University of Northern Iowa

UNI ScholarWorks

2018

Student engagement in higher education: Measuring the differences in community engagement

Stanley S. Ebede
University of Northern Iowa

Let us know how access to this document benefits you

STUDENT ENGAGEMENT IN HIGHER EDUCATION: MEASURING THE

DIFFERENCES IN COMMUNITY ENGAGEMENT

An Abstract of a Dissertation

Submitted

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

Approved:

_____

Dr. Julianne Gassman, Committee Chair

_____

Dr. Jennifer J. Waldron, Dean, Graduate College

Stanley S. Ebede

University of Northern Iowa

December, 2018

ABSTRACT

In U.S. education system, the growing gap in the engagement of various groups and types of students is wider than ever (Darling-Hammond, 2015). Therefore, there is a need to bridge the gap in engagement by ensuring that either personal or social circumstances such as gender, student status, ethnic groups etc. are not obstacles to achieving educational potential in higher education (Williams & Whiting, 2016; Greene, Marti, & McClenney, 2008; McClenney & Marti, 2006). Using both longitudinal and cross-sectional perspectives advocated by Fuller, Wilson and Tobin (2011); Gordon, Ludlum, and Hoey (2008); and Astin and Lee (2003), this study examined students' level of engagement during their freshman year and senior year to understand the changes in engagement over time. This study further examined the difference in student engagement comparing male and female students, white and non-white students, international and domestic students, traditional and nontraditional students, first-generation and non-first-generation students, and academic majors by college (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences).

The difference in student engagement was studied using data from 2013 to 2016 administration of the National Survey of Student Engagement (NSSE) survey in a comprehensive Midwestern university. This study adopted two of Kuh's (2008) high-impact practices (community-based learning and diversity experiences) and one of NSSE's benchmarks of effective educational practices (student-faculty interaction) which served as the measures of student of engagement. These measures provided a

representation of the dimensions of students' experiences in association with engagement.

Ninety-seven students participated in the longitudinal aspect of this study and 4,773 students participated in the cross-sectional study. The findings of the longitudinal perspective of this study highlight the importance of ensuring that there is no decline in the engagement of students in educational activities from admission through graduation. Furthermore, the findings of the cross-sectional perspective provide insight into the extent to which different types of students are engaged in colleges and universities. Holistically, the findings of this study illuminate the need to bridge the gap in engagement. Findings could be used to improve the engagement and overall satisfaction of students in higher education.

STUDENT ENGAGEMENT IN HIGHER EDUCATION: MEASURING THE

DIFFERENCES IN COMMUNITY ENGAGEMENT

A Dissertation

Submitted

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

Approved:

_____

Dr. Julianne Gassman, Chair

_____

Dr. Robin Lund, Committee Member

_____

Dr. Michele Devlin, Committee Member

_____

Dr. Shuaib Meacham, Committee Member

_____

Dr. Kristin Moser, Committee Member

Stanley S. Ebede

University of Northern Iowa

December, 2018

DEDICATION

This research study is dedicated to the Almighty God, the author and finisher of

my faith. He has granted me the wisdom and perseverance through my doctoral

coursework and dissertation process:

> Therefore, since we are surrounded by so great a cloud of witnesses, let us also
> lay aside every weight, and sin which clings so closely, and let us run with
> endurance the race that is set before us, looking to Jesus, the founder of our faith,
> who for the joy that was set before him endured the cross, despising the shame,
> and is seated at the right hand of the throne of God (Hebrews 12:1-2).

ACKNOWLEDGEMENTS

I would like to give special thanks and appreciation to my dissertation committee. To my chair, Dr. Julianne Gassman, thank you for guiding and supporting my enthusiasm and intellectual curiosity in student engagement, community engagement and student development by helping me view these content areas from multiple perspectives. My sincere appreciation goes to my members, Dr. Robin Lund, for his expertise and knowledge in statistics, Dr. Michele Devlin, for her invaluable and positive thought-provoking inputs, Dr. Meacham Shuaib, for his encouragement and suggestions, and Dr. Kristen Moser, for her editing expertise and also sharing the institutional data with me.

This journey would not have been possible without the support of my family. I am most grateful to my parents, Charity Ebede and Samuel Ebede, for their unconditional love and always supporting my decisions, inspiring me to follow my dreams and encouraging me in all of my pursuits. To my siblings, Adaeze Ebede, Kingsley Ebede, Desmond Ebede, Ebuka Ebede, and Chisom Ebede, thank you all for your moral support, encouragement, personal attention, care, and unconditional love.

I express my gratitude to my supervisor Dr. Gaetane Jean-Marie, Dean of the College of Education for her tremendous support and kind advice. To my amazing students, "Teach Waterloo Fellows", thank you for your unconditional support that encouraged and challenged me in many positive ways.

To my irreplaceable network of generous and loving friends, Urias Bai Tombekai, Chukwuma Nwaka, Butch Zelinsky, Tony Wilson, James Eziashi, Jude Ephraim, Samuel

Ebelenna, Ursula Holmes and Kiri Holmes, thank you all for always being there for me through thick and thin.

Finally, I would like to thank my professional colleagues, Marie Adebiyi, Brian Hadley, Joyce Levingston, Michelle Cook, Kristina Kofoot, Carole Edginton, Younis Al-Hassan, Dongyub Bak, Dr. Christen Opsal, Karen Peterson, Karen Phillips, Brenda Briesner and Holly Boehmer for their advice and support throughout this entire process. To my mentors, Dr. Dwight Watson and Dr. Christopher Edginton, thank you for your technical advice and untiring mentorship.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Student engagement in higher education embraces an assemblage of high-impact practices that focus on teaching, learning, development, and engagement of students (Bernardo, Butcher, & Howard, 2012; Butin, 2010; Govil, 2017; Kezar, Chambers, & Burkhardt, 2015; Kuh, 2008). High-impact practices including community-based learning, diversity/global learning, interactions between faculty and students etc. take different forms depending on institutional priorities and contexts (Kuh, 2008). Explaining the meaning and importance of student engagement is crucial because it creates opportunities for effective educational practices (Kuh, 2001). Due to numerous definitions of student engagement in higher education, this study adopts the National Survey of Student Engagement (NSSE) definition. NSSE defined student engagement as the amount of time and efforts students devote to educational activities. In addition, student engagement represents how academic institutions structure their curriculum and learning opportunities to get students to participate in educational activities (NSSE, 2018).

Some of the benefits of student engagement include participation in educational opportunities that promote student thinking, improve self-confidence and expose students to diversity and inclusion (Morgan, 2001). Kuh (2008) noted that "engagement increases the odds that any student-educational and social background notwithstanding-will attain his or her educational objectives, acquire the skills and competencies demanded by the challenges of the twenty-first century" (p.22). Student engagement focuses on enhancing

effective active and collaborative learning and also improving the level of academic effort (Robinson & Hullinger, 2008). According to Appleton, Christenson, and Furlong (2008), educators view student engagement as an important avenue to involve students in academic and social activities. Student engagement creates opportunities for instilling active learning activities that go beyond the traditional classroom activities as well as providing opportunities for students to engage in common academic activities (Zhao & Kuh, 2004). Student engagement involves learning that actively involves students in a wide range of quality experiences that provide benefits to the academic institution and the community (Parker-Gwin & Mabry, 1998; Butin, 2010; Pike, Kuh & McCormick, 2011). Furthermore, student engagement enhances students' learning by strengthening opportunities for academically-grounded community engagement (Parker-Gwin & Mabry, 1998; Gallini & Moely, 2003).

Community engagement is an important component of student engagement (Kuh, 2008; Gallini & Moely, 2003). There is no widely accepted definition of community engagement as the meaning can vary in different contexts. The term "community engagement" is often used interchangeably with a number of other concepts such as community participation, community collaboration, community service, community-based learning, community empowerment etc. (Moore, McDonald, McHugh-Dillon, & West, 2016). In this context, particular emphasis was given to participation in community-based learning through the integration of community engagement in students' academic courses. Community engagement in this setting involves forming a partnership between community members and academic institutions to identify and address specific

needs of the community as well as ensuring that students gain meaningful experience from the engagement (Shalowitz et al., 2009). Community engagement should be acknowledged and implemented to engage students in community-based and/or service activities that enhance students' educational outcomes (Kahu, 2013; Patterson, 2012; Ewell, 2010; Pascarella & Terenzini, 2005).

Community engagement is one of the educational pedagogies that involves a dyadic pairing (e.g. faculty/student, faculty/community agency, student/community agency) to analyze complex problems. This relates to outcomes such as learning, community outcomes and student satisfaction (Bringle, Clayton, & Price, 2012). Community engagement provides an opportunity for students, faculty and community agencies to benefit from each other through a mutualistic interaction. Community engagement has been found to enhance engagement of students within the university and with the community outside of the university (Pike, Kuh, & McCormick, 2011). Table 1 illustrates different ways community engagement can be beneficial for students, faculty, academic institutions and communities.

Table 1

Benefits of Community Engagement

Classification	Community Engagement Benefits
Student	Improves students' ability to apply what they have learned in "the real world"
	Greater interpersonal development, particularly the ability to work well with others, and build leadership and communication skills
	Reduces stereotypes and improves greater inter-cultural understanding
	Connections with professionals and community members for learning and career opportunities
Faculty	Satisfaction with the quality of student learning
	Providing networking opportunities with engaged faculty in other disciplines or institutions
College and University	Improves institutional commitment to the curriculum and student retention
	Enhances community relations
Community	Valuable human resources needed to achieve community goals
	Enhances community-university relations

Source: Bandy, J. (2015). What is service-learning or community engagement? *Center for Teaching, Vanderbilt University*.

Conclusively, the subsequent chapter will highlight the concepts of student engagement; community engagement as a key aspect of student engagement; and elements of student engagement including student-faculty interaction and diversity experiences. This chapter includes the following topics of discussion: (i) statement of the problem, (ii) purpose of the study, (iii) research questions, (iv) null hypothesis, (v) conceptual framework, (vi) significance of the study, (vii) delimitations, (viii) limitations, (ix) assumptions and (x) definitions of relevant terms.

<div align="center">Statement of the Problem</div>

The growing gap in the engagement of various groups of students is wider than ever. Therefore, there is a need to bridge the gap in engagement by ensuring that either personal or social circumstances such as gender, student status, ethnic groups etc. are not obstacles to achieving educational potential in higher education (Williams & Whiting, 2016; Gallop, 2014; Greene et al., 2008; McClenney & Marti, 2006). Although the impact of student engagement on the educational experience of students has been extensively studied, the difference in student engagement comparing different demographic characteristics of students has been minimally studied (Wyatt, 2011; Kuh et al., 2008). To better understand the indicators of students' success in higher education, more must be discovered regarding how demographic characteristics such as gender, race/ethnicity etc. interact with the engagement of students (Kuh et al., 2008).

In addition, most studies that looked at student engagement in higher education focused on examining the differences in engagement among population groups at a single point in time. There is also a need to investigate the difference in students' level of

engagement during their freshman year and senior year in order to examine and understand the changes in their engagement over time. Prior researchers have advocated for the use of longitudinal data in predicting outcomes and examining the differences in engagement (Fuller et al., 2011; Astin & Lee 2003; Gordon et al., 2008; Kuh et al., 2008). Development of a longitudinal perspective requires a strong commitment to effective data management (Fuller et al., 2011, p. 736). In addition, Astin and Lee (2003) suggest that longitudinal models "provide a basis for learning how much students actually change after entering college, a kind of information that comes much closer to assessing institutional quality or effectiveness than a one-shot cross-sectional assessment" (p.670). Holistically, employing both longitudinal and cross-sectional research designs will probe the conditions or merits of the effective use of both designs in research and assessment.

<u>Purpose of the Study</u>

Using both longitudinal and cross-sectional perspectives advocated by previous researchers, this study examined students' level of engagement during their freshman year and senior year to understand the changes in engagement over time. Furthermore, this study examined the difference in student engagement comparing male and female students, white and non-white students' international and domestic students, traditional and nontraditional students, first-generation and non-first-generation students, and academic majors by college (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences).

<u>Research Questions</u>

The research questions that were addressed in this study are:

1. Is there a difference in student engagement specifically comparing students' high-impact community-based learning, student-faculty interaction and diversity experiences during their freshman and senior year?

2. Is there a difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between male and female students?

3. Is there a difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between white and non-white students?

4. Is there a difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between international and domestic students?

5. Is there a difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between traditional and non-traditional students?

6. Is there a difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between first-generation and non-first-generation students?

7. Is there a difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences

between academic majors by college (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences)?

Hypothesis

The following are the null hypotheses that were used in this study:

1. There is no significant difference in student engagement specifically comparing students' high-impact community-based learning, student-faculty interaction and diversity experiences during their freshman and senior year.

2. There is no significant difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between male and female students.

3. There is no significant difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between white students and non-white students.

4. There is no significant difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between international and domestic students.

5. There is no significant difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between traditional and non-traditional students.

6. There is no significant difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between first-generation and non-first-generation students.

7. There is no significant difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between academic majors by college (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences)?

<div align="center">Theoretical and Conceptual Frameworks</div>

This study used two frameworks which include: (a) Astin's (1984) theory of student involvement and (b) Bringle, Games, and Malloy's (1999) conceptual framework for community engagement. These two frameworks were further discussed.

Astin's Theoretical Framework of Involvement

Astin's Input-Environment-Output (I-E-0) theory of involvement was used as the theoretical framework for this study. Student-engagement theory had its origin from Astin's Input-Environment-Output (I-E-0) theory of involvement (Pike & Kuh, 2005a). Although Astin used a different terminology to describe his concept of student engagement, he had a powerful perception that students learn and develop from being engaged in colleges and universities (Pike & Kuh, 2005a). In addition, Webber, Krylow, and Zhang (2013) noted that Astin's theory of involvement addresses the issues of involvement and student engagement. Astin's notion is that students will "get more out of college if they put more into it. If students become involved in class discussions, student activities, and residence hall programs, they will become engaged with and learn from other students and faculty" (Webber, Krylow, & Zhang, 2013, p.592).

Astin's 1984 theory of student involvement comprises three elements (I-E-O): (a) input – This includes student's demographics, background, and any previous experiences;

(b) environment – student's environment accounts for all of the experiences including

learning, development and engagement a student would have during college or

university; and (c) output – This includes student's characteristics, knowledge, attitudes,

beliefs, and values that exist after a student's college graduation. Astin also created four

basic assumptions about involvement: "(a) involvement occurs along a continuum;

different students exhibit different levels of involvement in different activities at different

times; (b) involvement has both quantitative aspects, how much time a student spends

doing something, and qualitative aspects, how focused the student's time is; (c) the

amount of personal development and learning that can occur is directly proportional to

the quality and quantity of student involvement; and (d) the effectiveness of educational

policies, practices, or programs is directly related to the policy, practice, or program's

commitment to increasing student involvement" (Astin, 1984, p. 298). Figure 1 presents

a graphic illustration of Astin's Input-Environment-Output (I-E-0) theory of involvement.
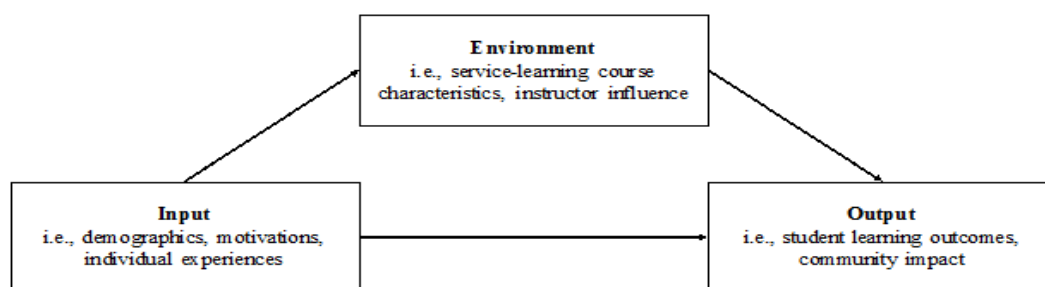
Figure 1. Astin's Input-Environment-Output (I-E-0) Theory of Involvement

Source: Pearl, A. J., & Christensen, R. K. (2017). First-Year Student Motivations for Service-Learning: An Exploratory Investigation of Minority Student Perceptions. *Journal of Higher Education Outreach and Engagement, 21*(4), 117-138.

Bringle, Games, and Malloy's Conceptual Framework for Community Engagement

The writing of Bringle, Games, and Malloy (1999) underpins a conceptual framework for community engagement. According to Bringle, Games, and Malloy (1999), "there are two primary ways in which academic institutions involve students in community engagement: (a) co-curricular service and academically-based service-learning" (p.28). Co-curricular service activities create opportunities for student-initiated activities, student engagement, and collaboration among students and with the community (Bringle, Games, & Malloy, 1999). Academic-based service-learning demonstrates mutual benefits (teaching and learning) and reciprocity (giving and receiving) between academic institutions and the community (Bringle, Games, & Malloy, 1999). Community engagement in higher education has been endorsed as a method of engaging students in meaningful activities as well as enriching students' educational experience (Bringle, Games, & Malloy, 1999).

Bringle, Games, and Malloy's (1999) conceptual framework for community engagement structures community engagement as "an irreducible and unavoidable element of the existing activities of a university" (Bender, 2008, p.88). This conceptualization of community engagement assumes that educational activities including teaching, research, and service offered both in and with the community improve students' learning experiences (Bender, 2008). This framework illuminates "forms of engagement such as the teacher-student relationship, involvement with stakeholders in the community; educator-student empowerment programs as a natural extension or element of the university's traditional engagement activities in

teaching/learning, research and service" (Bender, 2008, p.88). Figure 2 presents a graphic

illustration of Bringle, Games, and Malloy's conceptual framework for community

engagement.

Figure 2. Conceptual Framework for Community Engagement

Source: Bringle, R., Games, R, & Malloy, E. (1999). Colleges and universities as
citizens. Needham Heights, VA: Allyn and Bacon.

Significance of the Study

As mentioned earlier, most studies have examined student engagement using a

cross-sectional design. Using both longitudinal and cross-sectional designs, this study

significantly tracked changes in students' level of engagement over time as well as

providing information about the extent to which different demographic characteristics are

engaged in educational activities. The cross-sectional study investigated the differences

in student engagement specifically comparing high-impact community-based learning,

student-faculty interaction and diversity experiences between different demographic characteristics. The longitudinal study investigated the change in student engagement specifically comparing students' high-impact community-based learning, student-faculty interaction and diversity experiences over time (from freshman year to senior year). Astin and Lee (2003) suggest that the longitudinal study of student engagement will provide a better assessment of how students' level of engagement change over time than a one-shot cross-sectional assessment.

Unlike previous studies that used the NSSE instrument to examine student engagement, this study investigated the difference in the level of engagement comparing different demographic characteristics of a specific population. Examining the differences in student engagement will make a significant contribution to both theoretical and practical frameworks of student engagement as well as assisting in the evaluation and informing future best practices of programs and services offered. Furthermore, this study serves as a model for the identification of educational priorities in colleges and universities. In conclusion, this study might suggest approaches for the appropriate utilization of cross-sectional and longitudinal data for future educational research.

<div align="center">Delimitations</div>

The following delimitations of this study were noted:

1. Students who completed the survey during their freshman year and again in senior year were selected for the longitudinal study. The cross-sectional study selected students who completed the demographic questions that reflect the research questions.

2. The difference in student engagement was examined using Astin's theoretical framework and Bringle, Games, and Malloy's conceptual framework. Therefore, care must be taken in generalizing findings from this study to other similar contexts.

3. This study adopted only two of Kuh's (2008) high-impact practices and one of NSSE's benchmark of effective educational practice. Therefore, findings should be generalized to other studies utilizing other practices.

<div align="center">Limitations</div>

The following limitations of this study were noted:

1. Since the cross-sectional study focused on comparing different demographic information, completion of the demographic section of the survey was necessary. Reviewing the NSSE questionnaire, the demographic questions were inserted at the end of the survey. The placement of the demographic questions may have impacted the response rate of students' demographic information.

2. One of the survey's demographic questions asked students to identify whether they are international students or foreign nationals. There is a complexity in distinguishing international students from foreign nationals.

3. The open-ended question inquiring about the students' major may lead to inaccuracies and/or discrepancies.

4. To categorize students as traditional or nontraditional, this study excluded age of 23 and 24 to allow for a distinct difference between 22 years of age and 25 years of age.

5. Since the institution selected for this study is a Predominantly White Institution (PWI), this study combined and categorized students who are not of white race or

Caucasoid as 'Non-White Students'. Therefore, the difference in student engagement comparing race and ethnicity was not examined extensively.

6. The length of the questionnaire may discourage participants from completing the survey and indecision, fatigue, and other health factors may also have impacted participants' overall responses.

Assumptions

The following assumptions of this study were noted:

1. The researcher assumed that the participants honestly and accurately completed the questionnaire.

2. It was assumed that students participated in the survey voluntarily and without any form of coercion.

3. It was assumed that the coding is reliable and valid.

Definition of Terms

1. Student Engagement: According to Conner (2011), "National Survey of Student Engagement (NSSE) defined the student engagement as the intersection of the time and energy students devote to educationally sound activities" (p. 54).

2. Community Engagement: The Carnegie Foundation for the Advancement of Teaching defined community engagement as the "collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity" (Carnegie Foundation for the Advancement of Teaching, 2006, p.3).

3. <u>High-Impact Community-Based Learning</u>: According to Kuh (2008), community-based learning is one of the high-impact practices that "gives students direct experience with issues they are studying in the curriculum and with ongoing efforts to analyze and solve problems in the community" (p.11).

4. <u>Student-Faculty Interaction</u>: Kuh (2008) highlighted student-faculty interaction as one of the components of learning communities which involves students with issues that matter beyond the classroom.

5. <u>Diversity Experiences</u>: Kuh (2008) emphasized diversity experiences as a situation whereby "students explore cultures, life experiences, and worldviews different from their own" (p.10).

6. <u>NSSE</u>: An acronym for National Survey of Student Engagement. NSSE is an annual survey that measures undergraduate students' participation in educationally purposeful activities and other activities that matter to student learning in four-year institutions (Kuh 2001; Kuh, Kinzie, Cruce, Shoup, & Gonyea, 2006; Pascarella & Terenzini, 2005).

7. <u>Demographic Characteristics</u>: Socio-demographic information and personal features or attributes including gender, educational level, age, ethnicity, race, family size, class level, student status, sexual orientation etc. of the human population that is collected and statistically studied by researchers.

8. <u>Gender</u>: Gender is selected as a variable in this study because the researcher is interested in comparing the difference in student engagement between males and females.

