engagement and self-confidence in UK higher education.*Assessment & Evaluation in Higher Education*, *41*(1), 154-166.

Zahorik, P., & Jenison, R. L. (1998). Presence as being-in-the-world.*Presence*, *7*(1), 78-89.