9. <u>White Students</u>: A racial classification used for students who are members of the white race and of Caucasian ancestry.

10. <u>Non-White Students</u>: A racial classification used for students who are not of white race or Caucasoid such as African- American/African/Black/Caribbean; Asian/Pacific Islander; Hispanic/Latino; Native American etc.

11. <u>Traditional Students</u>: Students between the ages of 18-22 who receive parental financial support, attend class full-time and live within college residences (Courtner, 2014; Kim, Sax, Lee, & Hagedorn, 2010; National American University, 2015).

12. <u>Nontraditional Students</u>: Students who are 25 years old or older, have children, enrolled as part-time students (6 hours or less), and did not attend college directly after high school (University of Northern Iowa, 2018; Pelletier, 2010).

13. <u>International Students</u>: According to United Nations Educational, Scientific and Cultural Organization (2009), international students are defined as individuals who are enrolled for credit at an accredited higher education institution in the U.S. on a temporary visa, and who is not an immigrant (permanent residents with an I-51 or Green Card), or undocumented immigrants, or refugees.

14. <u>Domestic Students</u>: Students who are citizens, permanent residents of the United States of America or hold Refugee, Asylee, or Jay Treaty status.

15. <u>First- Generation Students</u>: According to National Center for Education Statistics (1998), first-generation students are defined as "those whose parents' highest level of education is a high school diploma or less" (p.7). Brooks (2011) also defined first-

generation students as "students who are the first person in their immediate family to attend college" (p.20).

16. <u>Non-First-Generation Students</u>: Students who are not the first in their immediate family to obtain an undergraduate degree and have parents who are familiar with postsecondary education (Alvarado, Spatariu, & Woodbury, 2017).

17. <u>Academic Majors</u>: Based on NSSE categorization of majors, this study selected academic majors under these four colleges (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences) to investigate how academic disciplines influences on student engagement.

CHAPTER II

REVIEW OF RELATED LITERATURE

The primary purpose of this study was to examine students' level of engagement during their freshman year and senior year to understand the changes in engagement over time. Furthermore, this study examined the difference in student engagement comparing male and female students, white and non-white students, international and domestic students, traditional and nontraditional students, first-generation and non-first-generation students, and academic majors by college (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences). The literature review determines the level of what is already known about the topics and works under study, as well as dissolves some areas of imbalances and missing links in knowledge.

The literature review is categorized into twelve (12) sections as shown in Table 2 and 2a. The first section illuminates the conceptualization of student engagement. The second section discusses community engagement as an important component of student engagement. The third and fourth sections briefly discuss student-faculty integration and diversity experiences as elements of student engagement. The fifth section highlights how demographic characteristics can influence student engagement. The sixth section provides a comparison of student engagement of male students and female students. The seventh section looks at the comparison of student engagement of white students and non-white students. The eighth section illustrates the comparison of student engagement of international students and domestic students. The ninth section provides the comparison of student engagement of traditional students and non-traditional students.

The tenth section provides the comparison of student engagement of first-generation and non-first-generation students. The eleventh section provides the comparison of student engagement between academic majors within fields of study. The last section provides an assessment of the National Survey of Student Engagement (NSSE).

Table 2

Literature Review Sources (Part 1)

Student Engagement in Higher Education	Kahu, 2013; Hu et al., 2012; Butin, 2010; Trowler, 2010; Robinson & Hullinger, 2008; Carini, Kuh, & Klein, 2006; Zhao & Kuh, 2004; Gallini & Moely, 2003; NSSE, 2003; NSSE, 2000; Parker-Gwin & Mabry, 1998.
Community Engagement	Govil, 2017; Jacob, Sutin, Weidman & Yeager, 2015; Purcell, 2014; Bernado, Butcher & Howard, 2012; Nicotera, Cutforth, Fretz & Thompson, 2011; Pike, Kuh & McCormick, 2011; Ahmed & Palermo, 2010; Butin, 2010; Inman & Schütze, 2010; Weiss, Lopez, & Rosenberg, 2010; Driscoll, 2009; Shalowitz et al., 2009; Bender, 2008; Bawa, 2007; Beckett & Rosser, 2007; Buys & Bursnall, 2007; Lazarus, 2007; Head, 2007; Watson, 2007; Carnegie Foundation for the Advancement of Teaching, 2006; Brukardt, Holland, Percy, & Zimpher, 2004.
Element of Student Engagement **(Student – Faculty Interaction)**	Parsons & Taylor, 2011; Dunleavy & Milton, 2009; Willms, Friesen, & Milton, 2009
Element of Student Engagement **(Diversity Experiences)**	Denson & Chang, 2009; Kuh, 2008; Bok, 2006; Umbach & Kuh, 2006; Kuh, 2003
Demographic Characteristics Influence on Student Engagement	Thill, Rosenzweig, & Wallis, 2016; Chen, Ingram, & Davis, 2014; Kuh et al., 2008; Zhao & Kuh, 2004.
Comparison of Student Engagement of Male and Female Students	Tessema, Ready, & Malone, 2012; Strayhorn and Saddler, 2009; Sax, 2008; Wilson, Kickul, & Marlino, 2007; Sax & Harper, 2007; Harper, Carini, Bridges, & Hayek, 2004; Ng & Pine, 2003; Jones, Howe & Rua, 2000; Ansic, 1997; Feingold, 1994.

Table 2a

Literature Review Sources (Part 2)

Comparison of Student Engagement of White and Non-White Students	Turcios-Cotto & Milan, 2013; Kim & Sax, 2009; Greene et al., 2008; Chang, 2005; Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999.
Comparison of Student Engagement of International and Domestic Students	Wang & BrckaLorenz, 2017; Korobova, 2012; Perry, 2012; Grayson, 2008; Zhao, Kuh, & Carini, 2005.
Comparison of Student Engagement of Traditional and Non-Traditional Students	Cotton, Nash, & Kneale, 2017; Lowe, 2015; Courtner, 2014; Gilardi & Guglielmetti, 2011.
Comparison of Student Engagement of First-Generation and Non-First-Generation Students	Rodriguez & Halton, 2018; Stebleton, Pelco, Ball & Lockeman, 2014; Stebleton, Soria & Hueman, 2014; Williamson, 2013; Soria & Stebleton, 2012; Pike & Kuh, 2005b.
Comparison of Student Engagement between Academic Majors	NSSE, 2010; Grasgreen, 2011
Assessing National Survey of Student Engagement (NSSE) Instrument	NSSE, 2017; Pike, 2013; McCormick & McClenney, 2012; Potter, 2012; Campuswide, 2011; Strydom, Kuh, & Mentz, 2010; Ewell, 2010; Kuh, & Mentz, 2010; Kuh, 2009a/b; Mark & Boruff-Jones, 2003; Kuh, 2003; Kuh, 2001.

Student Engagement in Higher Education

Ever since Astin (1984) structured "a developmental model of college student learning that emphasized the concept of involvement, educators in higher education around the globe have become more focused on developing what has come to be known as student engagement" (Tendhar, Culver, & Burge, p.182). In educational institutions, students' success as related to learning and academic achievement depends upon students' level of engagement (NSSE, 2000; NSSE, 2003). Due to the complexity and wide-ranging understandings of the concept, there is no widely accepted or single definition that would exhaustively disclose the notion of student engagement (Trowler, 2010). Student engagement is "widely recognized as an important influence on achievement and learning in higher education and as such is being widely theorized and researched" (Kahu, 2013, p.258). In educational institutions, students' success as related to learning and academic achievement depends upon students' level of engagement (NSSE, 2000; NSSE, 2003). A basic understanding of student engagement is that students' activity, involvement, and efforts in their learning tasks is related to their academic achievement (Hu et al., 2012, p.71).

Desirable learning outcomes are positively linked to student engagement (Carini et al., 2006). Engaging students in educational activities can potentially provide positive outcomes because it creates opportunities for students to be exposed to new situations that are ultimately beneficial (Parker-Gwin & Mabry, 1998). Student engagement focuses on enhancing an effective active and collaborative learning and also improving the level of academic effort (Robinson & Hullinger, 2008). Student engagement creates

opportunities for students to see one another frequently and also engage in common academic activities as well as instilling collaboratively active learning activities that go beyond the traditional classroom activities (Zhao & Kuh, 2004). Carini et al. (2006) suggested that "the more students study or practice a subject, the more they tend to learn about it. Therefore, student engagement is generally considered to be among the better predictors of learning and personal development" (p.2). With reference to student engagement, most academic institutions ensure that their teaching and research practices either align with or support the needs of the community (Butin, 2010). As mentioned earlier, community engagement is a key aspect of student engagement (Parker-Gwin & Mabry, 1998; Gallini & Moely, 2003). The concepts of community engagement in higher education will be discussed in the next section.

Community Engagement

In some universities, community engagement is embedded or reflected in the institution's' mission, goal and strategic plans (Bender, 2008; Scott & Jackson, 2005). This usually resonates with university's' foundation, history, adaptation, operations, and mission. Educational institutions that focus on using community participation or engagement should carefully structure it in a way that it enhances the student learning experience (Pike, Kuh, & McCormick, 2011). Bernado, Butcher and Howard (2012) suggested that "there are different streams by which community engagement is viewed including (1) as an educational goal along with instruction and research; (2) as implied from the outcomes of instruction and research; and (3) as integral in defining the role of higher education in the wider social context" (p.5). Purcell (2014) suggested that there

are four significant aspects of capacity building for community engagement. These include (1) distributed leadership serving as an information gatekeeper between the educational institution and the community; (2) creating and extending channels of communication that allows community engagement to parallel with the institution's agenda; (3) authentic engagement reflecting unique contexts and interests involved; and (4) collaborative action inquiry that involves utilizing existing expertise among university faculty and administrators to strengthen networks.

Community engagement is considered one of the effective teaching practices in higher education (Govil, 2017). In most academic discipline, community engagement can also be perceived as philanthropic activities and not as a core component (Lazarus, 2007). There are two factors that can further the development of community engagement in higher education which includes creating a conceptual framework for community engagement and ensuring adequate funding of community engagement (Bender, 2008). Carnegie Foundation for the Advancement of Teaching (2006) suggested the following about community engagement in higher education:

> The purpose of community engagement is the partnership of college and university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity; enhance curriculum, teaching, and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good (p.3).

At higher education institutions where community engagement is embraced, some of the curriculums involve participation in out-of-class activities that are connected to student learning and success (Pike, Kuh, & McCormick, 2011). Educational institutions tend to create a curriculum-related community engagement in order to create an

atmosphere for students to engage with the community (Bender, 2008). These community-based learning curriculums model the idea that collaboration with community partners and giving something back to the community is an important college outcome (Kuh, 2008). According to Pike, Kuh, and McCormick (2011), university faculty and administrators should consider using community engagement to create effective support systems that will help students meet or exceed expectations. In addition, for a university to encourage participation in community engagement, there is a need for support of its leadership and senior management (Bender, 2008).

Educational institutions are working towards becoming part of the community by playing a vital role in creating a unique learning environment for students (Ahmed & Palermo, 2010). Alternatively, community engagement enhances a community's ability to address its needs and issues while ensuring that institutions have a better understanding of community priorities (Ahmed & Palermo, 2010). The idea of community-based learning is to give students direct experience with a continuous effort to address problems in the community (Kuh, 2008). Community engagement brings forth new knowledge that will aid in enhancing higher education (Nicotera, Cutforth, Fretz, & Thompson, 2011). Universities and other institutions of higher education focus on generating knowledge with communities fostering relationships as well as facilitating collaboration (Inman & Schütze, 2010).

There is a need to share responsibility for resolving complex issues; and the local politics of managing social, economic and environmental projects. This can be done by building institutional bridges between institutions and the communities (Head, 2007).

Many benefits arise from the creation of community-university partnerships (Buys &

Bursnall, 2007). Communities provide different resources that are essential for higher

education systems to reach their goals and objectives (Jacob, Sutin, Weidman, & Yeager,

2015). Community engagement involves the partnership and collaboration between a

university's knowledge-based resources and those of public, private and service agencies

in order to enhance innovation and curriculum as well as preparing students to be

educated and engaged citizens (Bender, 2008). Brukardt et al. (2004) asserted that

partnerships are the currency of engagement- the medium of exchange between

university and community and the measurement of an institution's level of commitment

to working collaboratively" (p.9). Community-engaged universities apply their

knowledge to problems, issues or concerns in a community. To ensure community

growth, effective partnerships between agencies, government, schools, and residents is

vital (Buys & Bursnall, 2007).

Forming an academic-community partnership is an approach that involves

engaging community members and faculty to identify and address specific needs of the

community as well as ensuring that students gain meaningful experience from the

engagement (Shalowitz et al., 2009). Developing community-university partnerships

aims at creating different networks within educational institutions to help promote

mobilization and dissemination of knowledge (Govil, 2017). Partnerships between

universities and communities create series of interpersonal relationships that involve: (a)

university administrators, faculty, staff, and students and (b) community leaders, agency

personnel, and members of communities (Bringle & Hatcher, 2002). Community

engagement involves methods or processes that ensure that educational institutions are not underestimated (Bender, 2008).

Student success can be strategically supported by community engagement. Repositioning this type of engagement serves as a contributor to learning experiences and school turnaround efforts (Weiss, Lopez, & Rosenberg, 2010). Universities also use this approach to prepare students for employment (Bender, 2008). Extrinsically, the reason for community engagement is to expose students to external agencies in the community (Buys & Bursnall, 2007). Involvement of academics and students in community-based projects helps to disseminate information that will address questions in academics and the community (Bawa, 2007). Community participation is related to different benefits of educational experiences and outcomes including degree attainment and enhancing experiences of students (Beckett & Rosser, 2007). Furthermore, an increasingly salient objective for higher education institutions across the world focuses on community engagement (Watson, 2007).

The term community engagement was intentionally selected for the classification to encompass various meaningful relationships between higher education and community and to promote inclusivity (Driscoll, 2009). Practices of community engagement have been developed in such a way to align with integral components of the institutional identity and culture and also structured in a way that they encourage diversity (Driscoll, 2009). According to Pike, Kuh and McCormick (2011), community engagement is also considered to be effective in promoting or enhancing student interaction with peers from diverse backgrounds as well as promoting students' affective development. Bernardo et

al. (2012) refer to community engagement as "broad intentions, programs, and activities, embedded in instruction and research, in order to address various forms of marginalization of communities and individuals as a way of fulfilling a university's stated mission" (p.2). According to Ahmed and Palermo (2010), community engagement is a method that requires power-sharing and maintenance of equity in order to meet the priorities and needs as well as building capacities within the communities. The next section highlights the elements of student engagement which includes student-faculty interaction and diversity experiences.

<div align="center">Elements of Student Engagement</div>

As previously mentioned, Kuh (2008) recommends that the engagement of students in meaningful educational activities must incorporate the following high impact practices: (a) community based learning – engaging students in experiential learning with community partners; (b) diversity experiences/global learning – exposing students to cultures, life experiences, and worldviews that are different from their own; and (c) student-faculty interaction – encouraging learning communities where students can interact and work closely with one another and with their faculty. In addition to the community-based learning that has been discussed in the previous section, this section highlights student-faculty interaction and diversity experiences as other high-impact activities that enhance student engagement.

<u>Student – Faculty Interaction</u>

Respectful relationships and interactions improve student engagement (Parsons & Taylor, 2011). The results from *Imagine a School…, Design For Learning*, and *What did*

you do in school today? repeatedly show the following: "(a) students want stronger relationships with their teachers, with each other, and with their communities – locally, provincially, nationally and globally. They want their teachers to know them as people; (b) students want their teachers to know how they learn. They want their teachers to take into account what they understand and what they misunderstand, and to use this knowledge as a starting place to guide their continued learning; and (c) students want their teachers to establish learning environments that build interdependent relationships and that promote and create a strong culture of learning" (Willms, Friesen, & Milton, 2009, p.36). In addition, Dunleavy and Milton (2009) explored the concept of student engagement. The study identified three criteria that correlate with interaction based on students' responses: (a) learning and interacting with people (students, faculty and community partners); (b) connecting with experts, and (c) creating more opportunities for dialogue. Overall, student-faculty interactions and relationships are essential to support engagement in learning experiences as well as supporting part of the curriculum that is used in academic institutions (Dunleavy & Milton, 2009).

Diversity Experiences

Many academic institutions currently emphasize courses and programs that provide opportunities for students to explore different cultures, worldviews and diverse life experiences (Kuh, 2008). Kuh (2003) noted that "understanding and learning how to work effectively with people from different backgrounds is a valued set of skills and competencies" (p.30). The density of racial and ethnic groups is an important factor in student engagement (Kuh, 2003). Denson and Chang (2009) examined the impact of

diversity-related student engagement. The study found that students gained positive educational benefits through their involvement in workshops or classes geared toward diversity and interaction with others of another racial-ethnic group.

College and university authorities have seen the need to encourage students to develop a sense of acceptance and understanding of the differences between their fellow students (Bok, 2006). Diversity or cross-racial interaction helps in improving students learning, personal development and educational experience. In addition, employers are more interested in college graduates who can work together with a diverse group of employees and client in complex settings (Bok, 2006). Through engaging students with people from different life experiences and backgrounds, students develop employability skill and other foundations of skills and dispositions that are essential in an increasingly multicultural world (Umbach & Kuh, 2006).

<u>Demographic Characteristics Influence on Student Engagement</u>

Demographic characteristics play a vital role when it comes to engaging students in educational activities (Thill, Rosenzweig, & Wallis, 2016). Due to the slow growth of college completion rates and other external pressures such as financial and family obligations, the need to better understand the factors such as student background and demographic characteristics that influence student success in higher education has been intensified. It is of great importance to understand indicative factors of student success which include the following: (a) student background characteristics including demographics and pre-college academic and other experiences (b) structural characteristics of institutions such as mission, size, and selectivity (c) interactions with

faculty and staff members and peers (d) student perceptions of the learning environment, and (e) the quality of effort students devote to educationally purposeful activities (Kuh et al., 2008).

Along with race and ethnicity, gender and other demographic characteristics do affect student engagement in colleges and universities (Chen et al., 2014). Student demographic characteristics such as race and ethnicity along with family income are especially important because the nature of the experience of historically underserved students can distinctively differ from that of majority white students in academic institutions. Kuh et al. (2008) suggested that the impact of engagement and direct effect of educationally purposeful activities differed somewhat by race and ethnicity. Therefore, it is important to assess the various subgroups of students and their level of engagement in activities that contribute to their learning and personal development. Zhao and Kuh (2004) suggested that student types such as class levels, student status, race and ethnicities, gender etc. act as indicators that can possibly affect students' level of engagement. In addition, the authors outlined three actions that academic administrators in colleges and universities should take into consideration. First, academic institutions should examine the nature of educational activities that are being provided and the number of different groups of students in relation to gender, class level, race, and ethnicity etc. are engaged or participating in those activities. Second, efforts should be made in creating additional educational activities that will target and attract students that are underrepresented in higher education today. Third, due to the differences in the effectiveness of some educational activities, additional research is needed to determine

activities that are more effective than the other for various groups of students (Zhao & Kuh, 2004). Therefore, it is of great importance all students should be given the opportunity to benefit from a form of activities that will enhance their educational experience (Zhao & Kuh, 2004).

Comparison of Student Engagement of Male and Female Students

The existence of gender differences in educational experiences of students in higher education has long been studied by several researchers. Gender differences have continued to remain constant across generations from the late 1950s to the early 1990s. Sax (2008) opined that gender differences create a clear assertion to address the assumption that women and men are either influenced or affected in the same way by the undergraduate experience. Ng and Pine (2003) argued that males always have a perception that females are less efficient in activities. Research has shown that male students rated themselves higher in some areas related to educational experiences than female students (Feingold, 1994). In addition, Powell and Ansic (1997) suggest that females feel less confident in the participation of educational activities. Another study suggested that females feel less confident than their male counterparts in self-perceptions of skills and engagement (Wilson, Kickul, & Marlino, 2007). Sax and Harper (2004) opined that females tend to interact and feel more supported by faculty member than males.

Just like several studies have shown that females are less likely to see themselves as to be more engaged, some parts of the literature also showed that females see themselves as more engaged than males in educational activities (Foste & Jones, 2017;

Chesborough, 2011), others showed that females and males see themselves as equally engaged. Jones, Howe, and Rua (2000) explored the impact and implications of gender differences in achievement and careers. These authors suggested that females show high interest in achievement and careers compared to males. Strayhorn and Saddler (2009) examined gender differences in interactions between students and faculty. The study showed that men and women engage in interactions with faculty members equally. Harper, Carini, Bridges, and Hayek (2004) looked at the gender differences in student engagement and found that men and women are equally engaged in their academic and social engagement experiences. Tessema, Ready, and Malone (2012) asserted that the notion of gender gaps in higher education has been viewed from the perspective of inequities faced by females as they progress through the educational pipeline (p.1). Today, gender differences related topics are highly focused on both national and institutional levels.

Comparison of Student Engagement of White and Non-White Students

Black-White comparisons in education disparities have been historically studied. National studies on educational outcomes have provided statistical information on white, Black, and Latino individuals to enhance how American demographic is viewed or categorized (Turcios-Cotto & Milan, 2013). The information provided on students of different ethnic backgrounds have reinforced the need for comparative studies of student engagement of white and non-white students in educational institutions (Carter & Fountaine, 2012). Chang (2005) examined how student characteristics correlated with faculty contact interaction differ among racial subgroup. The study found that African

American students tend to show the highest level of engagement in faculty-student interaction followed by white and then Latino and Asian American/Pacific Islander students. In addition, Kim and Sax (2009) asserted that African American students are more frequently talking, communicating, or interacting with faculty members. According to Cabrera et al. (1999), four important contentions related to the adjustment of African American students to college or university includes the following: (1) academic preparedness at the time of high school graduation is a crucial factor accounting difference in educational experiences between African American and white students; (2) successful adjustment in college by all students has to do ties with families and communities; (3) academic performance and persistence decisions of minorities, historically discriminated groups and targets of racism and bigotry are shaped primarily by exposure to a climate of discrimination; and (4) some educational models fail to capture fully minority collegiate experiences. In addition, these authors also found out that minorities and non-minorities adjust to college in a similar manner.

Greene et al. (2008) examined the differences in participation and achievement gap between ethnic groups. The study showed that minority students reported higher levels of engagement than white students. Evidence has been shown that there is a high dropout rate among minority students because they are not more engaged and only the most highly engaged persist (Greene et al., 2008). Therefore, there is a need to identify the educational practices that matter most to enhancing the success of African American, Hispanic, and other students who have been underserved and underrepresented in higher education historically (Greene et al., 2008).

Comparison of Student Engagement of International and Domestic Students

Research has focused on international students' adaptation in host societies (Grayson, 2008). Comparison of student engagement of international and American students has been studied by very few researchers (Korobova, 2012). Examining the differences in educational experiences of international and domestic students can identify issues and obstacles that students may face as well as improving the education that colleges and universities offer (Perry, 2012). Furthermore, the study found that self-assessed outcomes of international students were lower than those of domestic students (Perry, 2012). Grayson (2008) examined the academic and social experiences of international and domestic students. The author found that international students are equally engaged in educational activities as domestic students.

Another study compared international student and American student engagement in educational practices. The authors asserted that international students are more engaged than American students during their first year of college but tend to be more adapted to the milieu and then do not differ from American students during their senior year (Zhao, Kuh, & Carini, 2005). Korobova (2012) compared student engagement of international and American students and found the following: (1) international students engaged more than American students in enriching educational experiences during their senior year; and (2) international and American students similarly reported the same level of educational experience. Wang and BrckaLorenz (2017) studied the comparison of international students' engagement and faculty perceptions of international student

engagement. The study confirmed the significance of faculty support in engaging international students.

Comparison of Student Engagement of Traditional and Non-Traditional Students

United States Department of Education (2002) defines non-traditional students with the following seven characteristics: (1) delays enrollment (does not enter postsecondary education in the same calendar year that he/she finished high school); (2) attends part-time for at least part of the academic year; (3) works full time (35 hours or more per week) while enrolled; (4) is considered financially independent for purposes of determining eligibility for financial aid; (5) has dependents other than a spouse (usually children, but sometimes others); (6) is a single parent (either not married or married but separated and has dependents; or (7) does not have a high school diploma (completed high school with a GED or other school completion certificate or did not finish high school).

Studies have shown that non-traditional students are at risk and/or more likely to drop out of college or university than traditional students. A study conducted by Gilardi and Guglielmetti (2011) examined the differences between the engagement of traditional students and that of non-traditional students. The results showed that nontraditional students are more drawn to participate in activities outside formal teaching environment than traditional students do. For non-traditional students, they value and see engagement as a fundamental way to sustain their continuation of studies. It is important that academic administrators provide opportunities that are beneficial not just for non-

traditional students benefit from but also other underrepresented students (Gilardi & Guglielmetti, 2011).

Courtner (2014) studied the impact of student engagement on academic performance and quality of relationships of traditional and nontraditional students. The study found that traditional students had higher levels of student engagement than nontraditional students. On the other hand, non-traditional students had higher levels of academic performance than traditional students. Cotton, Nash, and Kneale (2017) suggested that nontraditional students should not be viewed as underrepresented groups that experience difficulties in higher education than traditional students. Lowe (2015) examined the difference in engagement between traditional and nontraditional students in higher education. The study found that student engagement opportunities were offered equally to both traditional and nontraditional students. The study also suggests that "nontraditional students need different services available to engage them because of their schedules and multiple obligations" (p.138).

Comparison of Student Engagement of First-Generation and Non-First- Generation Students

There is no consistency shown in the literature regarding the difference in engagement comparing first-generation and non-first-generation students. Pike and Kuh (2005b) compared the engagement of first-generation and second-generation students. The study showed that "first-generation students were less engaged overall and less likely to successfully integrate diverse college experiences; they perceived the college environment as less supportive and reported making less progress in their learning and

intellectual development" (p.289). Another study found that first-generation students have lower academic engagement (student –faculty interaction and contribution in class) and lower retention as compared to non-first-generation students (Soria & Stebleton, 2012). In addition, first-generation students rated low in their level of engagement such as having a sense of belonging, college satisfaction etc. than non-first-generation students (Stebleton, Soria, & Huesman, 2014; York-Anderson & Bowman, 1991; Chaney, Muraskin, Cahalan, & Goodwin, 1998). First-generation students reported lower skill development in co-curricular activities (Rodriguez & Halton, 2018).

A study conducted by Williamson (2013) found the following "(a) first-generation respondents reported that they were more engaged in collaborations with other students and faculty than non-first-generation students; and (b) first-generation students exhibited more effort in contributing to their learning experience than those who indicated that they were not first-generation students" (pp.111 -112). Pelco, Ball, and Lockeman (2014) compared first-generation and non-first-generation students' growth and completing a service-learning class. The study found that both first-generation and non-first-generation students' growth perceived service-learning class as a contribution to their academic and professional growth. In addition, there is no difference in student-faculty interaction between first-generation students and non-first-generation students (Williamson, 2013).

Comparison of Student Engagement between Academic Majors

NSSE (2010) asserted that the difference in engagement between different academic disciplines or majors should not only be based on students' "content and pedagogy, but also by their students' diverse backgrounds, prior academic experiences,

and the varying expectations that students bring with them to college—most often

expecting to be more engaged than they were in high school" (p.15). NSSE (2010)

examined the engagement of students within four majors: general biology, business,

English, and psychology at U.S. academic institutions. NSSE findings showed that: (a)

students in biology majors are more likely to engage in student-faculty interactions than

students in other disciplines; (b) students majoring in business were more frequently

engaged in learning activities than peers in other fields; (c) English majors are not always

engaged compared to their peers, and (d) psychology curriculum engages students in

educational activities that prepare students with the necessary skills not only for graduate

programs but also help students gain employability skills. Overall, NSSE findings

suggest that student engagement varies by major. Furthermore, NSSE examined the

engagement of students in career preparatory programs such as practicums, internships or

clinical assignments. The responses ranged from 57 percent of engineering majors to a

low of 47 percent for arts and humanities and 43 percent for business majors (Grasgreen,

2011). In order to understand the effectiveness of NSSE in examining student

engagement, the following section will provide an assessment of the NSSE instrument.

<u>Assessing the National Survey of Student Engagement (NSSE) Instrument</u>

The NSSE instrument was assessed by reviewing the background of the

instrument; outlining some of its impacts; reviewing the five benchmarks of effective

educational practice, and some of the criticisms of the NSSE instrument.

<u>Background</u>

      The National Survey of Student Engagement (NSSE) instrument was first launched in 2000, updated in 2003 and has been considered the best known and highly valued and recognized national project for measuring student engagement (NSSE, 2017). This survey focuses on specific undergraduate student experiences and structures of the educational environment (Kuh, 2001). The NSSE annually surveys engagement and experiences of randomly selected freshmen and seniors at four-year colleges and universities (Mark & Boruff-Jones, 2003). From Spring of 2000 to Fall of 2017, four hundred and eighty-seven (487) colleges and universities have participated in the NSSE (NSSE, 2017).

      According to Kuh (2009a), the NSSE instrument incorporates five categories for the collection of information. The first category contains questions about a student's participation in different activities that will enhance their educational experiences such as (a) interaction with faculty and peers, and (b) amount of time student spend studying or engaging in co-curricular or other activities including working with a faculty member on a research project, internships, community service, and study abroad (Kuh, 2009a). The second category provides a set of questions related to what the institution requires of the students, such as the amount of reading and writing students did during the current school year and the nature of their examinations and coursework (Kuh, 2009a). The third category provides questions that ask students about their perceptions of features of the college environment that are associated with achievement, satisfaction, and persistence (Kuh, 2009a). The fourth category allows students to estimate their personal and

professional development since their starting college (Kuh, 2009a). Finally, the fifth

category allows students to provide their background information including age, gender,

race/ethnicity, living situation, educational status, and major field. This information

allows NSSE and other researchers to better understand the relationships between student

engagement and desired outcomes for different types of students (Kuh, 2009a).

Impact

NSSE informs improvement of actions in undergraduate education (Campuswide,

2011). This instrument has a positive impact on public perceptions of quality institutions

strategies to improve educational practice (Ewell, 2010). NSSE instrument enhances

students' specific way of thinking about the quality college experience and also assessing

the level of participation of students in four-year colleges and universities (Kuh, 2001).

Kuh (2009b) further asserted that through "campus institutional review board approval,

schools have the option to link their students' responses with their own institutional data

to examine other aspects of the undergraduate experience. Institutions may also compare

their students' performance with data from other institutions on a mutually determined

basis for purposes of benchmarking and institutional improvement. This greatly enhances

the power of student engagement data because institutions can better understand and

more accurately estimate the impact of course-taking patterns, major fields, and

initiatives such as first-year seminars, learning communities, study abroad, internships,

and service-learning on achievement and persistence of students from different

backgrounds and majors" (p.12). Figure 3 provides the structure of information

incorporated in the NSSE instrument.
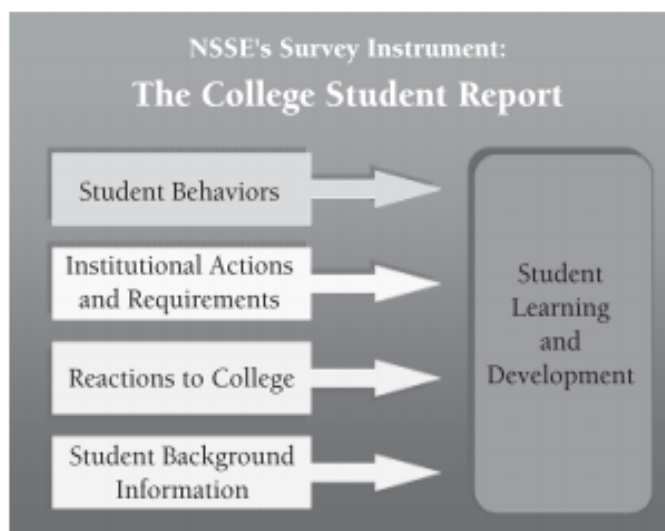
Figure 3. Structure of the NSSE Instrument

Source: Kuh, G. D. (2009a). The national survey of student engagement: Conceptual and empirical foundations. *New directions for institutional research*, *2009*(141), 5-20.

Benchmarks

NSSE established five benchmarks of effective educational practice based on 42 key questions: level of academic challenge, active and collaborative learning, student-faculty interaction, supportive campus environment, and enriching educational activities (see Appendix A). The five benchmarks include (a) Benchmark 1 – "level of academic challenge (LAC)" illustrates how challenging intellectual and creative work is critical to student learning and collegiate quality; (b) Benchmark 2 – "active and collaborative learning(ACL)" illustrates how students learn more when they are intensively involved and collaborates with their peers; (c) Benchmark 3 – "student-faculty interaction (SFI)" illustrates students' views on how experts solve real-life problems through faculty interaction; (d) Benchmark 4 - "enriching educational experiences (EEE)" focuses on

complementary learning opportunities inside and outside the classroom that enhance academic programs. These opportunities include the use of technology, interaction and collaboration between peers and instructors, internships, field experiences, community service, volunteer work, and other similar activities provide students with another opportunity to apply their knowledge; and (e) Benchmark 5 – "supportive campus environment (SCE)" informs how students are more satisfied and perform better at colleges that are committed to their success and that nurture positive working and social relations among campus groups.

Criticism

While NSSE can inform institutions, it has some challenges as well. Kuh (2003) outlined some of the continuing challenges of the NSSE instrument including (1) attaining student response rates that are high enough for institutions to be confident that the results are valid and stable; (2) re-designing an instrument introduces its own set of potential problems because moving items around to fit a new format could affect how students answer certain questions; (3) more people are involved in deciding which student surveys to use at some institutions; (4) NSSE is not the only good instrument out there for assessing the experiences of college students.

Furthermore, criticisms have raised questions about the accuracy of students' self-reports using the NSSE instrument (Pike, 2013). Porter (2011) selected NSSE for a critical examination of college student survey validity. The study found that a typical student survey has minimal validity. According to Pike (2013), "McCormick and McClenney (2012) criticized Porter (2011) for failing to address the fact that NSSE relies

on vague quantifiers, rather than precise reports of behavior" (p.151). Furthermore, Porter (2011) was criticized by these researchers for failing to respond to evidence from focus groups that presented how NSSE respondents reported that questions asked were well-understood and interpreted in similar ways (Pike, 2013). With respect to validity, the engagement indicators in the NSSE instrument have been validated for its use for college and university assessment effort (NSSE, 2018). In conclusion, NSSE benchmarks can "serve as proxies for institutional programs and practices that enhance student success above and beyond the characteristics of the institutions themselves" (Pike, 2013, p.157).

<div align="center">Summary</div>

Community engagement in higher education was discussed by exploring several works of literature that provide information on different notions and concepts of community engagement. The literature outlines the various dimensions of community engagement in higher education and how they are grounded in one primary goal which is student engagement. Different notions of student engagement were further explored in the literature. Demographic characteristics were presented as an influential factor that impacts student engagement. The difference in gender, student status, race, and ethnicity and student types were further explored. Last, the assessment of the NSSE instrument was reviewed by looking at NSSE background, components of the instrument, impacts, benchmarks for effective educational practice and criticisms.

CHAPTER III

METHODOLOGY

The primary purpose of this study was to examine students' level of engagement during their freshman year and senior year to understand the changes in engagement over time. Furthermore, this study examined the difference in student engagement comparing male and female students, international and domestic students, white and non-white students, traditional and nontraditional students, first-generation and non-first-generation students and academic majors by college (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences). This chapter discussed the research methods for the study and how it can be used in response to the statement of the problem. This chapter further highlights the research design; define the research participants; describe the instrumentation employed in the study; outline the procedures used in the collection of data, and describe the data analysis used.

<u>Research Design</u>

This study used a secondary data collected by NSSE in collaboration with the comprehensive Midwestern University's Institutional Research and Effectiveness (IR & E) office. The longitudinal design (Time 1 and Time 2) was utilized to examine the difference in student engagement by tracking changes over time. The cross-sectional design was utilized to examine the difference in student engagement by comparing different types of students.

<u>Research Participants</u>

The participants in this study were first-year and senior students from a comprehensive Midwestern university who completed the NSSE survey from 2013 through 2016. Student samples were drawn from population files submitted by the IR& E office. Students completing the survey were removed from further contact attempts once their responses had been logged. Prior approval from the internal review board at the comprehensive Midwestern University was obtained prior to the data collection. All participants were informed of any risks associated with participation in this study and signed an informed consent document prior to any testing.

Participants of this study were divided into two categories which include: (1) longitudinal study category and (2) cross-sectional study category.

(a) <u>Category 1 – Longitudinal Study</u>: The participants that were selected for this category are students who completed the NSSE survey during their first year and again during their senior year. Participants' responses were matched using masked ID numbers. The total number of participants was ninety-seven (97) students.

(b) <u>Category 2 – Cross-Sectional Study:</u> The participants that were selected for this category are students who completed the NSSE survey and could best inform the research questions and enhance understanding of the phenomenon under study. The total number of participants was four thousand seven hundred and seventy-three (4,773) students.

Instrumentation

Research participants completed the NSSE survey electronically. NSSE instrument collects information in five categories: (1) participation in dozens of educationally purposeful activities, (2) institutional requirements and the challenging nature of coursework, (3) perceptions of the college environment, (4) estimates of educational and personal growth, and (5) background and demographic information (NSSE, 2018).

Validity and Reliability of the NSSE Instrument

Since 1999, the NSSE instrument has been extensively tested to ensure its validity and reliability (Strydom et al., 2010). The NSSE instrument has been designed in such a way that it meets these five criteria that encourage accurate and valid results: (a) questions are phrased clearly and unambiguously; (b) the questions refer to recent activities; (c) the respondents think the questions merit a serious and thoughtful response; (d) answering the questions does not threaten, embarrass, or violate the privacy of the respondent; and (e) encourage the respondent to answer the questions in socially desirable ways (Strydom et al., 2010).

With respect to construct validity, "the original NSSE instrument was designed by a team of higher education experts who primarily wanted to capture the most effective engagement practices as measured by individual items, as opposed to selecting items based on the ability to derive scales or factors" (Strydom, Kuh, & Mentz, 2010, p.269). Evidence of construct validity of NSSE survey items was provided through exploratory and confirmatory factor analyses (EFA/CFA) and it concludes that there is a strong

construct validity for its use for college and university assessment effort. The Kaiser-Meyer-Olkin statistic was .94 indicating "meritorious" factorability of the item set and Bartlett's test of sphericity was significant (p < .001) (NSSE, 2016). For the purpose of this study, the researcher conducted another validity and reliability statistics. More discussion on the validity and reliability of the NSSE instrument will be presented after the data analysis.

Measures

This study measured student engagement experiences using two of Kuh's (2008) high-impact practices (community-based learning and diversity experiences) and one of NSSE's benchmarks of effective educational practices (student-faculty interaction). These measures represent capture vital aspects of student learning experiences in association with engagement as well as embracing different dimensions of educational practices (Kuh, 2008; NSSE, 2018).

Procedures for Collecting Data

NSSE data collection is a partnership between each participating institution and the Indiana University Bloomington (IUB) Center for Postsecondary Research (CPR). The comprehensive Midwestern University collaborated with NSSE for the collection of data that was used in this study. NSSE collected data using the student information provided through email by the comprehensive Midwestern University IR& E office. NSSE sent an institution-customized survey invitation and consent form directly to the students through email. The email recruitment helped in providing a census

administration of all first-year and senior students, as well as providing students the opportunity to log in and complete the survey immediately.

Ethical standards were strictly followed to obtain electronic informed consents from the participants. Participants read the consent script and voluntarily decided whether or not to complete the electronic survey. A number of reminders were sent to encourage students to participate in the study. All student survey data were returned to the IR& E office with student ID numbers included. The IR& E office received a data file that identifies student participants by the student identification number provided in the original file. The data is combined with institutional data points (e.g. race/ethnicity, gender, student status etc.) and merged into one data set with masked ID numbers. Access to original student data is limited to NSSE staff and authorized personnel at the Indiana University Center for Survey Research (CSR).

<div align="center">Data Analysis</div>

This study used data from 2013 to 2016 administration of the National Survey of Student Engagement (NSSE) survey in a comprehensive Midwestern university. The IBM Statistical Package for SPSS 22 was used for the statistical analysis. The effect sizes were interpreted and reported in order to provide potential information regarding what study features contributed to significance, non –significance, similarities or differences in effects. The validity and reliability of NSSE instrument were established using Confirmatory Factor Analysis (CFA) and Cronbach's alpha. CFA allows the researcher to measure the construct in order to avoid redundancy and also establish construct validity (Rattray & Jones, 2007; Burton & Mazerolle, 2011).

The independent variables of this study are student demographic characteristics including their gender identity (female = 1, male = 2); race/ethnicity (white = 1, non-white = 2); student type (international students = 1, domestic students = 2); and student status (traditional students = 1, non – traditional students = 2); student generation (first-generation students = 1, non-first-generation students = 2); academic majors by college (College of Arts and Humanities =1, College of Business =2, College of Education = 3, and College of Social Sciences = 4). The dependent variables are the three measures of student engagement namely (a) high-impact community-based learning; (b) student-faculty interaction; and (c) diversity experiences. Six statistical analyses were performed. First, the descriptive statistics were used to analyze and provide numerical calculations of the demographic characteristics of students such as gender, race and ethnicity, student status, student types etc. Second, there was a computation of mean scores of each measure of student engagement. Third, the reliability and validity of the instrument were examined. Fourth, students' self-reported engagement during their freshman year was matched with their self-reported engagement during their senior year. Wilcoxon Signed-Rank test (nonparametric procedure) was used to compare students' high-impact community-based learning, student-faculty interaction and diversity experiences during their freshman and senior year to assess the difference in mean ranks. This will not compare groups but will compare the difference in students' level of engagement during their freshman year and senior year i.e. comparing the Time 1 and Time 2. Fifth, Mann-Whitney U test (nonparametric procedure) was used to examine the differences in student engagement by comparing high-impact community-based learning, student-faculty

interaction, and diversity experiences between male and female students, white and non-white students, international and domestic students, first-generation and non-first generation students, and traditional and non-traditional students.

In order to determine whether a student is traditional or nontraditional, their age was considered. As previously discussed, traditional students were defined as 18 to 22 years of age, and nontraditional students were considered 25 years of age or older. Question 32 of the NSSE survey asks participants to indicate their birth year. This question allows the age of the participants to be determined as well as categorizing students as traditional or nontraditional. The age of 23 and 24 were excluded from this study to allow for a distinct difference between 22 years of age and 25 years of age. This has been supported by previous researchers (Bean & Metzner, 1985; Chao & Good, 2004; Choy, 2002; Courtner, 2014). Overall, the calculations for the Mann-Whitney U test require that the individual scores in the two samples are rank-ordered (Gravetter & Wallnau, 2004).

Last, Kruskal –Wallis test (nonparametric procedure) was used to examine the difference in student engagement comparing high-impact community-based learning, student-faculty interaction and diversity experiences between academic majors by college. Based on the university's categorization of majors by colleges (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences), students' primary academic majors were combined. The Kruskal-Wallis statistical test was used to evaluate differences between these four groupings. However, this statistical procedure only provides the overall outcomes but does not allow for

comparison between groups. The most commonly used follow- up test or can also be called post hoc test for the Kruskal-Wallis is the multiple Mann-Whitney U test with Bonferroni correction (Gravetter & Wallnau, 2004). The significance level (alpha) was set at .05 (95% confidence level). Regarding the Kruskal Wallis test, the alpha level was first set at .05 but was later adjusted to .01 during the posthoc test.

<div align="center">Summary</div>

This chapter articulates specific methods for addressing the research problem. The participants of the study are first-year and senior students from a comprehensive Midwestern university who completed the NSSE survey. Procedures were further discussed in order to provide readers with an explicit understanding of the specific research actions undertaken by the investigator. This provides a basis for readers to evaluate the integrity, reliability, and validity of the findings. The data analysis that was discussed serves as a filter in acquiring meaningful insights out of large data-set; keeps human bias away and helps the researcher reach a conclusion.

CHAPTER IV

RESULTS

The impact of student engagement on the educational experience of students has been extensively studied, proven that student engagement embraces practices that focus on the learning and development of students (Kuh, 2008). However, the difference in student engagement of various groups and types of students and the difference in student engagement over time has been studied less. The primary purpose of this study was to examine students' level of engagement during their freshman year and senior year to understand the changes in engagement over time. Furthermore, this study examined the difference in student engagement comparing male and female students, white and non-white students, international and domestic students, traditional and nontraditional students, first-generation and non-first-generation students, and academic majors by college (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences). This chapter presents the major results in both the longitudinal and cross-sectional study including demographic information, effect size analyses, validity, reliability, student engagement – freshman year and senior year, male and female students, white and non-white students, international and domestic students, traditional and non-traditional students, first-generation and non-first generation students, academic majors by major, and summary of the findings.

Demographic Information

The analysis of the demographic information of students was divided into two categories: (a) demographic information of students in the longitudinal study and (b)

demographic information of students in the cross-sectional study. Tables 3 and 4 highlighted the demographic information of the longitudinal and cross-sectional study. Ninety-seven university students participated in the longitudinal study and four-thousand, seven hundred and seven university students participated in the cross-sectional study.

Employing both longitudinal and cross-sectional models in a study that selects participants from the same data pool can contribute to overlapping responses. Depending on the overlapping response rate, a higher rate could potentially threaten the validity of a study. That was not necessarily the case in this study. Out of 4,773 participants that were selected for the cross-sectional study analysis, only 97 participants completed the survey twice (freshman year and again in senior year). The 97 participants who completed the survey twice were further selected for the longitudinal study analysis. Since NSSE is continually used to survey the educational experiences of students in four-year colleges and universities, the chances of students completing the survey twice are high. In this particular context, ninety-seven out of 4,773 students took the survey twice. This indicates that there is only 2.1% of overlapping responses and could be considered not problematic. Regarding the use of cross-sectional model in this study, the model captured participants with following varied demographic characteristics including gender, race and ethnicity (white and non-white); student geographical status (international and domestic); student type (traditional or non-traditional); student generation (first generation and non-first generation); and student academic majors by college.

Table 3

Demographic Information of the Participants (Longitudinal Study)

Variables	Frequency N=97	Percent
Gender of Students		
Male	20	20.6
Female	61	62.9
Unclassified	16	16.5
Race/Ethnicity		
White Students	84	86.6
Non-White Students	11	11.3
Unclassified	2	2.1
Student Status		
Domestic Students	87	89.7
International Students	2	2.1
Unclassified	8	8.2
Student Type		
Traditional Students	78	80.4
Non-Traditional Students	3	3.1
Unclassified	16	16.5
Student Generation		
First-Generation Students	30	30.9
Non-First-Generation Students	51	52.6
Unclassified	16	16.5
Academic Majors by College		
Arts and Humanities	22	22.7
Business	12	12.4
Education	33	34.0
Social Sciences	16	16.5
Unclassified	14	14.4

Table 4

Demographic Information of the Participants (Cross-Sectional Study)

Variables	Frequency n= 4773	Percent
Gender of Students		
Male	1324	30.1
Female	1444	32.8
Unclassified	2005	44.9
Race/Ethnicity		
White Students	3829	80.2
Non-White Students	944	19.8
Unclassified	0	0.0
Student Status		
Domestic Students	4255	89.1
International Students	119	2.5
Unclassified	399	8.4
Student Type		
Traditional Students	3562	74.6
Non-Traditional Students	365	7.6
Unclassified	846	17.7
Student Generation		
First-Generation Students	1912	40.1
Non-First-Generation Students	2496	52.3
Unclassified	365	7.6
Academic Majors by College		
Arts and Humanities	1055	22.1
Business	734	15.4
Education	1662	34.8
Social Sciences	665	13.9
Unclassified	657	13.7
Class Level/Current Year of Study		
Freshman/1st Year	1415	29.6
Sophomore/2nd Year	148	3.1
Junior/3rd Year	160	3.4
Senior/4th Year	2566	53.8
Unclassified	125	2.6

<div align="center">Effect Size Analyses</div>

<u>Longitudinal Study</u>

According to Tomczak and Tomczak (2014), the effect size estimates for Wilcoxon Signed Rank Test include the following values: "Z – standardized value for the U-value; r – correlation coefficient where r assumes the value ranging from –1.00 to 1.00; and r2 (η2) – the index assumes values from 0 to 1 and multiplied by 100% indicates the percentage of variance in the dependent variable explained by the independent variable" (p.23). Pearson's r was calculated using the formula below (Cohen 1988; Fritz, Morris, & Richler, 2012; Tomczak & Tomczak, 2014).

Step 1: $\quad r = \dfrac{Z}{\sqrt{N\,(n1 + n2)}}$

Step 2: $\quad r^2 \text{ or } \eta^2 = \dfrac{Z^2}{N\,(n1 + n2)}$

Cohen's (1988) conventions were used to calculate the effect size. A correlation coefficient of .10 is considered a weak effect; a correlation coefficient of .30 is considered a moderate effect; and a correlation coefficient of .50 or greater represents a strong or large effect. As shown in Table 5, Cohen's effect size values: community-based learning course (r = .03); community service /volunteer work (r = .01); student – faculty interaction (r = .08); and diversity experiences (r = .01) suggested a significant weak effect.

Table 5

Effect Size Analysis of the Longitudinal Study

| Variables | High-Impact Community-Based Learning | | | |
	Community-Based Learning Course	Community Service/Volunteer Work	Student-Faculty Interaction	Diversity Experiences
Freshman Yr.(Time 1) **Senior Yr.** (Time 2)	.03	.01	.08	.01

Note: Cohen's (1988) convention (.0 – .20= weak effect, .30 - .50 = moderate effect, and .06 or greater = strong or large effect)

Cross-Sectional Study

The effect size estimates for Mann-Whitney U and Kruskal-Wallis nonparametric

tests were evaluated using the following formulas to calculate Pearson's "r" (Cohen,

1988; Fritz, Morris, & Richler, 2012; Lakens, 2013; Tomczak & Tomczak, 2014). Table

6 shows that Cohen's effect size values suggested a significant weak effect in all

categories except community-based learning course (student status) which has a

correlation coefficient of .35 suggesting a significant moderate effect.

(a) *Formula - Mann-Whitney U Test*

Step 1: $r = \frac{Z}{\sqrt{N}}$

Step 2: r^2 or $\eta^2 = \frac{Z^2}{N}$

(b) *Formula - Kruskal Wallis Test*

Step 1: $F = \frac{Chi^2}{N-1}$ (Transform Chi Square into an F value)

Step 2: r^2 or $\eta^2 = \frac{F \, X \, (4-1)}{F \, X \, (4-1)+(n-4)}$

Table 6

Effect Size Analysis of the Cross-Sectional Study

Variables	High-Impact Community-Based Learning			
	Community-Based Learning Course	Community Service/Volunteer Work	Student-Faculty Interaction	Diversity Experiences
Gender Male Female	.16	.08	.06	.04
Race and Ethnicity White Non-White	.00	.04	.06	.20
Student Status International Domestic	.35	.07	.07	.17
Student Type Traditional Non-Traditional	.20	.07	.10	.10
Student Generation First-Generation Non-First Generation	.03	.02	.03	.05
Academic Majors by College Arts & Humanities Business Education Social Sciences	.03	.01	.01	.01

Note: Cohen's (1988) convention (.0 – .20= weak effect, .30 - .50 = moderate effect, and .06 or greater = strong or large effect)

Validity

Confirmatory Factor Analysis (CFA) was conducted to establish construct

validity. According to Kaiser (1974), a minimum of .5 and values between .5 and .7 are

average/mediocre, values between .7 and .8 are good, values between .8 and .9 are great

and values above .9 are excellent. In order to check the suitability of variable, Bartlett's

Test of Sphericity should be significant ($p < .05$) and Kaiser-Meyer-Olkin Measure of

Sampling Adequacy should be above .60 or greater (Field, 2005). Table 7 highlights the

validity statistics for both longitudinal and cross-sectional studies. According to the

longitudinal study validity statistics, Kaiser Meyer-Olkin is .774 and Bartlett's Test of

Sphericity is .000 suggesting a great suitability of variables. The cross-sectional study

validity statistics indicate that Kaiser Meyer-Olkin is .819 and Bartlett's Test of

Sphericity is .000 also suggesting a great suitability of variables.

Table 7

Measures of Student Engagement Validity Statistics (Longitudinal and Cross-sectional Study)

	Longitudinal Study	
Factors	Scale Items	Measures of Sampling Adequacy (MSA)
Student – Faculty Interaction		
	Talked about career plans with a faculty member	.817* .840**
	Worked with a faculty member on activities other than coursework	.739* .797**
	Discussed course topics, ideas, or concepts with a faculty member outside of class	.655* .815**
	Discussed your academic performance with a faculty member	.776* .879**
Diversity Experiences		
	Had discussions with people of a different race or ethnicity	.751* .768**
	Had discussions with people from a different economic background	.732* .801**
	Had discussions with people with different religious beliefs	.749* .742**
	Had discussions with people with different political beliefs	.735* .736**

(Table Continues)

	Cross-Sectional Study	
Factors	Scale Items	Measures of Sampling Adequacy (MSA)

Student – Faculty Interaction

	Talked about career plans with a faculty member	.849
	Worked with a faculty member on activities other than coursework	.844
	Discussed course topics, ideas, or concepts with a faculty member outside of class	.804
	Discussed your academic performance with a faculty member	.817

Diversity Experiences

	Had discussions with people of a different race or ethnicity	.819
	Had discussions with people from a different economic background	.792
	Had discussions with people with different religious beliefs	.819
	Had discussions with people with different political beliefs	.824

Note: Longitudinal Study (Time 1 was indicated with [*] and Time 2 with [**]); Kaiser Meyer Olkin MSA (longitudinal study = .774; cross-sectional study = .819); Bartlett Test of Sphericity (longitudinal study = .000; cross-sectional study = .000) and range of responses (1-5).

<div align="center">Reliability</div>

Cronbach's alpha, α (or coefficient alpha), established by Lee Cronbach in 1951, measures reliability, or internal consistency (Tavakol & Dennick, 2011). Internal consistency illustrates "the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inter-relatedness of the items within the test" (Tavakol & Dennick, 2011, p.53). The reliability statistics of the longitudinal and cross-sectional studies were further highlighted in Table 8.

<u>Longitudinal Study</u>

Internal consistency was found in the eight individual questions with an alpha coefficient of .856, suggesting that the items have relatively strong internal consistency. The reliability scores for factors in student-faculty interaction show a strong internal consistency with a range of an alpha score of .840 (Time 2 - talked about career plans with a faculty member) to an alpha score of .855 (Time 1 - talked about career plans with a faculty member). In addition, the reliability scores for factors in diversity experiences also showed a strong internal consistency with a range of an alpha score of .845 (Time 1 - had discussions with people of a different race or ethnicity) to an alpha score of .854 (Time 1 - had discussions with people from a different economic background).

<u>Cross-Sectional Study</u>

With an alpha coefficient of .817, the reliability statistics suggest that the scale items have relatively strong internal consistency. For student-faculty interaction, the alpha score range from .791 (discussed course topics, ideas, or concepts with a faculty member outside of class) to an alpha score of .802 (worked with a faculty member on

activities other than coursework). Furthermore, the reliability scores for factors in

diversity experiences ranged from an alpha score of .792 (had discussions with people

from a different economic background) to an alpha score of .798 (had discussions with

people of a different race or ethnicity).

Table 8

Measures of Student Engagement Reliability Statistics (Cross-sectional and Longitudinal
Study)

Cross-Sectional Study Scale Items	$n = 4500$ Cronbach's Alpha Score (a)	Mean Scores *(M)*	Standard Deviation *(SD)*
Student – Faculty Interaction			
Talked about career plans with a faculty member	.801	2.46	.935
Worked with a faculty member on activities other than coursework	.802	1.99	.982
Discussed course topics, ideas, or concepts with a faculty member outside of class	.791	2.16	.893
Discussed your academic performance with a faculty member	.796	2.17	.882
Diversity Experiences			
Had discussions with people of a different race or ethnicity	.798	2.77	.900
Had discussions with people from a different economic background	.792	2.92	.845
Had discussions with people with different religious beliefs	.794	2.92	.886
Had discussions with people with different political beliefs	.796	3.00	.874

(Table Continues)

Longitudinal Study Scale Items	$n = 79$ Cronbach's Alpha *(a)*	Mean Scores *(M)*	Standard Deviation *(SD)*
Student – Faculty **Interaction**			
Talked about career plans with a faculty member	.855 .840	2.19 2.89	.848 * .947 **
Worked with a faculty member on activities other than coursework	.850 .841	1.75 2.44	.792 * 1.141 **
Discussed course topics, ideas, or concepts with a faculty member outside of class	.852 .844	2.14 2.51	.780 * .932 **
Discussed your academic performance with a faculty member	.854 .842	2.03 2.37	.832 * .936 **
Diversity **Experiences**			
Had discussions with people of a different race or ethnicity	.845 .848	2.89 2.95	.816 * .830 **
Had discussions with people from a different economic background	.854 .850	2.95 3.09	.815 * .720 **
Had discussions with people with different religious beliefs	.846 .850	3.05 3.05	.830 * .815 **
Had discussions with people with different political beliefs	.848 .849	2.99 3.15	.899 * .802 **

Note: Alpha coeeficients (longitudinal study = .856; cross-sectional study = .817) suggesting a high internal consistency; Longitudinal Study Reliability Statistics (Time 1 was indicated with [*] and Time 2 with [**]; Range of responses (1-5).

Student Engagement – Freshman Year and Senior Year

Wilcoxon signed ranked test was conducted to examine the difference in student engagement specifically comparing students' high-impact community-based learning, student-faculty interaction and diversity experiences during their freshman and senior year. Table 9 shows that there is a statistically significant difference comparing students' high-impact community-based learning (community-based learning course and community service/volunteer work) and student-faculty interaction between Time 1 (freshman year) and Time 2 (senior year). Therefore, the null hypothesis was rejected (p <.05).

The analysis indicated that students participated more in courses that included a community-based project during their freshman year compared to their senior year. In addition, students participated more in community service or volunteer work during their freshman year compared to their senior year. Furthermore, students interacted more with faculty members which involve talking about career plans, working together on activities, discussing course topics, ideas or concepts as well as discussing their academic performance during their senior year compared to their freshmen year.

Table 9

Comparative Analysis of Student Engagement during their Freshman Year and Senior Year

Measures of Student Engagement	Time 1 (Freshman Year)		Time 2 (Senior Year)			
	n	*Mean*	*N*	*Mean*	*z*	*p*
High-Impact Community-Based Learning						
Community-Based Learning Course	92	19.44	85	17.50	2.596	.009*
Community Service/Volunteer Work	89	31.07	80	30.56	5.157	.000*
Student – Faculty Interaction	93	38.13	92	41.29	4.130	.000*
Diversity Experiences	92	32.54	86	33.33	1.274	.203

Note: Alpha (*a*) = .05

Student Engagement – Male and Female Students

Mann-Whitney U test was conducted to examine the difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between male and female students. As shown in Table 10, significant gender differences emerged on high–impact community-based learning (community-based learning course and community service/volunteer work). The analysis indicated that females participated more in courses that included a community-based project than males. In addition, females participated more in community service or volunteer work than males. Therefore, the null hypothesis was

rejected (p < .05). However, there were no statistically significant differences when comparing student-faculty interaction and diversity experiences between males and females.

Table 10

Comparative Analysis of Student Engagement of Male and Female Students

Measures of Student Engagement		Male	Female		
	n	*Mean*	*Mean*	*z*	*p*
High-Impact Community-Based Learning					
Community-Based Learning Course	2742	1313.95	1423.77	4.120	.000*
Community Service/Volunteer Work	2721	1292.36	1423.42	4.828	.000*
Student-Faculty Interaction	2768	1405.26	1365.46	1.316	.188
Diversity Experiences	2764	1399.01	1367.39	1.049	.294

Note: Alpha (*a*) = .05

Student Engagement – White and Non-White Students

Analyzing this research question, Mann Whitney U test was also conducted to determine the difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between white and non-white students. Reviewing Table 11, white students and non-white students differ significantly with regard to their diversity experiences (p = .000). Non-

white students interacted more with people of a different race or ethnicity; economic

background; religious beliefs; and political beliefs than white students. Therefore, the

null hypothesis was rejected (p < .05).

Table 11

Comparative Analysis of Student Engagement of White and Non-White Students

		White	Non-White		
Measures of Student Engagement	*n*	*Mean*	*Mean*	*z*	*p*
High-Impact community Based-Learning					
Community-Based Learning Course	4562	2283.11	2273.30	.210	.833
Community Service/Volunteer Work	4378	2185.48	2214.36	.580	.562
Student-Faculty Interaction	4768	2368.07	2451.25	1.671	.095
Diversity Experiences	4616	2257.88	2552.90	5.720	.000*

Note: Alpha (*a*) = .05

Student Engagement – International and Domestic Students

Mann-Whitney U test was used to evaluate the difference in student engagement

specifically comparing high-impact community-based learning, student-faculty

interaction and diversity experiences between international and domestic students. As

presented in Table 12, there is a statistically significant difference comparing high-impact

community-based learning (community-based learning course) between international and

domestic students (p = .000). The analysis indicated that international students

participated in more courses that included a community-based project than domestic

students. Therefore, the null hypothesis was rejected (p<.05).

Table 12

Comparative Analysis of Student Engagement of Domestic and International Students

Measures of Student Engagement	n	Domestic Mean	International Mean	z	p
High-Impact community Based-Learning					
Community-Based Learning Course	4344	2162.91	2531.62	3.483	.000*
Community Service/Volunteer Work	4305	2154.62	2094.44	.570	.569
Student-Faculty Interaction	4252	2183.31	2282.14	.847	.397
Diversity Experiences	4250	2189.40	2007.99	1.554	.120

Note: Alpha (*a*) = .05

Student Engagement – Traditional and Non-Traditional Students

Mann-Whitney U was used to examine the difference in student engagement

specifically comparing high-impact community-based learning, student-faculty

interaction and diversity experiences between traditional and non-traditional students. As

seen in Table 13, there is a significant difference in high-impact based learning

(community-based learning course and community service or volunteer work) and

student-faculty interaction between traditional and non-traditional students (p < .05).

Therefore, the null hypothesis was rejected.

The analysis shows that traditional students participated more in courses that included a community-based project and participated more in community service or volunteer work than non-traditional students. Furthermore, traditional students interacted more with faculty members which involve talking about their career plans, working together on activities, discussing course topics, ideas or concepts as well as discussing their academic performance than non-traditional students.

Table 13

Comparative Analysis of Student Engagement of Traditional and Non-Traditional Students

Measures of Student Engagement	Traditional		Non-Traditional		
	n	*Mean*	*Mean*	*z*	*p*
High-Impact Community-Based Learning					
Community-Based Learning Course	3901	1968.54	1780.03	3.428	.001*
Community Service/Volunteer Work	3866	1951.48	1757.32	3.478	.001*
Student-Faculty Interaction	3924	1975.62	1834.54	2.279	.023*
Diversity Experiences	3923	1971.69	1867.22	1.690	.091

Note: Alpha (*a*) = .05

<u>Student Engagement – First-Generation and Non-First Generation Students</u>

Mann-Whitney U was used to examine the difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between first-generation and non-first-generation students. Table 14 presents the statistically significant difference in high-impact community-based learning (community service or volunteer work) between first-generation and non-first-generation students ($p < .05$). The analysis indicated that non-first-generation students participated more in community service or volunteer work than first-generation students.

Table 14

Comparative Analysis of Student Engagement of First-Generation and Non-First-Generation Students

Measures of Student Engagement	N	First-Generation Mean	Non-First Generation Mean	z	p
High-Impact Community- Based Learning					
Community-Based Learning Course	4377	2216.75	2167.75	1.436	.151
Community Service/Volunteer Work	4337	2129.62	2199.10	2.007	.045*
Student-Faculty Interaction	4405	2212.79	2195.49	.450	.653
Diversity Experiences	4401	2171.32	2223.78	1.369	.171

Note: Alpha (*a*) = .05

Student Engagement – Academic Majors by College

Kruskal Wallis test was used to examine the difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between academic majors by college (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences). As presented in Table 15, there is a statistically significant difference between these four groupings comparing their high-impact community-based learning (community-based learning course and community service or volunteer work), student-faculty interaction and diversity experiences ($p < .05$). Therefore the null hypothesis was rejected. As noted earlier, the Kruskal Wallis test only provides the overall outcomes but does not allow for comparison between groups.

Table 15

Comparative Analysis of Student Engagement of Academic Majors by College (Arts and Humanities, Business, Education, and Social Sciences)

Measures of Student Engagement	n	Arts& Hum. Mean	Business Mean	Education Mean	Social Sciences Mean	df	p
High-Impact Community-Based Learning							
Community-Based Learning Course	4560	2075.98	2100.49	2557.60	2195.66	4	.000*
Community Service/Volunteer Work	4376	2120.58	2022.65	2319.33	2258.81	4	.000*
Student-Faculty Interaction	4766	2536.36	2267.01	2435.09	2191.80	4	.000*
Diversity Experiences	4614	2332.83	2180.80	2281.15	2476.42	4	.001*

Note: Alpha (*a*) = .05

As a result of the null hypothesis being rejected, multiple Mann-Whitney U tests with Bonferroni correction, which is the most commonly used follow- up test/post hoc test for the Kruskal-Wallis test, was conducted to examine the differences in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between the following 6 groupings: (i) Arts and Humanities vs. Business, (ii) Arts and Humanities vs. Education, (iii) Arts and Humanities vs. Social Sciences, (iv) Business vs. Education, (v) Business vs. Social Sciences, and (vii) Education vs. Social Sciences. To perform a Bonferroni correction,

the alpha (.05) was divided by the number of groupings (6) which resulted in a new

critical alpha or modified alpha (.01). The differences in student engagement between

these six comparisons were calculated based on the modified alpha (.01). A comparative

analysis of each of these six groupings was presented in Tables 15a-15f.

Table 15a

Comparative Analysis of Student Engagement of the College of Arts and Humanities and the College of Business

Measures of Student Engagement	n	Arts & Humanities Mean	Business Mean	z	p
High-Impact Community-Based Learning					
Community-Based Learning Course	1774	884.78	891.41	.302	.763
Community Service/Volunteer Work	1755	894.28	854.55	1.815	.069
Student-Faculty Interaction	1788	935.40	835.77	4.037	.000*
Diversity Experiences	1784	916.54	857.95	2.382	.017

Notes: (a) Mann-Whitney U with Bonferroni Correction and (b) Alpha (*a*) = .01

Table 15a provided a comparison of high-impact community-based learning,

student-faculty interaction and diversity experiences of students majoring in the College

of Arts and Humanities and students in the College of Business. The result shows that

students majoring in the College of Arts and Humanities had more interactions with their

faculty members than those majoring in the College of Business (p < .01).

Table 15b

Comparative Analysis of Student Engagement of the College of Arts and Humanities and the College of Education

Measures of Student Engagement	n	Arts & Humanities Mean	Education Mean	z	p
High-Impact Community-Based Learning					
Community-Based Learning Course	2701	1174.56	1462.69	10.671	.000*
Community Service/Volunteer Work	2675	1262.93	1385.45	4.419	.000*
Student-Faculty Interaction	2715	1393.41	1335.53	1.886	.059
Diversity Experiences	2713	1376.08	1344.92	1.019	.308

Notes: (a) Mann-Whitney U with Bonferroni Correction and (b) Alpha (*a*) = .01

A comparative analysis of high-impact community-based learning, student-faculty interaction and diversity experiences between students majoring in the College of Arts and Humanities and students in the College of Education was presented in Table 15b. The statistically significant difference indicated that students majoring in the College of Education participated more in courses that included a community-based project and spent more hours per week doing community service or volunteer work than those majoring in Arts and Humanities (p < .01).

Table 15c

Comparative Analysis of Student Engagement of the College of Arts and Humanities and the College of Social Sciences

Measures of Student Engagement	n	Arts & Humanities Mean	Social Sciences Mean	z	p
High-Impact Community-Based Learning					
Community-Based Learning Course	1704	836.67	881.49	2.071	.038
Community Service/Volunteer Work	1692	826.03	878.83	2.398	.016
Student-Faculty Interaction	1718	888.62	813.28	3.082	.002*
Diversity Experiences	1716	837.18	892.28	2.263	.024

Notes: (a) Mann-Whitney U with Bonferroni Correction and (b) Alpha (*a*) = .01

As indicated in Table 15c, there is a statistically significant difference comparing student-faculty interaction between students majoring in the College of Arts and Humanities and students in the College of Social Sciences (p < .01). Students majoring in Arts and Humanities interacted more with their faculty members than those majoring in Social Sciences.

Table 15d

Comparative Analysis of Student Engagement of the College of Business and the College of Education

Measures of Student Engagement	n	Business Mean	Education Mean	z	p
High-Impact Community-Based Learning					
Community-Based Learning Course	2381	1027.32	1262.94	8.726	.000*
Community Service/Volunteer Work	2358	1067.12	1228.80	5.878	.000*
Student-Faculty Interaction	2395	1139.63	1223.79	2.762	.006*
Diversity Experiences	2393	1160.10	1213.26	1.749	.080

Notes: (a) Mann-Whitney U with Bonferroni Correction and (b) Alpha (*a*) = .01

Table 15d presents the statistically significant difference in high-impact community-based learning (community-based learning course and community service or volunteer work) and student-faculty interaction between students majoring in the College of Business and students majoring in the College of Education. The analysis indicated that students majoring in the College of Education participated more in courses that included a community-based project; participated more in community services/volunteer work; and interacted more with faculty members than those majoring in the College of Business.

Table 15e

Comparative Analysis of Student Engagement of the College of Business and the College of Social Sciences

Measures of Student Engagement	n	Business Mean	Social Sciences Mean	z	p
High-Impact Community-Based Learning					
Community-Based Learning Course	1387	679.75	709.70	1.556	.120
Community Service/Volunteer Work	1375	653.78	725.51	3.725	.000*
Student-Faculty Interaction	1398	690.64	709.30	.868	.386
Diversity Experiences	1396	656.77	744.50	4.094	.000*

Notes: (a) Mann-Whitney U with Bonferroni Correction and (b) Alpha (*a*) = .01

Reviewing Table 15e, the significant difference indicates that students majoring in the College of Social Sciences participated more in high-impact community-based learning (community service or volunteer work) than those majoring in the College of Business. The analysis also indicated that students majoring in the College of Social Sciences interacted more with faculty members than those majoring in the College of Business.

Table 15f

Comparative Analysis of Student Engagement of the College of Education and the College of Social Sciences

Measures of Student Engagement	n	Education Mean	Social Sciences Mean	z	p
High-Impact Community-Based Learning					
Community-Based Learning Course	2314	1210.20	1025.43	6.885	.000*
Community Service/Volunteer Work	2295	1156.06	1127.87	1.012	.312
Student-Faculty Interaction	2325	1177.88	1125.79	1.700	.089
Diversity Experiences	2325	1135.15	1232.67	3.191	.001*

Notes: (a) Mann-Whitney U with Bonferroni Correction and (b) Alpha (*a*) = .01

Table 15f presents the statistically significant differences in high-impact community-based learning (community-based learning course) and diversity experiences between students majoring in the College of Education and students majoring in the College of Social Sciences. The analysis indicated that students majoring in the College of Education participated more in community-based learning course as well as interacting more with people of a different race or ethnicity; economic background; religious beliefs; and political beliefs than those majoring in the College of Social Sciences.

Summary

This chapter presents the findings to answer the research questions in this study. Descriptive statistics such as frequencies and percentages were calculated to provide demographic and background information of the respondents. In both longitudinal and cross-sectional studies, the majority of the respondents were females, white students, traditional students, domestic students, first-generation students, and students in the College of Education.

Effect sizes of both longitudinal and cross-sectional studies were calculated to measure the relationship between variables. The Cohen's size values suggested a significant weak effect in both the longitudinal and cross-sectional studies. Furthermore, the validity and reliability were measured to check for internal consistency and assess the intended constructs under study. In both longitudinal and cross-sectional studies, the validity and reliability statistics suggested great suitability of variables and strong internal consistency.

In response to the research question 1 that focuses on the longitudinal aspect of this study, a Wilcoxon test was used to determine if there is a difference in student engagement specifically comparing students' high-impact community-based learning, student-faculty interaction and diversity experiences during their freshman and senior year. The result showed that there is a significant difference in all categories except diversity experiences.

Research questions 2, 3, 4, 5, 6 and 7 highlighted the cross-sectional aspect of this study. Mann-Whitney U tests were applied to research questions 2, 3, 4, 5 and 6 to

determine the difference in student engagement specifically comparing students' high-impact community-based learning, student-faculty interaction and diversity experiences between male and female students, white and non-white students, international and domestic students, traditional and nontraditional students, first-generation and non-first-generation students. The Mann-Whitney U test found statistically significant differences between the following groups: (a) male and female students [high-impact community-based learning (community-based learning course and community service or volunteer work)]; (b) white and non-white students (diversity experiences); (c) international and domestic students [high-impact community-based learning (community-based learning course)]; (d) traditional and non-traditional students [high-impact community-based learning (community-based learning course and community service or volunteer work) and student-faculty interaction]; and (e) first-generation and non-first-generation students [high-impact community-based learning (community service or volunteer work)].

Kruskal-Wallis test was applied on question 7 to determine the difference in student engagement specifically comparing students' high-impact community-based learning, student-faculty interaction and diversity experiences between academic majors by college (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences). The statistically significant difference in all of the four categories resulted in the application of Multiple Mann-Whitney U tests with Bonferroni correction (Kruskal-Wallis post-hoc test). Six groups were created for this comparative analysis. The results from the post-hoc test indicated the statistically significant differences between the following groups: (a) College of Arts and Humanities vs. College

of Business (student-faculty interaction); (b) College of Arts and Humanities vs. College

of Education (community based learning course and community service/volunteer work);

(c) College of Arts and Humanities vs. College of Social Sciences (student-faculty

interaction); (d) College of Business vs. College of Education (community-based learning

course and community service/volunteer work and student–faculty interaction); (e)

College of Business vs. College of Social Sciences (community service/volunteer work

and diversity experiences); and (f) College of Education vs. College of Social Sciences

(community –based learning course and diversity experiences). As previously mentioned,

this chapter only provides the findings of this study. Discussions, implications for

professional practice, recommendations and conclusion will be further highlighted in the

subsequent chapter.

CHAPTER V

DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

To date, there is an extensive literature regarding the influence of student

engagement on the development of students. However a minimum number of studies

have examined the difference in student engagement over time as well as examining the

difference in student engagement, extensively comparing various groups and types of

students (Astin & Lee 2003; Gordon et al., 2008; Kuh et al. 2008; Wyatt, 2011; Fuller et

al., 2011). The primary purpose of this study was to examine students' level of

engagement during their freshman year and senior year to understand the changes in

engagement over time. Furthermore, this study examined the difference in student

engagement comparing male and female students, international and domestic students,

white and non-white students, traditional and nontraditional students, first-generation and

non-first-generation students; and academic majors by college (College of Arts and

Humanities, College of Business, College of Education, and College of Social Sciences).

Chapter V has five sections including (a) discussion of conceptual and theoretical

frameworks; (b) discussion of findings; (c) implications for professional practice; (d)

recommendations for future studies; and (e) conclusion.

<u>Discussion of Conceptual and Theoretical Frameworks</u>

Astin's (1984) theoretical framework for student involvement and Bringle,

Games, and Malloy's (1999) conceptual framework for community engagement served as

the guide, structure, and support for the rationale of this study. Astin's (1984) theory of

student involvement was relevant to this study because it revealed some elements and

factors that could potentially impact student engagement which include: (i) student's demographics, (ii) background, (iii) student's environment, (iv) institutional inputs etc. Astin (1984) opined that these elements were structured with the purpose of addressing the issues of student engagement. Following Astin's opinion, this study adopted these elements of the theory to examine how student demographics and background interact with student engagement and also serve as indicators of student success.

The findings of the longitudinal study support Astin's first assumption about student engagement suggesting that engagement is continuous. As highlighted in the longitudinal findings, students exhibit different levels of involvement in different activities at different times. This was reflected in students' higher engagement in high – impact community-based learning during their freshman year than senior year. Conversely, students interacted more with their faculty members during their senior year than freshman year. In addition, the findings of the cross-sectional study support also Astin's first assumption suggesting that the level of engagement varies from student to student. As presented in the findings, the level of engagement varied between male and female students, international and domestic students, white and non-white students, traditional and nontraditional students, first-generation and non-first-generation students; and students majoring in various academic disciplines.

Bringle, Games, and Malloy's (1999) conceptual framework for community engagement illuminates community-based learning as a method of engaging students in learning opportunities. Adapting this concept, this study looked at community-based learning from two different perspectives. The first perspective, 'community based

learning course' looks at the number of courses that included a community-based project. The second perspective, 'community service/volunteer work' examines students' level of participation in community service or volunteer work. Supported by Bringle, Games, and Malloy's (1999) assumption, these two perspectives highlight primary ways in which academic institutions involve students in community engagement. Generally, this study suggested that both the theoretical and conceptual frameworks aligned well with the rationale for conducting this study.

<div align="center">Discussion of Findings</div>

Analyzing the demographic information of the participants in both the longitudinal and cross-sectional studies, the findings illustrate that the majority of the respondents were female students, white students, traditional students, domestic students, and non-first-generation students. Reviewing the demographic statistics of the study's institution, the demographic information of this study is unsurprising, as the institution is predominantly made up of female students, white students, traditional students, and non-first-generation students. This section provides a discussion of findings of the difference in student engagement over time (freshman year and senior year) and the difference in student engagement comparing groups.

Regarding the effect size analysis, the 'effect size values' allowed the researcher to determine the level of the statistically significant differences among the groups in both the longitudinal and cross-sectional studies. Particularly with the cross-sectional study that has a large sample size (4,773 participants), extremely small differences can be statistically significant. Such statistically significant differences may not suggest that

there is an important or meaningful difference in the influence of one variable on another variable. Therefore to determine how meaningful or important these differences are, the effect size was calculated to highlight the degree, the null hypotheses were false. As Cohen (1988) indicated, the larger the effect size, the more important the effect and the smaller the effect size, the less important the effect. The effect size analysis of the longitudinal study indicated that Cohen's effect size values for all groups were less than .30 suggesting a low effect or practical significance. Further, the effect size analysis of the cross-sectional study indicated that the effect size values were less than .30 (low effect) among all groups except for student status. The effect size value for student status suggested that participation in community-based learning courses has a moderate effect on the comparison of international and domestic students ($r = .35$, $p < .05$). In other words, this simply indicated that students holding a status either as an international student or domestic student was a significant factor in determining the level of participation in community-based learning courses. Such a finding could potentially inform practitioners of the discernible magnitude of the differences in the engagement level between international and domestic students. Therefore academic institutions should pay close attention to the engagement level among this group of students.

<center>Student Engagement – Freshman Year and Senior Year</center>

The longitudinal aspect of this study embedded the analysis of the difference in student engagement over time (i.e. from freshman year to senior year). The difference in student engagement specifically comparing students' high-impact community-based learning, student-faculty interaction and diversity experiences during their freshman and

senior year was analyzed. According to the findings of this study, there is a statistically significant difference comparing students' high-impact community-based learning and student-faculty interaction during their freshman and senior year. These findings further indicate that students are more likely to participate in community-based learning courses and community service or volunteer during their freshman year (Time 1) than in their senior year (Time 2). Conversely, students had more interaction during their freshman year than senior year.

Reflecting on Astin's involvement theory, the findings support Astin's assumption indicating that students exhibit a different level of engagement in different activities at different times (Astin, 1984). Students' high level of participation in community-based learning during their freshman year may suggest that there is more focus on recruiting and getting students engaged and involved in educational opportunities such as community-based learning activities during their freshman year. However, this is not necessarily the case for students during their senior year. This finding supports Hunter's (2006) research which indicates that academic institutions put more efforts on the delivery of curricular and co-curricular activities to students to help them thrive on campus during their freshman year.

Furthermore, the findings may indicate that after two to three years, students may be working more to support themselves during their senior year and this could potentially impact their ability to engage more in educational opportunities such as community-based learning activities. In addition, since internships are mandated in some programs for seniors coupled with the graduation that lies ahead, students may feel overwhelmed

and view their participation in other educational activities as irrelevant during their senior year. Korobova and Starobin (2015) noted that students tend to be more focused on graduation and less concerned with institutional emphasis on engagement in educational activities during their senior year. Following Korobova and Starobin's (2015) opinion, Kuh (2009b) indicated that heavy commitments to work and/or other educational activities dampen engagement experiences for students during their senior year.

The findings also illustrate that students interacted more with their faculty members during their senior year than freshman year. This may suggest that students spend more time adjusting on campus during their freshman year. By their senior year, students may get more acquainted with faculty members by doing research, and discussing coursework or career plans. In addition, students may discuss their interest in joining student organizations or clubs that are being advised by faculty members, and getting involved outside the classroom such as co-presenting at a conference. This is supported by Miller and Dumford (2018) indicating that student participation in educational activities during their senior year is related to more frequent student–faculty interaction, as most of these activities are usually done under the guidance of a faculty advisor.

Furthermore, the difference in student-faculty interaction may suggest that due to power discrepancies, students may feel intimidated by faculty members during their freshman year. As students progress to senior year, the power discrepancy may tend to diminish due to students' continuous need for more career advising. This is supported by Reif (2007) suggesting that the power imbalance between students and academic affairs

is prevalent in higher education and could hinder collaboration or interaction between students and faculty.

Although students' diversity experience was not statistically significant, the positive growth in students' interaction with faculty members from Time 1 to Time 2 is of importance in celebrating student success and promoting student development. The findings of the longitudinal study support the notion of Fuller et al. (2011) regarding the benefits of using longitudinal datasets. Regarding the use of longitudinal datasets, academic institutions may be "relatively certain that their overall efforts in student engagement are positively influencing students as time progresses" (Fuller et al., 2011, p.746).

By tracking and calculating students' level of engagement from their freshman year (Time 1) to their senior year (Time 2), the effects of their experiences in colleges and universities can be more directly explored (Fuller et al., 2011). Overall, the longitudinal approach provides a useful perspective and understanding of the changes in high-impact community-based, student-faculty interaction and diversity experiences of students not attainable from a comparative analysis conducted at a single point in time. Therefore it is of great importance that academic and program administrators use a longitudinal model to examine the growth in students' experiences in colleges and universities. The longitudinal study may support educational institutions seeking to meet pressures that come from programs' quality monitoring and improvement.

<u>Comparing Student Engagement by Groups</u>

The cross-sectional aspect of this study examined the difference in student engagement specifically comparing students' high-impact community-based learning, student-faculty interaction and diversity experiences of different groups and types of students. This section highlights the student engagement between male and female students, white and non-white students, international and domestic students, traditional and non-traditional students, first generation and non-first generation students and academic majors by college.

<u>Gender - Male and Female Students</u>

The difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between male and female students was analyzed. The findings indicate that there is a statistically significant difference comparing high-impact community-based learning between male and female students. There is no consistency in the literature that male students are more engaged in educational activities than females and vice versa. This study shows that there is a gender difference in the engagement of students in high-impact community-based learning. The significant difference suggests that females participate in more community-based learning courses than males. In addition, females have a higher proclivity for community service or volunteerism than males. The gender difference supports previous studies conducted by Jones et al. (2000) and Chesbrough (2011) which suggest that females see themselves as more engaged than males in service activities. Furthermore, the non-significant difference comparing student-faculty interaction and diversity

experience between males and females supports previous studies conducted by Strayhorn and Saddler (2009) and Harper et al. (2004) which suggest that males and females have equal diversity experience and also interact with their faculty members equally.

Furthermore, the gender difference suggests that male and female students may have different motivational factors for participating in high-impact community-based learning. Female students are more likely to participate in high-impact community-based learning, as found in previous studies indicating that females perceive volunteerism or any form of activity that involves participation in the community as one of the most important things for individuals to consider during college/university (Jenkins, 2005; Cruce & Moore, 2007; Lazarus, 2007; Lipka, 2010). In addition, this finding is supported by Foste and Jones (2017) regarding the role of gender participation in service activities such as volunteer service and service- learning projects. Foste and Jones' (2017) study found that service activities such as volunteer service and service-learning projects were largely understood by male students as a feminine endeavor. Overall, the findings of this study provide a substantial contribution to the evident gender differences and lower participation of male students in community-based learning.

Student Race and Ethnicity – White and Non-White Students

The difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between white and non-white students was examined. The result shows that there is a statistically significant difference in student engagement comparing diversity experiences between white and non-white students. Non-white students perceive themselves to have more

interaction with people of a different race or ethnicity, economic background, religious beliefs, and political beliefs than their counterparts. These findings support a previous study on campus diversity experiences conducted by Roksa et al. (2017). The study found that non-white students had more diverse experiences than white students (47 percent of African-Americans, 56 percent of Hispanics, 53 percent of Asians and 30 percent of white students). Contradicting the findings of this study, Greene et al. (2008) and Chang's (2005) studies found that white students reported a higher level of engagement than non-white students.

Reviewing the findings of this study, the significant difference comparing diversity experiences between white and non-white student suggests that the campus climate may have an impact on students' diversity experiences. According to the diversity statistics of the institution used in this study, 82.7 percent of students are white and 88.3 percent of faculty members are white indicating that the institution is a Predominantly White Institution (PWI) (College Factual, 2018). Therefore discomfort may set in due to lack of exposure and limited or no opportunities for white students to interface with other students from different ethnic backgrounds. This supports a study conducted by Phillips (2014) suggesting that diversity comes with anxiety, fear and discomfort and students need more exposure to diverse situations and people in order to enhance their diversity experiences. Since the environment may be a contributing factor to the discomfort among white students, the findings highlight the need to integrate and promote diversity and inclusion in university and college campuses. Exposing students to diversity increases their learning, personal development and educational experience (Bok,

2006). In addition, interacting with individuals from different backgrounds do not only bring new information but helps students to be better prepared and be willing to anticipate and accept alternative viewpoints (Phillips, 2014).

<u>Student Type – International and Domestic Students</u>

The difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between international and domestic students was analyzed. Community-based learning may not have a clear definition to many international students (Zhao, Kuh, & Carini, 2005). Regardless, the findings of this study suggest that international students show more interest in participation in community-based learning courses than their counterparts. These findings contradict studies conducted by Zhao, Kuh, and Carini, (2005), Korobova (2012), Perry (2012) and Grayson (2008). An explanation for the significant difference is that international students may see their participation in community-based learning experiences as an opportunity to integrate into their host society's environment. Such an opportunity may have sparked international students' interest in enrolling in more courses that included community-based projects. This is supported by Hechanova-Alampay, Beehr, Christiansen, Van Horn (2002) study suggesting that international students community-based learning activities as an opportunity to engage in and explore their community.

<u>Student Status – Traditional and Non-Traditional Students</u>

The difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between

traditional and non-traditional students was analyzed. As indicated in the findings, traditional students participate more in high-impact community-based learning (i.e. community-based learning courses and community service/volunteer work) than non-traditional students. Further, traditional students interact more with faculty members than their counterparts. These findings support studies conducted by Courtner (2014) and Bean and Metzner (1985) and contradict a study conducted by Gilardi and Guglielmetti (2011). A possible explanation of traditional students' higher level of participation in community-based learning and more interaction with faculty is that traditional students tend to be more engaged in their learning environment. This may not necessarily be the case for non-traditional students.

Reflecting on some of the characteristics of non-traditional students highlighted in chapter II, the findings of this study indicate that time constraint coupled with multiple life roles may impact the engagement of non-traditional students in high-impact community-based learning and their interaction with faculty members. Due to the juggling of multiple roles, having more work and life experiences and responsibilities outside of their role as students, non-traditional students may not see their participation in the aforementioned as a necessity. This is supported by Largent's (2009) study which suggests that service-learning programs often do not meet the needs of non-traditional students, as the target of most programs is the traditional, inexperienced, unemployed, full-time student in institutions of higher education across the United States.

As highlighted in the findings of this study, the minimal interaction between non-traditional students and faculty members supports a study conducted by Bean and

Metzner (1985) which suggest that non-traditional students "experience lessened intensity and duration of their interaction with the primary agents (faculty and peers) at the institutions they attend" (p.488). The findings may indicate that non-traditional students' lives tend to become busy and this could possibly reduce the amount of time they spend on campus. To ensure success for traditional students, positive faculty interaction is an interpersonal academic support service that should be considered and encouraged (Hittepole, 2018). Overall, the lower level of engagement of non-traditional students highlights the need for an effective structuring of services provided to non-traditional students. As noted by Lowe (2015), nontraditional students need additional services to keep them engaged because of their schedule and multiple obligations.

<u>Student Generation - First-Generation and Non-First-Generation Students</u>

The difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between first-generation and non-first-generation students was analyzed. The finding indicates that non-first-generation students participate more in community service/volunteer work than first-generation students which supports previous studies (Pike & Kuh, 2005b; Soria & Stebleton, 2012; Rodriguez & Halton, 2018; Stebleton, Soria & Huesman, 2014) and contradicts a few studies (Pelco, Ball, & Lockeman, 2014; Williamson, 2013).

The findings suggest that 'parent education status' of non-first-generation students may be related to their engagement in community-based learning (i.e. volunteer work). Due to parent college experiences, non-first-generation students may tend to be more academically prepared and gain awareness of how to immerse themselves into

different educational activities. Conversely, first-generation students may have feelings of doubts and may question the relevancy and necessity of educational opportunities offered. In addition, first-generation students may lack self-esteem, academic readiness and adjustment, and family support. These factors may compromise first-generation students' participation in community service or volunteer work. Studies have found that first-generation students are less prepared academically, less supported by family members, and often unable to be fully engaged in their learning environment (York-Anderson & Bowman, 1991; Chaney et al., 1998). Furthermore, first-generation students are more likely to frequently encounter obstacles (e.g. job and family responsibilities, stress, anxiety, depression etc.). These obstacles may also impact their participation in community service or volunteer work. Stebleton and Soria (2013) suggest that first-generation students are more likely to meet employment, family and financial obligations than academic obligations.

<u>Academic Majors by College</u>

The difference in student engagement specifically comparing high-impact community-based learning, student-faculty interaction and diversity experiences between academic majors by college (College of Arts and Humanities, College of Business, College of Education, and College of Social Sciences) was analyzed. The overall outcomes of the Kruskal Wallis test indicate students majoring in the College of Education participate more in high-impact community-based learning than their counterparts; students majoring in the College of Arts and Humanities have more interaction with faculty members than their counterparts; and students majoring in the

College of Social Sciences have more diverse experiences than their counterparts. The Kruskal-Wallis test did not compare the four groups but provided the overall outcomes. As a result of the significant differences between these four groupings in all categories, a follow-up test for Kruskal Wallis, namely 'multiple Mann-Whitney U with Bonferroni correction was conducted. As mentioned earlier, to perform this follow up test, the following 6 sub-groups of students' academic majors by college were created: (i) College of Arts vs. College of Humanities and Business, (ii) College of Arts and Humanities vs. College of Education, (iii) College of Arts and Humanities vs. College of Social Sciences, (iv) College of Business vs. College of Education, (v) College of Business vs. College of Social Sciences, and (vii) College of Education vs. College of Social Sciences. The following highlights the difference in student engagement among these comparisons.

The findings indicate that students majoring in the College of Education participate more in high-impact community-based learning (i.e. community-based learning courses and community service or volunteer work) than students in the College of Arts and Humanities, College of Social Sciences, and College of Business. A possible explanation of the significant difference is that the College of Education may offer students more programs that have elements of community engagement and/or embedded in community engagement than their counterparts. These findings support a previous study that found that students who are enrolled in Education disciplines have greater opportunities to participate in community-based learning (Cruce & Moore, 2007). These findings contradict a study that also found that students majoring in Arts and Humanities disciplines are more likely to participate in career preparatory activities such as

internships, volunteer services etc. (Grasgreen, 2011). Furthermore, the findings also indicate that students majoring in the College of Social Sciences participate more in community service or volunteer work than students in the College of Business. This suggests that academic majors offered in the College of Social Sciences may have a higher focus on studying real-world problems and seeking strategies to address issues within a community. This finding supports a previous study that found that students who are enrolled in Social Science disciplines are more likely to volunteer (Cruce & Moore, 2007).

Regarding the difference in student-faculty interaction, the findings indicate that students majoring in the College of Arts and Humanities interact more with faculty members than students in the College of Business and College of Social Sciences. Supporting NSSE's (2010) study, the difference in student-faculty interaction in the College of Arts and Humanities and the College of Business suggests that students working together with faculty members on projects. In addition, prioritization of educational opportunities that encourage interaction between students and faculty members may be an integral part of education in the College of Arts and Humanities. This may not be the case for the College of Business. However, the difference in student-faculty interaction in the College of Arts and Humanities and College of Business and College of Social Sciences contradicts the study conducted by NSSE (2010). Furthermore, the findings also indicate that students majoring in the College of Education interact more with faculty members that students in the College of Business. This finding supports the study conducted by NSSE (2010). An explanation of the difference in

student-faculty interaction is that community-based learning programs offered in the College of Education may tend to foster an environment for students to collaborate and/or interact with faculty members.

The findings further indicate that students majoring in the College of Social Sciences have more diverse experiences than students in the College of Education. As mentioned earlier, the focus of academic programs in the College of Social Sciences could be 'studying and addressing real-world problems' which may involve topics like the role of gender and race in societies, integrating immigrants in foreign communities etc. Therefore, this could potentially provide students with opportunities to interact with people of a different race or ethnicity, economic background, religious beliefs, and political beliefs. This supported by Tasmania Department of Education (2016) suggesting that courses in Social Science discipline have a historical and contemporary focus, from personal to global contexts, and consider challenges for the future (p.2). Following the aforementioned suggestion, Ifegbesan, Lawal, and Rampedi (2017) noted that courses and programs integrated into the Social Science discipline are designed to promote cultural competency.

Reviewing the six comparisons, it is interesting to note that students majoring in the College of Education have thrice proven that they are more likely to participate in high-impact community based learning than students in other colleges. Overall, the findings of the cross-sectional study added several insights on how student demographic characteristics interact with student engagement as well as providing an analysis of the differences in student engagement among various groups of students. The implications

for professional practice related to the findings of the longitudinal and cross-sectional studies will be further discussed.

<div align="center">Implications for Professional Practice</div>

The findings of both the longitudinal and cross-sectional studies have several pedagogical and educational implications that may assist program administrators with future program planning and implementation. The implications include (a) enhancement of student support services; (b) focus on recruitment and retention issues, (c) community engagement focus, and (d) improving campus climate for diversity and inclusion.

Enhancement of Student Support Services

To create a holistic experience for students, student services should extend beyond classroom. The cross-sectional findings imply that academic institutions should ensure that underrepresented students including non-traditional students, first-generation students etc. feel welcomed and integrated into colleges and universities they attend. The more integrated and engaged underrepresented students are, the more likely they are to persist in academic institutions (Greene et al., 2008). Further, it has been proven that students' effective use of support system positively impacts their academic performance, level of engagement and development of skills (Kaur, 2016). Providing appropriate support services will potentially promote the development of different types of students.

The findings of the longitudinal study highlight the need to understand what can or should be done to ensure that student engagement remains consistent over time. The findings further imply that student support services such as advising, mentoring, counseling etc. could potentially improve the consistency of the students' engagement

experiences from admission to graduation. As mentioned earlier, the difference in student engagement over time implies that there is more focus on engaging students during their freshman year. More attention should be directed towards supporting and encouraging students to participate in various engagement opportunities from their freshman year through their senior year. As indicated by Kuh (2008), academic institutions should aspire for their students to participate in at least one high impact educational practice before they graduate from college or university. To ensure consistency in participation, these findings imply that academic institutions should either refine their existing educational opportunities or create new challenging engagement activities.

Focus on Recruitment and Retention Issues

As of today, student retention is one of the emergent concerns in higher education (McAughtrie, 2016). Therefore, it is crucial to understand why students choose to leave or drop out of colleges and universities. Although there are many reasons, one of the unique challenges academic institutions face is engaging students in educational practices that could effectively impact the development of students (Kuh, 2008). As previously mentioned, this study adopts two of Kuh's (2008) high-impact practices (community-based learning and diversity experiences) and one of NSSE's benchmarks of effective educational practices (student-faculty interaction) which serve as the measures of student engagement. These three measures of student engagement provide effective ways to support students. Kuh (2008) suggests that the high-impact practices could increase rates of student retention and student engagement. Additionally, NSSE benchmarks of

educational practices serve as alternatives for enhancing student success and increasing

retention (Pike, 2013).

Retention begins with recruitment (Tinto, 2005). As of today, universities and

colleges all over the United States are seeing significant declines in enrollment over the

past few years, due to the very strong economy and the fact that many students cannot

pay the expensive loans that are now needing to go to schools in the United States. Often

times, individuals do not want to take loans for 4-year degrees, when they can work in a

number of jobs without a degree. A contributive factor to this issue is that education in

the United States is no longer seen as an investment in a community or in the future, but

rather as a bill that should be paid by parents and/or students. As indicated by Avery and

Turner (2012), the decision as to whether to invest in education usually requires

individuals to compare the benefits (gains in future earnings as a result of education) to

the cost (tuition, fees, forgone wages etc.). In light of the strong economy in the United

States today, these aforementioned barriers could potentially impact academic

institutions' effort in addressing recruitment and retention issues. To address and/or

eliminate retention issues, the findings of this study emphasize the importance of

effective structuring and implementation of strategies, practices, policies, and practices

with a focus on recruitment and retention. Strategies such as recruiting students from the

minority group

Increased engagement of students in educational activities is considered as one of

many ways to improve retention (Wyatt, 2011). Often times, many academic institutional

missions are focused more on recruitment, teaching and learning rather than engagement

which fosters retention and graduation rates (Hunter, 2006). To improve student retention and success, academic institutions should be more attentive to the engagement experiences of all students and integrate student engagement in their strategic plans and practices. The cross-sectional findings emphasized the extent to which different students are engaged in educational activities as well as emphasizing the critical need to understand that different students have different needs. The findings yield insights into an effective structuring of opportunities that are offered to different types of students in colleges and universities. It is important to note that the engagement needs of various groups of students may be different from their counterparts. For example, underrepresented students such as first-generation students, non-traditional students etc. may need additional assistance or support in navigating the university or college culture than their counterparts. Therefore, students' (specifically underrepresented students) needs and constraints should be approached or addressed differently.

As highlighted in the findings of the longitudinal study, students are more likely to be more engaged in high-impact community based learning during their freshman year than senior. Conversely, students interacted more with their faculty members during their senior year than freshman year. Halm (2015) and Lau (2003) suggest that student engagement is an important element influencing student retention. To improve student persistence in colleges and universities, the longitudinal findings imply that academic administrators should ensure that student engagement remains consistent and continuous from the time students are admitted to their time of graduation. Furthermore, actionable

plans such as student success plan, strategic plan etc. should be developed to improve student retention rates.

<u>Community Engagement Focus</u>

Well-developed community projects have the potential to create a platform for meaningful interactions between staff, faculty, students and their surrounding communities. Although community engagement prepares students to be educated and engaged citizens as well as improving the life of a community, the type of community partner chosen and the scope of the project can impact students' level of participation in community projects (Bender, 2008; Buys & Bursnall, 2007; Porr, 2015). As the cross-sectional findings indicate that there is a significant difference in high-impact community-based learning across all groups, there is a need for institutions to promote community engagement to their students. By encouraging and increasing more focus on community engagement for students, academic institutions create opportunities for students to gain experiences working with diverse populations (Czerwiec, 2016).

The cross-sectional findings further imply that academic institutions should ensure that they increasingly provide resources and opportunities that encourage community-based projects and service-learning projects for different types and groups of students. This could be done by identifying some activities and projects that have a quantifiable impact such as tutoring, which could strengthen students' resumes or graduate school applications. Academic institutions could further provide community-based learning opportunities that may allow students to do their hobbies (Sarikas, 2018). In addition, current community engagement opportunities presented to different types of

students should be revisited. Such efforts will ensure that there is a fair provision of meaningful community engagement experiences for various groups of students (Williams & Whiting, 2016). Furthermore whether mandatory or voluntary, community engagement should be an integral part of 'student success plan' of colleges and universities. Integrating community engagement in student success planning will address individual student's needs and interests as well as assisting students to attain post-secondary and career goals. Following Greene et al's (2008) and McClenney and Marti's (2006) research, these findings also advocate the need to bridge the gap in engagement.

Reviewing the findings of the longitudinal study, the decline in the engagement of students in community-based learning during their senior year emphasized the need to explain to students the benefits of staying more engaged till graduation. Keeping students more motivated and engaged until the time of graduation can be challenging. As students may experience feelings of overwhelming anxiety about graduation expectations and requirements during their senior year, academic institutions should consider establishing programs, scholarships, and committees such as mentorship programs, sustainability engagement committee, student community engagement scholarships etc. that focus on promoting community connectedness and engagement. As noted by Anderson et al. (2006), programs and services embedded in community engagement help to reduce barriers as well as stimulating and promoting continued participation in community engagement activities.

A strong commitment to community engagement prepares students to be effective citizens (Carnegie Foundation for the Advancement of Teaching, 2006). The findings of

the longitudinal study further illuminate the importance of embedding community

engagement in classes. This could be implemented by designating courses as 'service-

learning courses' in classes. As indicated by Song, Furco, Lopez, and Maruyama (2017),

service learning opportunities "may have the greatest potential for promoting students'

educational success because insofar as it offers them opportunities to connect with

diverse communities and address societal issues that matter to them" (pp.23-24). Faculty

members and academic advisors should, therefore, direct and guide all students to enroll

in service-learning courses. Astin, Vogelgesang, Ikeda, and Yee (2000), and Pearl and

Christensen (2017) highlighted how service-learning coursework improves student

learning outcomes and also creates an opportunity for students to interact with their

communities. Following the aforementioned suggestion, Butin (2006) also indicated that

service-learning courses serve as a pedagogy that links classrooms with the real world.

Furthermore, an explicit focus on service learning in higher education creates a path into

an important question that is linked to various ways universities can help to shape their

students (Kahne, Westheimer, & Rogers, 2000).

<u>Improving Campus Climate for Diversity and Inclusion</u>

Regarding diversity-related student engagement, Denson and Chang (2009)

suggest that student engagement should be geared toward diversity and interaction with

others of another racial-ethnic group. The difference in diversity experiences among

different groups of students implies that academic institutions should readjust recruitment

strategies to better recruit and retain students from minority groups. Specifically

recruiting more males, first-generation students, non-traditional students, non-white

students, international students etc. may also address campus climate issues related to diversity and inclusion. Further, academic institutions should not only promote diversity and inclusion by actively recruiting students and faculty from minority groups, but also should create and encourage an environment where there is a positive interaction between different groups of students. As Chen (2017) noted, diversity is not only about the student demographic but also requires an institution-wide focus on the demographics of students, administrators, faculty and staff.

Engaging students in diversity-related experience will prepare students to interface with diverse groups of individuals in different settings (Bok, 2006). The findings of the cross-sectional study also imply that there is a need to create diversity-related experiences for students off campus, as communities can play a role in shaping students' educational experiences. Often times, academic institutions are surrounded and/or embedded in communities with many rich diversity-related opportunities. Homogenous academic institutions should, therefore, partner and take advantage of their communities to create and expand learning opportunities for students to develop cultural competency. This is supported by Adams and Welsch (1995) indicating that faculty members should consider engaging students in diversity-related opportunities off campus to help students confront and address multicultural issues. Students can enhance their cultural competence through on-campus and off-campus activities such as internships, service learning projects, community services etc. Gaston Gayles and Kelly's (2007) study found that students improved their multicultural competence from "choosing

internship experiences where they could work directly with people from different cultural backgrounds" (p.202).

Furthermore, the cross-sectional findings emphasize on the importance of including diversity-related themes or topics in syllabi or curriculums such as gender, political and religious views, social class, sexual orientation and multiple identities, privilege, power, oppression etc. As noted by Costa (2008) and Adams and Welsch (1995), educators must deepen student thinking by building a thought-filled curriculum to hasten the arrival of a world community that values the diversity of other cultures, races, religions, language systems, time perspectives, and political and economic views. Integrating diversity in the curriculum prepares academic professionals to address the needs of different types of students. To make a stronger argument or emphasize on the need for integrating diversity in new and/or existing curriculums, "there should be some evidence that students are willing and able to become agents for social change" (Gaston Gayles & Kelly, 2007, p.205).

<div align="center">Recommendations for Future Studies</div>

Based on the rationale and findings of this study, the following recommendations may be considered for future studies:

(1) It is evident that Astin's (1984) theoretical framework for student involvement helps to answer student engagement related questions. In addition, Bringle, Games and Malloy's (1999) conceptual framework for community engagement could also assist researchers in responding to questions in the area of community engagement. Future studies exploring areas in community engagement and student engagement should

either adopt these frameworks or embrace a framework that closely aligns with the purpose of the study. Adopting these two frameworks will assist researchers to explain, predict and understand various engagement experiences.

(2) It is recommended that future studies examine and map out the graduation rate and GPA of students who are engaged and those who are not engaged.

(3) Academic professionals should be aware of the various challenges faced by students. Gaining such awareness will assist academic professionals to pay more attention to the factors that characterize different types of students.

(4) It is recommended that scholars/researchers should carefully consider 'time interval' before conducting a longitudinal study. Depending on the study's objective(s), shorter and longer time intervals can impact the effectiveness of a study in different ways.

(5) The recurring differences in high-impact community-based learning remind academic professionals including administrators, faculty, and staff to continually seek effective ways (e.g. encouraging and/or referring students to community-based learning opportunities, partnering with community engagement offices, civic engagement/service learning centers etc.) to improve upon their existing co-curricular and extra-curricular activities. Future studies should consider investigating the reasons for the non-significant differences through interviews, case studies etc.

(6) Academic institutions should develop and implement policies that encourage faculty members to include themes relating to diversity in their teaching.

(7) Future studies should consider conducting a longitudinal and/or cross-sectional study to compare student engagement of: (a) Carnegie's classification of institutions of

higher education which includes doctoral universities, master's colleges and universities, baccalaureate colleges, associate's colleges, and special focus four-year and (b) students with different types of disabilities e.g. sensory impairment, mobility impairment, learning disability, mental health disorder etc.

(8) Students are the key to the success of a college or university. To address barriers related to recruitment and retention, academic institutions should consider utilizing their current students as their 'recruitment ambassadors' and 'peer mentors'. Recruiting students with students can serve as both engagement and recruitment strategies. As peer mentors, current students can remain engaged by working with faculty members, connecting with student clubs and community agencies to support new students' success. Furthermore, serving as recruitment ambassadors will encourage interactions between current students and prospective students and may also influence the decision of prospective students to enroll in a university or college.

Conclusion

One of the key strengths of this study is that it expands the research of Fuller et al. (2011) on the use of both cross-sectional and longitudinal models in examining student engagement in higher education. Generally, both the longitudinal and cross-sectional findings were supported by Astin's (1984) theoretical assumption which states that 'different students exhibit different levels of involvement in different activities at different times' (p.298). The results of this study reveal aspects of the undergraduate students' experiences, including their engagement in educational opportunities such as community-based learning, student-faculty interaction and diversity experiences that

contribute to their learning and personal development. These aspects which reflect Kuh's (2008) high-impact practices and NSSE's benchmark of educational practices serve as the foundation of this study in examining student experiences in higher education. The longitudinal study highlights the importance of ensuring that there is no decline in engagement from admission through graduation. The cross-sectional study highlights the importance of ensuring that demographic characteristics and background do not hinder students from achieving educational potential in colleges and universities. Holistically, Astin's (1984) I-E-O theoretical model assists academic institutions in understanding how particular interventions such as mentoring, improving campus diversity, academic advising, integration of service-learning courses, and participation in community engagement activities can influence educational outcomes including recruitment, satisfaction, and retention.

This study represents one of many steps that should be taken to better examine and understand the interaction between student engagement and student demographic characteristics in colleges and universities. Furthermore, this study highlights the need for the effective structuring of educational policies, practices, and programs to increase student engagement (Astin, 1984; Kuh, 2008). Through the rationale and purpose of this study, the concept 'different students, different needs' has surfaced indicating that different students have different interests and learning paths. Understanding and embracing this concept may effectively assist colleges and universities in improving student learning experiences. In addition, faculty members and student affairs administrators may use the findings of this study to better advise and assist different types

of students to engage in a wide range of educational activities as well as helping students

satisfactorily attain their educational goals.

REFERENCES

Adams, J. Q., & Welsch, J. R. (1995). *Multicultural Education: Strategies for Implementation in Colleges and Universities*. *Volume 4*. Chicago, IL. ERIC Publishing.

Ahmed, S. M., & Palermo, A. G. S. (2010). *Community Engagement in Research: Frameworks for Education and Peer Review*. *American Journal of public health, 100(8), 1380-1387.*

Alvarado, A., Spatariu, A., & Woodbury, C. (2017). Resilience & Emotional Intelligence between First Generation College Students and Non-First Generation College Students. *FOCUS on Colleges, Universities & Schools*, *11*(1).

Anderson, T., Lipman, E., Mills, B., Metz, H., Teram, E., Elbard, M., ... & Sanford, M. (2006). The Recreation Mentoring Program: A community engagement initiative for children. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, *15*(2), 59.

Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student Engagement with School: Critical Conceptual and Methodological Issues of the Construct. *Psychology in the Schools, 45(5), 369-386.*

Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of college student personnel*, *25*(4), 297-308.

Astin, A. W., & Lee, J. J. (2003). How risky are one-shot cross-sectional assessments of undergraduate students? *Research in Higher Education*, *44*(6), 657-672.

Astin, A. W., Vogelgesang, L. J., Ikeda, E. K., & Yee, J. A. (2000). *How service learning affects students*. Los Angeles, CA: Higher Education Research Institute, University of California.

Avery, C., & Turner, S. (2012). Student Loans: Do College Students Borrow Too Much-- Or Not Enough?. *Journal of Economic Perspectives*, *26*(1), 165-92.

Bandy, J. (2015). What is service-learning or community engagement? Center for Teaching, Vanderbilt University. Retrieved January 2018 from https://cft.vanderbilt.edu/guides-sub-pages/teaching-through-community-engagement/

Bawa, A. C. (2007). *Rethinking the place of community-based engagement at universities in Higher education and civic engagement: International perspectives*. Burlington, VT: Ashgate Publishing Company.

Bean, J. P., & Metzner, B. S. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research, 55, 485-540.*

Beckett, A. K., & Rosser, V. J. (2007). *Relationship between learning community participation and degree attainment*. In annual meeting of the Association for the Study of Higher Education, Louisville*, KY*.

Bender, G. (2008). Exploring conceptual models for community engagement at higher education institutions in South Africa: conversation. *Perspectives in Education*, *26*(1), 81-95.

Bernardo, M. A. C., Butcher, J., & Howard, P. (2012). An international comparison of community engagement in higher education. *International Journal of Educational Development*, *32*(1), 187-192.

Bringle, R. G., Clayton, P., & Price, M. (2012). Partnerships in service-learning and civic engagement. *Partnerships: A Journal of Service-Learning and Civic Engagement*, *1*(1).

Bringle, R. G., Games, R., & Malloy E. (1999). *Colleges and universities as citizens*. Needham Heights, VA: Allyn and Bacon.

Bringle, R. G., & Hatcher, J. A. (2002). Campus–community partnerships: The terms of engagement. *Journal of Social Issues*, *58*(3), 503-516.

Brooks, L. R. (2011). *Comparing first generation and non-first generation African-American students at predominately White institutions* (Published Dissertation). Western Michigan University. Kalamazoo, MI.

Brukardt, M. J., Holland, B., Percy, S. L., & Zimpher, N. (2004). *Calling the question: Is higher education ready to commit to community engagement*. A wingspread statement. Milwaukee, WI: Milwaukee Idea Office, University of Wisconsin-Milwaukee.

Burton, L. J., & Mazerolle, S. M. (2011). Survey Instrument Validity Part I: Principles of Survey Instrument Development and Validation in Athletic Training Education Research. *Athletic Training Education Journal*, *6*(1), 27-35.

Butin, D. W. (2006). The limits of service-learning in higher education. *The review of higher education*, *29*(4), 473-498.

Butin, D. W. (2010). Service-learning in theory and practice: *The future of community engagement in higher education*. New York, NY: Palgrave Macmillan US.

Buys, N., & Bursnall, S. (2007). Establishing university–community partnerships: Processes and benefits. *Journal of Higher Education Policy and Management*, *29*(1), 73-86.

Cabrera, A. F., Nora, A., Terenzini, P. T., Pascarella, E., & Hagedorn, L. S. (1999). Campus racial climate and the adjustment of students to college: A comparison between White students and African-American students. *The Journal of Higher Education*, *70*(2), 134-160.

Campuswide. (2011). *National Survey of Student Engagement*: Bloomsburg University of Pennsylvania Executive Snapshot 2011. Bloomington, IN: Indiana University Center for Postsecondary Research.

Carini, R. M., Kuh, G. D., & Klein, S. P. (2006). Student engagement and student learning: Testing the linkages. *Research in Higher Education*, *47*(1), 1-32.

Carnegie Foundation for the Advancement of Teaching. (2006). How is Community Engagement defined? http://nerche.org/index.php?option=com_content&view=article&id=341&#CECd esc.

Carter, J. D., & Fountaine, T. P. (2012). An analysis of White student engagement at public HBCUs. *The Journal of Educational Foundations*, *26*(3/4), 49.

Chaney, B., Muraskin, L. D., Cahalan, M. W., & Goodwin, D. (1998). Helping the progress of disadvantaged students in higher education: The federal student support services program. *Educational Evaluation and Policy Analysis*, *20*(3), 197-215.

Chang, J. C. (2005). Faculty student interaction at the community college: A focus on students of color. *Research in Higher Education*, *46*(7), 769-802.

Chao, R., & Good, G. E. (2004). Nontraditional students' perspectives on college education: A qualitative study. Journal of College Counseling, 7(1), 5-12.

Chen, A. (2017). Addressing diversity on college campuses: Changing expectations and practices in instructional leadership. *Higher Education Studies*, *7*(2), 17.

Chen, P. D., Ingram, T. N., & Davis, L. K. (2014). Bridging student engagement and satisfaction: A comparison between historically black colleges and universities and predominantly white institutions. *The Journal of Negro Education*, *83*(4), 565-579.

Chesbrough, R. D. (2011). College students and service: A mixed methods exploration of motivations, choices, and learning outcomes. *Journal of College Student Development*, *52*(6), 687-705.

Choy, S. P. (2002). Findings from the condition of education 2002: Nontraditional undergraduates (NCES 2002-012). Washington, DC: National Center for Educational Statistics.

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. New York, NY: Routledge Academic.

College Factual. (2018). University of Northern Iowa Diversity: How Great is it? Retrieved July 2018 from https://www.collegefactual.com/colleges/university-of-northern-iowa/student-life/diversity/

Conner, T. (2011). Academic engagement ratings and instructional preferences: Comparing behavioral, cognitive, and emotional engagement among three school-age student cohort. *Review of Higher Education & Self-Learning*, *4*(13).

Costa, A. L. (2008). Five themes to shape curriculum. *Thought*, *65*(5), 20-24.

Cotton, D. R., Nash, T., & Kneale, P. (2017). Supporting the retention of non-traditional students in Higher Education using a resilience framework. *European Educational Research Journal*, *16*(1), 62-79.

Courtner, A. (2014). Impact of student engagement on academic performance and quality of relationships of traditional and nontraditional students. *International Journal of Education*, *6*(2), 24.

Cruce, T. M., & Moore, J. V. (2007). First-year students' plans to volunteer: An examination of the predictors of community service participation. *Journal of College Student Development*, *48*(6), 655-673.

Czerwiec, K. M. (2016). The effect of participating on service trips on community engagement and student development.

Darling-Hammond, L. (2015). *The flat world and education: How America's commitment to equity will determine our future*. Teachers College Press.

Denson, N., & Chang, M. J. (2009). Racial diversity matters: The impact of diversity-related student engagement and institutional context. *American educational research journal*, *46*(2), 322-353.

Driscoll, A. (2009). Carnegie's new community engagement classification: Affirming higher education's role in community. *New Directions for Higher Education, 2009(147), 5-12.*

Dunleavy, J., & Milton, P. (2009). What did you do in school today? Exploring the concept of student engagement and its implications for teaching and learning in Canada. *Canadian Education Association (CEA)*, 1-22.

Ewell, P. T. (2010). *The US national survey of student engagement (NSSE). In Public Policy for Academic Quality* (pp. 83-97). Dordrecht. Netherlands: Springer.

Feingold, A. (1994). Gender Differences in Personality: A meta-analysis. *Psychological Bulletin*, *116*(3), 429.

Field, A. (2005). *Discovering statistics using SPSS*. Thousand Oaks, CA: Sage Publications.

Foste, Z. & Jones, S. R. (2017). Isn't that for sorority girls?: Narratives of college men in service-learning. *Journal of Student Affairs Research and Practice, 55(1), 65-77*

Fritz, C. O., Morris, P. E., & Richler, J. J. (2012). Effect size estimates: current use, calculations, and interpretation. *Journal of experimental psychology: General*, *141*(1), 2.

Fuller, M. B., Wilson, M. A., & Tobin, R. M. (2011). The national survey of student engagement as a predictor of undergraduate GPA: A cross-sectional and longitudinal examination. *Assessment & Evaluation in Higher Education*, *36*(6), 735-748.

Gallini, S. M., & Moely, B. E. (2003). Service-Learning and Engagement, Academic Challenge, and Retention. *Michigan journal of community service-learning*, *10*(1).

Gallop, Inc. (2014). The State of America's School. Retrieved February 2018 from file:///C:/Users/Stanley/Downloads/Gallup%20Report%20--%20State%20Of%20Americas%20Schools.pdf

Gaston Gayles, J., & Kelly, B. T. (2007). Experiences with diversity in the curriculum: Implications for graduate programs and student affairs practice. *NASPA Journal*, *44*(1), 193-208.

Gilardi, S., & Guglielmetti, C. (2011). University life of non-traditional students: Engagement styles and impact on attrition. *Journal of Higher Education, 82(1), 33-53.*

Gordon, J., Ludlum, J., & Hoey, J.J. (2008). Validating NSSE against student outcomes: Are they related? *Research in Higher Education 49(1), 19–39.*

Govil, S. K. (2017). Community engagement in universities. *Journal of Management Value & Ethics, 7(3), 74-75.*

Grasgreen, A. (2011). Major Engagement. Retrieved March 2018 from https://www.insidehighered.com/news/2011/11/17/nsse-2011-measures-student-engagement-major.

Gravetter, F. J., & Wallnau, L. (2004). *Statistics for the behavioral sciences* (6th ed.). Belmont, CA: Thomson Learning, Inc.

Grayson, J. P. (2008). The experiences and outcomes of domestic and international students at four Canadian universities. *Higher Education Research & Development*, *27*(3), 215-230.

Greene, T. G., Marti, C. N., & McClenney, K. (2008). The effort—outcome gap: Differences for African American and Hispanic community college students in student engagement and academic achievement. *The Journal of Higher Education*, *79*(5), 513-539.

Halm, D. S. (2015). The impact of engagement on student learning. *International Journal of Education and Social Science*, *2*(2), 22-33.

Harper, S. R., Carini, R. M., Bridges, B. K., & Hayek, J. C. (2004). Gender differences in student engagement among African American undergraduates at historically Black colleges and universities. *Journal of College Student Development*, *45*(3), 271-284.

Head, B. W. (2007). Community engagement: participation on whose terms? Australian Journal of Political Science, 42(3), 441-454.

Hechanova-Alampay, R., Beehr, T. A., Christiansen, N. D., & Van Horn, R. K. (2002). Adjustment and strain among domestic and international student sojourners: A longitudinal study. *School Psychology International*, *23*(4), 458-474.

Hittepole, C. (2018). Nontraditional Students: Supporting Changing Student Populations. Retrieved August 2018 from https://www.naspa.org/images/uploads/main/Hittepole_NASPA_Memo.pdf

Hunter, M. S. (2006). Fostering student learning and success through first-year programs. *Peer Review*, *8*(3).

Ifegbesan, A. P., Lawal, M. B., & Rampedi, I. T. (2017). The Nigeria Teachers Social Studies Training Curriculum and Sustainable Development Goals: A Content Analysis. *Journal of International Social Studies*, *7*(1), 92-122.

Inman, P., & Schütze, H. G. (Eds.). (2010). *The community engagement and service mission of universities*. Leicester, England: NIACE.

Jacob, W. J., Sutin, S. E., Weidman, J. C., & Yeager, J. I. (2015). Community Engagement in Higher Education. In *Community Engagement in Higher Education* (pp. 1-28). Boston, MA: SensePublishers.

Jenkins, K. (2005). Gender and Civic Engagement: Secondary Analysis of Survey Data. CIRCLE Working Paper 41. *Center for Information and Research on Civic Learning and Engagement (CIRCLE), University of Maryland*.

Jones, M. G., Howe, A., & Rua, M. J. (2000). Gender Differences in Students' Experiences, Interests, and Attitudes toward Science and Scientists. *Science Education*, 84(2), 180-192.

Kahne, J., Westheimer, J., & Rogers, B. (2000). Service learning and citizenship in higher education. *Michigan Journal of Community Service Learning*, 42-5.

Kahu, E. R. (2013). Framing Student Engagement in Higher Education. *Studies in higher education*, *38*(5), 758-773.

Kaur, S. (2016). Student Support Services in Higher Education: A Student Perspective. *International Journal of Indian Psychology*, *3*(9).

Kezar, A., Chambers, A. C., & Burkhardt, J. C. (Eds.). (2015). *Higher education for the public good: Emerging voices from a national movement*. John Wiley & Sons.

Kim, Y. K., & Sax, L. J. (2009). Student–faculty interaction in research universities: Differences by student gender, race, social class, and first-generation status. *Research in Higher Education*, *50*(5), 437-459.

Kim, K. A., Sax, L. J., Lee, J. J., & Hagedorn, L. S. (2010). Redefining nontraditional students: Exploring the self-perceptions of community college students. *Community College Journal of Research and Practice, 34(5), 402-422*.

Korobova, N. (2012). *A comparative study of student engagement, satisfaction, and academic success among international and American students* (Published Dissertation). Iowa State University, Ames, IA.

Korobova, N., & Starobin, S.S. (2015). A comparative study of student engagement, satisfaction, and academic success among international and American students. *Journal of International Students, 5(1), 72-85.*

Kuh, G. D. (2001). Assessing What Really Matters to Student Learning inside the National Survey of Student Engagement. *Change: The Magazine of Higher Learning*, *33*(3), 10-17.

Kuh, G. D. (2003). What we are learning about Student Engagement from NSSE: Benchmarks for effective educational practices. Change Magazine, 35 (2), 24-32.

Kuh, G. D. (2008). Excerpt from high-impact educational practices: What they are, who has access to them, and why they matter. *Association of American Colleges and Universities*.

Kuh, G. D. (2009a). The National Survey of Student Engagement: Conceptual and Empirical Foundations. *New directions for institutional research*, *2009*(141), 5-20.

Kuh, G. D. (2009b). What student affairs professionals need to know about student engagement? *Journal of college student development*, *50*(6), 683-706.

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.

Kuh, G. D., Kinzie, J., Cruce, T., Shoup, R., & Gonyea, R. M. (2006). Connecting the dots: Multi-faceted analyses of the relationships between student engagement results from the NSSE, and the institutional practices and conditions that foster student success (Executive Summary). *Indiana University, Bloomington*.

Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs. *Frontiers in psychology*, *4*, 863.

Largent, E. (2009). *Contributing factors to meaningful service-learning and intention for future volunteerism: A case study at a community college* (Published Dissertation). The University of Oklahoma, Norman, OK.

Lau, L. K. (2003). Institutional factors affecting student retention. Education, 124, 126–136.

Lazarus, J. (2007). Embedding community engagement in SA universities: results of a national research and development strategy. In *10th Biennial International*

Conference of the South African Association for Research and Development in Higher Education (pp. 1-4).

Lipka, S. (2010). To Get More Men to Volunteer, Colleges Must Make an Extra Effort. Retrieved July 2018 from https://www.chronicle.com/article/To-Get-More-Men-to-Volunteer/64579

Lowe, B. J. (2015). *An Examination of the Perceptions of Traditional and Nontraditional Student Engagement at Northeast State Community College* (Published Dissertation). East Tennessee State University, Johnson City, TN.

Mark, A. E., & Boruff-Jones, P. D. (2003). Information literacy and student engagement: What the national survey of student engagement reveals about your campus. *College & Research Libraries*, *64*(6), 480-493.

McClenney, K. M., & Marti, C. N. (2006). Exploring Relationships between Student Engagement and Student Outcomes in Community Colleges: Report on Validation Research. Working Paper. *Community College Survey of Student Engagement*.

McCormick, A. C., & McClenney, K. (2012). Will these trees ever bear fruit?: A response to the special issue on student engagement. *The Review of Higher Education*, *35*(2), 307-333.

Miller, A. L., & Dumford, A. D. (2018). Do High-Achieving Students Benefit From Honors College Participation? A Look at Student Engagement for First-Year Students and Seniors. *Journal for the Education of the Gifted*, *41*(3), 217-241.

Moore, T. G., McDonald, M., McHugh-Dillon, H., & West, S. (2016). *Community engagement: A key strategy for improving outcomes for Australian families*. Melbourne, Victoria: Australian Institute of Family Studies.

Morgan, W. (2001). A journey through adult student involvement on campus. Journal of Student Affairs, (10), 1-15.

National American University (2015). What Does "Traditional Student" Even Mean in America Today?. Retrieved January 31, 2018 from https://www.national.edu/what-does-traditional-student-even-mean-in-america-today/.

National Center for Education Statistics (1998). First-Generation Students: Undergraduates Whose Parents Never Enrolled in Postsecondary Education. Retrieved April 2018 from https://nces.ed.gov/pubs98/98082.pdf

National Survey of Student Engagement (2000). *National benchmarks of effective educational practice*. National Survey of Student Engagement. Bloomington, IN: Indiana University Center for Postsecondary Research.

National Survey of Student Engagement (2003). *Converting data into action: Expanding the boundaries of institutional improvement*. National Survey of Student Engagement. Bloomington, IN: Indiana University Center for Postsecondary Research.

National Survey of Student Engagement (2010). Major Differences: Examining Student Engagement by Field of Study. Retrieved March 2018 from http://nsse.indiana.edu/NSSE_2010_Results/pdf/NSSE_2010_AnnualResults.pdf

National Survey of Student Engagement (2016). Construct Validity of NSSE Engagement Indicators. Retrieved March 2018 from http://nsse.indiana.edu/pdf/psychometric_portfolio/Validity_ConstructValidity_FactorAnalysis_2013.pdf

National Survey of Student Engagement (2017). NSSE Survey Instruments. Bloomington, IN: The Trustees of Indiana University.

National Survey of Student Engagement (2018). NSSE Reports on the Quality of Students' College Experience. Retrieved January 2018 from www.nsse.indiana.edu

Ng, C. W., & Pine, R. (2003). Women and men in hotel management in Hong Kong: perceptions of gender and career development issues. *International Journal of Hospitality Management*, *22*(1), 85-102.

Nicotera, N., Cutforth, N., Fretz, E., & Thompson, S. S. (2011). Dedication to community engagement: A higher education conundrum? *Journal of Community Engagement and Scholarship*, *4*(1), 37.

Parker-Gwin, R., & Mabry, J. B. (1998). Service-learning as pedagogy and civic education: Comparing outcomes for three models. *Teaching Sociology*, 276-291.

Parsons, J., & Taylor, L. (2011). Improving student engagement. *Current issues in education*, *14*(1).

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research* (Vol. 2). San Francisco, CA: Jossey-Bass.

Pelletier, S. G. (2010). Success for adult students. *Public Purpose*, *12*, 2-6.

Patterson, B. (2012). Influences of Student Organizational Leadership Experiences in College Students Leadership Behaviors. *E Journal of Organizational Learning & Leadership*, *10*(1).

Pearl, A. J., & Christensen, R. K. (2017). First-Year Student Motivations for Service-Learning: An Exploratory Investigation of Minority Student Perceptions. *Journal of Higher Education Outreach and Engagement*, *21*(4), 117-138.

Pelco, L. E., Ball, C. T., & Lockeman, K. (2014). Student growth from service-learning: A comparison of first-generation and non-first-generation college students. *Journal of Higher Education Outreach and Engagement*, *18*(2), 49-66.

Perry, C. J. (2012). Comparing international and American students' challenges: A literature review. *Journal of International Students, 6*(3), 712-721.

Phillips, K.W. (2014). How Diversity Makes Us Smarter. Retrieved July 2018 from https://www.scientificamerican.com/article/how-diversity-makes-us-smarter/

Pike, G. R. (2013). NSSE benchmarks and institutional outcomes: A note on the importance of considering the intended uses of a measure in validity studies. *Research in Higher Education*, *54*(2), 149-170.

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

Pike, G. R., & Kuh, G. D. (2005b). First-and second-generation college students: A comparison of their engagement and intellectual development. *The Journal of Higher Education*, *76*(3), 276-300.

Pike, G. R., Kuh, G. D., & McCormick, A. C. (2011). An investigation of the contingent relationships between learning community participation and student engagement. *Research in Higher Education*, *52*(3), 300-322.

Porter, S. R. (2011). Do college student surveys have any validity? *The Review of Higher Education*, *35*(1), 45-76.

Powell, M., & Ansic, D. (1997). Gender Differences in Risk Behavior in Financial Decision-Making: An experimental analysis. *Journal of Economic Psychology*, *18*(6), 605-628.

Purcell, J. W. (2014). The engaged community college: Supporting the institutionalization of engagement through collaborative action inquiry. *Journal of Higher Education Outreach and Engagement*, *18*(3), 105-112.

Rattray, J., & Jones, M. C. (2007). Essential elements of questionnaire design and development. *Journal of Clinical Nursing*, *16*(2), 234-243.

Reif, G. (2007). Higher education's missing link: Examining the gap between academic and student affairs and implications for the student experience. *The Vermont Connection*, *28*(1), 11.

Robinson, C. C., & Hullinger, H. (2008). New benchmarks in higher education: Student engagement in online learning. *Journal of Education for Business*, *84*(2), 101-109.

Rodriguez, L., & Halton, M. (2018). Developing EMPLOYABILITY Skills: Assessing the Needs of First-Generation Students. Retrieved April 2018 from https://www.campuslabs.com/developing-employable-skills/

Roksa, J., Kilgo, C. A., Trolian, T. L., Pascarella, E. T., Blaich, C., & Wise, K. S. (2017). Engaging with Diversity: How Positive and Negative Diversity Interactions Influence Students' Cognitive Outcomes. *The Journal of Higher Education*, *88*(3), 297-322.

Sarikas, C. (2018) 129 Great Examples of Community Service Projects. Retrieved October, 2018 from https://blog.prepscholar.com/129-examples-of-community-service-projects

Sax, L. J. (2008). *The gender gap in college: Maximizing the developmental potential of women and men*. San Francisco, CA: Jossey-Bass.

Sax, L. J., & Harper, C. E. (2007). Origins of the gender gap: Pre-college and college influences on differences between men and women. *Research in Higher Education*, *48*(6), 669-694.

Scott, G., & Jackson, J. (2005). A proposed framework for effective quality management of community engagement. In *2005 Australian Universities Quality Forum* (p. 162 -167). Melbourne, Victoria: Australian Universities Quality Agency.

Shalowitz, M. U., Isacco, A., Barquin, N., Clark-Kauffman, E., Delger, P., Nelson, D., & Wagenaar, K. A. (2009). Community-based participatory research: a review of the literature with strategies for community engagement. *Journal of Developmental & Behavioral Pediatrics*, *30*(4), 350-361.

Song, W., Furco, A., Lopez, I., & Maruyama, G. (2017). Examining the Relationship between Service-learning Participation and the Educational Success of Underrepresented Students. *Michigan Journal of Community Service Learning*, *24*(1).

Soria, K. M., & Stebleton, M. J. (2012). First-generation students' academic engagement and retention. *Teaching in Higher Education*, *17*(6), 673-685.

Stebleton, M., & Soria, K. (2013). Breaking down barriers: Academic obstacles of first-generation students at research universities.TLAR, 17(2), 7-19

Stebleton, M. J., Soria, K. M., & Huesman, R. L. (2014). First-generation students' sense of belonging, mental health, and use of counseling services at public research universities. *Journal of College Counseling*, *17*(1), 6-20.

Strayhorn, T. L., & Saddler, T. N. (2009). Gender differences in the influence of faculty–student mentoring relationships on satisfaction with college among African Americans. *Journal of African American Studies*, *13*(4), 476.

Strydom, F., Kuh, G., & Mentz, M. (2010). Enhancing success in South Africa's higher education: Measuring student engagement. *Acta Academica*, *42*(1), 259-278.

Tasmania Department of Education. (2016). Humanities and Social Sciences Learning Area Summary. Retrieved October 2018 from https://documentcentre.education.tas.gov.au/Documents/Learning%20Area%20Summary%20-%20Humanities%20and%20Social%20Sciences%20-%202016-04-20.pdf

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, *2*, 53.

Tendhar, C., Culver, S. M., & Burge, P. L. (2013). Validating the National Survey of Student Engagement (NSSE) at a Research-Intensive University. *Journal of Education and Training Studies*, *1*(1), 182-193.

Tessema, M., Ready, K., & Malone, C. (2012). Effect of gender on college students' satisfaction and achievement: The case of a midsized Midwestern public university. *International Journal of Business and Social Science*, *3*(10).

Thill, M., Rosenzweig, J. W., & Wallis, L. C. (2016). The Relationship between Student Demographics and Student Engagement with Online Library Instruction Modules. *Evidence Based Library and Information Practice*, *11*(3), 4-15.

Tinto, V. (2005). *College student retention: Formula for student success*. Westport, CT. Greenwood Publishing Group.

Tomczak, M., & Tomczak, E. (2014). The need to report effect size estimates revisited. An overview of some recommended measures of effect size. *Trends in Sport Sciences*, *21*(1).

Trowler, V. (2010). Student engagement literature review. *The higher education academy*, *11*, 1-15.

Turcios-Cotto, V. Y., & Milan, S. (2013). Racial/ethnic differences in the educational expectations of adolescents: does pursuing higher education mean something different to Latino students compared to White and Black students? *Journal of youth and adolescence*, *42*(9), 1399-1412.

Umbach, P. D., & Kuh, G. D. (2006). Student experiences with diversity at liberal arts colleges: Another claim for distinctiveness. *The Journal of Higher Education*, *77*(1), 169-192.

United Nations Educational, Scientific and Cultural Organization. (2009). *Global education digest: Comparing education statistics across the world*. Montreal, Quebec: UNESCO Institute for Statistics.

University of Northern Iowa. (2018). Definition of Nontraditional Students. Retrieved January 31, 2018 from https://web.uni.edu/nontrad

United States Department of Education. (2002). Nontraditional graduates (NCES 2001-012). Washington, DC: U.S. Government Printing office.

Wang, R., & BrckaLorenz, A. (2017). A comparison of international students' engagement and faculty perceptions of international student engagement. Paper presented at the 2017 American Educational Research Association Annual Conference in San Antonio, TX, USA. Retrieved January 2018 from http://nsse.indiana.edu/pdf/presentations/2017/AERA_2017_Wang_BrckaLorenz_paper.pdf.

Watson, D. (2007). *Managing civic and community engagement*. McGraw-Hill Education (UK).

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.

Weiss, H. B., Lopez, M. E., & Rosenberg, H. (2010). *Beyond Random Acts: Family, School, and Community Engagement as an Integral Part of Education Reform.* National Policy Forum for Family, School, & Community Engagement. Cambridge, MA: Harvard Family Research Project.

Williams, D., & Whiting, A. (2016). Exploring the Relationship between Student Engagement, Twitter, and a Learning Management System: A Study of

Undergraduate Marketing Students. *International Journal of Teaching and Learning in Higher Education*, *28*(3), 302-313.

Williamson, A. C. (2013). *Student engagement at rural public associate's colleges in Northern Alabama*. The University of Alabama, Tucaloosa, AL.

Willms, J. D., Friesen, S., & Milton, P. (2009). *What Did You Do in School Today? Transforming Classrooms through Social, Academic, and Intellectual Engagement. (First National Report).*

Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, *31*(3), 387-406.

Wyatt, L. G. (2011). Nontraditional student engagement: Increasing adult student success and retention. *The Journal of Continuing Higher Education*, *59*(1), 10-20.

York-Anderson, D. C., & Bowman, S. L. (1991). Assessing the college knowledge of first-generation and second-generation college students. *Journal of College Student Development, 9*(2), 1-20.

Zhao, C. M., & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education*, *45*(2), 115-138.

Zhao, C. M., Kuh, G. D., & Carini, R. M. (2005). A comparison of international student and American student engagement in effective educational practices. *The Journal of Higher Education*, *76*(2), 209-231.

APPENDIX A

NSSE SURVEY

This is a facsimile of the U.S. English version of the online NSSE instrument as it appears to the student.
A paper-formatted facsimile of the survey which includes item numbering is available on the
NSSE Web site: nsse.iub.edu/html/survey_instruments.cfm

NSSE national survey of student engagement
THE COLLEGE STUDENT REPORT

0% complete

During the current school year, about how often have you done the following?

	Very often	Often	Sometimes	Never
Asked questions or contributed to course discussions in other ways	○	○	○	○
Prepared two or more drafts of a paper or assignment before turning it in	○	○	○	○
Come to class without completing readings or assignments	○	○	○	○
Attended an art exhibit, play or other arts performance (dance, music, etc.)	○	○	○	○
Asked another student to help you understand course material	○	○	○	○
Explained course material to one or more students	○	○	○	○
Prepared for exams by discussing or working through course material with other students	○	○	○	○
Worked with other students on course projects or assignments	○	○	○	○
Gave a course presentation	○	○	○	○

During the current school year, about how often have you done the following?

	Very often	Often	Sometimes	Never
Combined ideas from different courses when completing assignments	○	○	○	○
Connected your learning to societal problems or issues	○	○	○	○
Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	○	○	○	○
Examined the strengths and weaknesses of your own views on a topic or issue	○	○	○	○
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	○	○	○	○
Learned something that changed the way you understand an issue or concept	○	○	○	○
Connected ideas from your courses to your prior experiences and knowledge	○	○	○	○

During the current school year, about how often have you done the following?

	Very often	Often	Sometimes	Never
Talked about career plans with a faculty member	⊙	⊙	⊙	⊙
Worked with a faculty member on activities other than coursework (committees, student groups, etc.)	⊙	⊙	⊙	⊙
Discussed course topics, ideas, or concepts with a faculty member outside of class	⊙	⊙	⊙	⊙
Discussed your academic performance with a faculty member	⊙	⊙	⊙	⊙

During the current school year, how much has your coursework emphasized the following?

	Very much	Quite a bit	Some	Very little
Memorizing course material	⊙	⊙	⊙	⊙
Applying facts, theories, or methods to practical problems or new situations	⊙	⊙	⊙	⊙
Analyzing an idea, experience, or line of reasoning in depth by examining its parts	⊙	⊙	⊙	⊙
Evaluating a point of view, decision, or information source	⊙	⊙	⊙	⊙
Forming a new idea or understanding from various pieces of information	⊙	⊙	⊙	⊙

During the current school year, to what extent have your instructors done the following?

	Very much	Quite a bit	Some	Very little
Clearly explained course goals and requirements	⊙	⊙	⊙	⊙
Taught course sessions in an organized way	⊙	⊙	⊙	⊙
Used examples or illustrations to explain difficult points	⊙	⊙	⊙	⊙
Provided feedback on a draft or work in progress	⊙	⊙	⊙	⊙
Provided prompt and detailed feedback on tests or completed assignments	⊙	⊙	⊙	⊙

During the current school year, about how often have you done the following?

	Very often	Often	Sometimes	Never
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	⊙	⊙	⊙	⊙
Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	⊙	⊙	⊙	⊙
Evaluated what others have concluded from numerical information	⊙	⊙	⊙	⊙

Continue

Save and Return Later   Contact Us   Frequently Asked Questions

IlNSSE national survey of student engagement

THE COLLEGE STUDENT REPORT

26% complete

During the current school year, about how many papers, reports, or other writing tasks of the following length have you been assigned? (Include those not yet completed.)

	None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
Up to 5 pages	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Between 6 and 10 pages	⊙	⊙	⊙	⊙	⊙	⊙	⊙
11 pages or more	⊙	⊙	⊙	⊙	⊙	⊙	⊙

During the current school year, about how often have you had discussions with people from the following groups?

	Very often	Often	Sometimes	Never
People of a race or ethnicity other than your own	⊙	⊙	⊙	⊙
People from an economic background other than your own	⊙	⊙	⊙	⊙
People with religious beliefs other than your own	⊙	⊙	⊙	⊙
People with political views other than your own	⊙	⊙	⊙	⊙

During the current school year, about how often have you done the following?

	Very often	Often	Sometimes	Never
Identified key information from reading assignments	⊙	⊙	⊙	⊙
Reviewed your notes after class	⊙	⊙	⊙	⊙
Summarized what you learned in class or from course materials	⊙	⊙	⊙	⊙

During the current school year, to what extent have your courses challenged you to do your best work?

Not at all						Very much
⊙	⊙	⊙	⊙	⊙	⊙	⊙
1	2	3	4	5	6	7

Which of the following have you done or do you plan to do before you graduate?

	Done or in progress	Plan to do	Do not plan to do	Have not decided
Participate in an internship, co-op, field experience, student teaching, or clinical placement	○	○	○	○
Hold a formal leadership role in a student organization or group	○	○	○	○
Participate in a learning community or some other formal program where groups of students take two or more classes together	○	○	○	○
Participate in a study abroad program	○	○	○	○
Work with a faculty member on a research project	○	○	○	○
Complete a culminating senior experience (capstone course, senior project or thesis, comprehensive exam, portfolio, etc.)	○	○	○	○

About how many of your courses at this institution have included a community-based project (service-learning)?

○ All

○ Most

○ Some

○ None

Indicate the quality of your interactions with the following people at your institution.

	Poor 1	2	3	4	5	6	Excellent 7	Not Applicable
Students	○	○	○	○	○	○	○	○
Academic advisors	○	○	○	○	○	○	○	○
Faculty	○	○	○	○	○	○	○	○
Student services staff (career services, student activities, housing, etc.)	○	○	○	○	○	○	○	○
Other administrative staff and offices (registrar, financial aid, etc.)	○	○	○	○	○	○	○	○

Continue

Save and Return Later   Contact Us   Frequently Asked Questions

NSSE national survey of student engagement
THE COLLEGE STUDENT REPORT

46% complete

How much does your institution emphasize the following?

	Very much	Quite a bit	Some	Very little
Spending significant amounts of time studying and on academic work	○	○	○	○
Providing support to help students succeed academically	○	○	○	○
Using learning support services (tutoring services, writing center, etc.)	○	○	○	○
Encouraging contact among students from different backgrounds (social, racial/ethnic, religious, etc.)	○	○	○	○
Providing opportunities to be involved socially	○	○	○	○
Providing support for your overall well-being (recreation, health care, counseling, etc.)	○	○	○	○
Helping you manage your non-academic responsibilities (work, family, etc.)	○	○	○	○
Attending campus activities and events (performing arts, athletic events, etc.)	○	○	○	○
Attending events that address important social, economic, or political issues	○	○	○	○

About how many hours do you spend in a typical 7-day week doing the following?

	Hours per week							
	0	1-5	6-10	11-15	16-20	21-25	26-30	More than 30
Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)	○	○	○	○	○	○	○	○
Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)	○	○	○	○	○	○	○	○
Working for pay **on campus**	○	○	○	○	○	○	○	○
Working for pay **off campus**	○	○	○	○	○	○	○	○
Doing community service or volunteer work	○	○	○	○	○	○	○	○
Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)	○	○	○	○	○	○	○	○
Providing care for dependents (children, parents, etc.)	○	○	○	○	○	○	○	○
Commuting to campus (driving, walking, etc.)	○	○	○	○	○	○	○	○

Of the time you spend preparing for class in a typical 7-day week, about how many hours are on *assigned reading*?

- ○ 0 hours
- ○ 1-5 hours
- ○ 6-10 hours
- ○ 11-15 hours
- ○ 16-20 hours
- ○ 21-25 hours
- ○ 26-30 hours
- ○ More than 30 hours

How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?

	Very much	Quite a bit	Some	Very little
Writing clearly and effectively	○	○	○	○
Speaking clearly and effectively	○	○	○	○
Thinking critically and analytically	○	○	○	○
Analyzing numerical and statistical information	○	○	○	○
Acquiring job- or work-related knowledge and skills	○	○	○	○
Working effectively with others	○	○	○	○
Developing or clarifying a personal code of values and ethics	○	○	○	○
Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)	○	○	○	○
Solving complex real-world problems	○	○	○	○
Being an informed and active citizen	○	○	○	○

How would you evaluate your entire educational experience at this institution?

- ○ Excellent
- ○ Good
- ○ Fair
- ○ Poor

If you could start over again, would you go to the *same institution* you are now attending?

- ○ Definitely yes
- ○ Probably yes
- ○ Probably no
- ○ Definitely no

Continue

Save and Return Later   Contact Us   Frequently Asked Questions

Screen 3 of 4 (continued)

NSSE national survey of student engagement
THE COLLEGE STUDENT REPORT

70% complete

Why do we ask about your personal background?

What is your class level?

◯ Freshman/first-year
◯ Sophomore
◯ Junior
◯ Senior
◯ Unclassified

Thinking about this current academic term, are you a full-time student?

◯ Yes
◯ No

How many courses are you taking for credit this current academic term?

◯ 0
◯ 1
◯ 2
◯ 3
◯ 4
◯ 5
◯ 6
◯ 7 or more

Of these, how many are *entirely online*?

◯ 0
◯ 1
◯ 2
◯ 3
◯ 4
◯ 5
◯ 6
◯ 7 or more

How many majors do you plan to complete? (Do not count minors.)

⊙ One
⊙ More than one

What have most of your grades been up to now at this institution?

⊙ A
⊙ A-
⊙ B+
⊙ B
⊙ B-
⊙ C+
⊙ C
⊙ C- or lower

Did you begin college at this institution or elsewhere?

⊙ Started here
⊙ Started elsewhere

Since graduating from high school, which of the following types of schools have you attended *other than* the one you are now attending? (Select all that apply.)

☐ Vocational or technical school
☐ Community or junior college
☐ 4-year college or university other than this one
☐ None
☐ Other

What is the highest level of education you ever expect to complete?

⊙ Some college but less than a bachelor's degree
⊙ Bachelor's degree (B.A., B.S., etc.)
⊙ Master's degree (M.A., M.S., etc.)
⊙ Doctoral or professional degree (Ph.D., J.D., M.D., etc.)

What is the highest level of education completed by either of your parents (or those who raised you)?

- ○ Did not finish high school
- ○ High school diploma or G.E.D.
- ○ Attended college but did not complete degree
- ○ Associate's degree (A.A., A.S., etc.)
- ○ Bachelor's degree (B.A., B.S., etc.)
- ○ Master's degree (M.A., M.S., etc.)
- ○ Doctoral or professional degree (Ph.D., J.D., M.D., etc.)

What is your gender?

- ○ Male
- ○ Female

Enter your year of birth (e.g., 1994):

[   ]

Are you an international student or foreign national?

- ○ Yes
- ○ No

What is your racial or ethnic identification? (Select all that apply.)

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ White
- ☐ Other
- ☐ I prefer not to respond

Are you a member of a social fraternity or sorority?

- ○ Yes
- ○ No

Which of the following best describes where you are living while attending college?

⊙ Dormitory or other campus housing (not fraternity or sorority house)

🔵 Fraternity or sorority house

⊙ Residence (house, apartment, etc.) *within* walking distance to the institution

⊙ Residence (house, apartment, etc.) *farther than* walking distance to the institution

⊙ None of the above

Are you a student-athlete on a team sponsored by your institution's athletics department?

⊙ Yes

⊙ No

Are you a current or former member of the U.S. Armed Forces, Reserves, or National Guard?

⊙ Yes

⊙ No

Have you been diagnosed with any disability or impairment?

⊙ Yes

⊙ No

⊙ I prefer not to respond

Which of the following have been diagnosed? (Select all that apply)

☐ A sensory impairment (vision or hearing)

☐ A mobility impairment

☐ A learning disability (e.g., ADHD, dyslexia)

☐ A mental health disorder

☐ A disability or impairment not listed above

Which of the following best describes your sexual orientation?

⊙ Heterosexual

⊙ Gay

⊙ Lesbian

⊙ Bisexual

⊙ Questioning or unsure

⊙ I prefer not to respond

Continue

Save and Return Later   Contact Us   Frequently Asked Questions

Screen 4 of 4 (continued)

APPENDIX B

SELECTED MEASURES OF STUDENT ENGAGEMENT- NSSE SURVEY

High-Impact Community-Based Learning

- **Community-Based Learning Courses**
  - o About how many of your courses at this institution have included a community-based project (service learning)?
- **Community Service/Volunteer Work**
  - o About how many hours do you spend in a typical 7- day week doing community service or volunteer work?

Student- Faculty Interaction

- During the current school year, about how often have you talked about career plans with a faculty member?
- During the current school year, about how often have you worked with a faculty member on activities other than coursework (committees, student groups, etc.)?
- During the current school year, about how often have you discussed course topics, ideas, or concepts with a faculty member outside of class?
- During the current school year, about how often have you discussed your academic performance with a faculty member?

Diversity Experiences

- During the current school year, about how often have you had discussions with people of a race or ethnicity other than your own?
- During the current school year, about how often have you had discussions with people from an economic background other than your own?
- During the current school year, about how often have you had discussions with people with religious beliefs other than your own?
- During the current school year, about how often have you had discussions with people with political beliefs other than your own?

APPENDIX C

LETTER OF COLLABORATION – UNI IRE OFFICE

University of Northern Iowa
Institutional Research
and Effectiveness

December 4, 2017

Stanley Ebede
Human Performance Ctr 107
Cedar Falls, IA 50614-0241

Dear Mr. Ebede,

The Office of Institutional Research & Effectiveness is pleased to collaborate with you on your project "Student Engagement in Higher Education: Measuring the Differences in Community Engagement."

My office will provide de-identified data from the National Survey of Student Engagement (NSSE) collected at UNI between 2006 and 2017. In addition, we will provide demographic information of study participants, including college, major/plan of study, cumulative GPA, classification, gender, race/ethnicity, on or off campus residency, transfer status, and residency. Individual ID numbers will be masked to maintain confidentiality. Furthermore, the PI and key personnel for this project will maintain confidentiality of all research participants in all phases of this project.

According to our agreement, project activities will be carried out as described in the research plan reviewed and approved by the University of Northern Iowa Institutional Review Board.

We look forward to working with you, and please consider this communication as our Letter of Cooperation.

Sincerely,

Kristin Moser, Ph.D.
Director

APPENDIX D

NSSE INFORMED CONSENT FORM

NSSE national survey of student engagement
THE COLLEGE STUDENT REPORT

WHAT THIS SURVEY IS ABOUT

You are invited to answer a series of questions about your college experiences by completing the National Survey of Student Engagement (NSSE). Information from this survey is used by faculty and administrators at your school to improve the undergraduate experience and by other higher education leaders and researchers.

After reading the information on this page, if you agree to take part in this survey, click the "Proceed to the Survey" button below.

SURVEY PARTICIPANTS

Survey participants are primarily first-year and senior bachelor's degree-seeking students at your school as well as other colleges and universities.

TAKING THE SURVEY

The survey asks you about your college experiences, how you spend your time, what you have gained from college, and your interactions with peers, faculty, and others. Filling out the questionnaire takes about 15 minutes. Your participation is completely voluntary. Declining participation or not completing the survey will not result in any penalty or loss of benefits.

SURVEY PARTNERS

This survey is conducted in a partnership between your school and the Indiana University Center for Postsecondary Research. The Center will send your survey responses to your school for institutional assessment, improvement, and research.

CONFIDENTIALITY

Your school and the Center will make every effort to keep your responses confidential, although absolute confidentiality cannot be guaranteed. Neither your college nor the Center will make any public release of information associated with your name while using survey results and related student records for their intended purpose (to improve the college experience and conduct research), but personally identifiable responses may be inspected by college and government organizations when required by law.

FURTHER INFORMATION

If you have any questions at any time about the study or the procedures, you may contact the National Survey of Student Engagement at nsse@indiana.edu or by calling 812-856-5824.

For questions about your rights as a research participant or to discuss problems, complaints, or concerns about a research study, or to obtain information or offer input, contact the Indiana University Human Subjects Office at 530 E. Kirkwood Avenue, Carmichael Center 203, Bloomington, IN 47408; by phone at 812-856-4242; or by email at irb@iu.edu.

Proceed to the Survey

I Decline to Participate

IRB Approval Date: June 23, 2015 to June 22, 2017 | Study #0709000079

APPENDIX E

NSSE BENCHMARK OF EFFECTIVE EDUCATIONAL PRACTICE

NSSE
national survey of student engagement

Benchmarks of Effective Educational Practice

The benchmarks are based on 42 key questions from the NSSE survey that capture many vital aspects of the student experience. These student behaviors and institutional features are some of the more powerful contributors to learning and personal development.

LAC

Level of Academic Challenge

Challenging intellectual and creative work is central to student learning and collegiate quality. Colleges and universities promote high levels of student achievement by emphasizing the importance of academic effort and setting high expectations for student performance.

Activities and conditions:

- Time spent preparing for class (studying, reading, writing, rehearsing, and other activities related to your academic program)
- Worked harder than you thought you could to meet an instructor's standards or expectations
- Number of assigned textbooks, books, or book-length packs of course readings
- Number of written papers or reports of 20 pages or more
- Number of written papers or reports between 5 and 19 pages
- Number of written papers or reports fewer than 5 pages
- Coursework emphasizes: Analyzing the basic elements of an idea, experience, or theory
- Coursework emphasizes: Synthesizing and organizing ideas, information, or experiences
- Coursework emphasizes: Making judgments about the value of information, arguments, or methods
- Coursework emphasizes: Applying theories or concepts to practical problems or in new situations
- Campus environment emphasizes spending significant amounts of time studying and on academic work

ACL

Active and Collaborative Learning

Students learn more when they are intensely involved in their education and are asked to think about and apply what they are learning in different settings. Collaborating with others in solving problems or mastering difficult material prepares students to deal with the messy, unscripted problems they will encounter daily during and after college.

Activities:

- Asked questions in class or contributed to class discussions
- Made a class presentation
- Worked with other students on projects during class
- Worked with classmates outside of class to prepare class assignments
- Tutored or taught other students
- Participated in a community-based project as part of a regular course
- Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

Student-Faculty Interaction
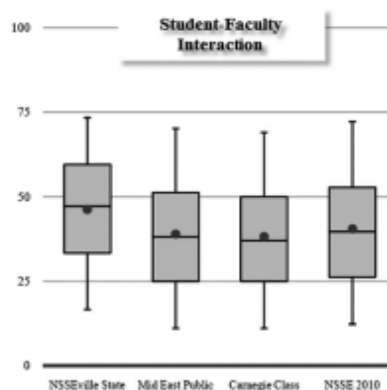
Student-Faculty Interaction

Students see first-hand how experts think about and solve practical problems by interacting with faculty members inside and outside the classroom. As a result, their teachers become role models, mentors, and guides for continuous, life-long learning.

Activities:

- Discussed grades or assignments with an instructor
- Talked about career plans with a faculty member or advisor
- Discussed ideas from your readings or classes with faculty members outside of class
- Worked with faculty members on activities other than coursework (committees, orientation, student-life activities, etc.)
- Received prompt written or oral feedback from faculty on your academic performance
- Worked with a faculty member on a research project

SCE

Supportive Campus Environment

Students perform better and are more satisfied at colleges that are committed to their success and cultivate positive working and social relations among different groups on campus.

Conditions:

- Campus environment provides support you need to help you succeed academically
- Campus environment helps you cope with your non-academic responsibilities (work, family, etc.)
- Campus environment provides the support you need to thrive socially
- Quality of relationships with other students
- Quality of relationships with faculty members
- Quality of relationships with administrative personnel and offices

EEE

Enriching Educational Experiences

Complementary learning opportunities inside and outside the classroom augment the academic program. Experiencing diversity teaches students valuable things about themselves and other cultures. Used appropriately, technology facilitates learning and promotes collaboration between peers and instructors. Internships, community service, and senior capstone courses provide students with opportunities to synthesize, integrate, and apply their knowledge. Such experiences make learning more meaningful and, ultimately, more useful because what students know becomes a part of who they are.

Activities and conditions:

- Talking with students with different religious beliefs, political opinions, or values
- Talking with students of a different race or ethnicity
- An institutional climate that encourages contact among students from different economic, social, and racial or ethnic backgrounds
- Using electronic technology to discuss or complete assignments
- Participating in:
  - Internships or field experiences
  - Community service or volunteer work
  - Foreign language coursework
  - Study abroad
  - Independent study or self-assigned major
  - Culminating senior experience
  - Co-curricular activities
  - Learning communities

NSSE
national survey of
student engagement