Influence of Deliberate Peer-to-Peer Interactions on First-Generation College Students' Educational Outcomes

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Approval of the Dissertation Committee

This dissertation has been duly read, reviewed, and critiqued by the Committee listed below, which hereby approves the manuscript of Junelyn Pangan Peeples as fulfilling the scope and quality requirements for meriting the degree of Doctor of Philosophy in Education.

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Abstract

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First-generation college students are first in their families to go to college and may not have the resources to help them navigate a college setting. They have parents who have not received a four-year degree, which diminishes the amount of knowledge they accumulated to help them navigate a college setting effectively. They are typically underprepared academically and socially, which can impede their ability to adjust and negatively influence their persistence and ultimately degree attainment. There is research that suggests there are ways to retain students and provide better support systems that help them graduate. Studies have found that peer-to-peer interactions has potential to influence a peer's disposition, which may affect certain educational outcomes. Since any environment is conducive to peer formation, then the setting is also an important factor in studying peer-to-peer involvement to find where the effect resides. This study measured deliberate peer-to-peer interactions in academic and social activities of college-aged women at a private elite liberal arts setting to determine whether a peer can affect their peer's first year persistence and academic GPA. Using a dual research design that incorporates a quantitative secondary data analysis with a complementarity qualitative approach makes it possible to measure whether a peer effect resides in these interactions and provides rich in-depth insight into first-generation students' lived college experiences in their first year. The preliminary

model used in this study on peer effects takes into consideration who the students are when they enter the college and how important their background characteristics are to their educational trajectory. This model focuses on how the student develops, which can help determine the precise activities and interactions that may produce either a positive or negative impact. This preliminary model also has implications for immediate application because it can account for important predictors that institutional practitioners can incorporate with ease and generate results, so they can be used to inform policies and drive decision-making practices and program development.

Dedication

With a grateful heart, I dedicate where I am today to my parents. They sacrificed everything, so their children could grow up in America that had greater opportunities than my birth country would ever be able to offer. The best advice they gave me was that education was the key to success. It was a simple advice, but the most profound. Essentially, my parents understood that knowledge had power, which could unlock doors and when those doors opened it was my responsibility to walk through them and do the best I could to take advantage of the opportunities I was afforded. My parents gave me the fighting chance and the work ethic to succeed from our disadvantaged background, and I hope I have made them proud. I will be the first in my entire family's history to obtain my PhD, but I hope I will not be the last.

With a full heart, I dedicate who I am today because of my husband. Philip Peeples has been the one person who I have turned to for everything and he has never let me down. He has stood behind me to push me when I could not push myself. He has stood in front of me to be the example that I turn to when I need to refocus my north star forward and upward. And most importantly, he has stood beside me both silently and vocally to shore me up and set me straight. I believe in myself because he unwaveringly believes so much in me. In his eyes, I see all my potential and possibilities and they are endless.

With a complete heart, I dedicate my transformation to Justyn Neil and Jaelyn Margaret Peeples. Nothing prepares you for motherhood, but motherhood prepares you for everything. These two amazing human beings are pure gifts and I always stand in awe of their humanitarian hearts and humble spirits. I had no idea how good people could be until I met Justyn. He is the best human I have ever met, and he has imprinted upon me to strive to be a better human every day. He is the exemplar of how to give without ever expecting anything in return. Jaelyn has

shown me the capacity that humility means grace, and she has shown more grace than anyone I have ever met. She uses her strength to help others and I admire how deeply she cares about the mental health and well-being of others struggling that she is willing to devote her future life's work to it. These two people are not just changing the world, but they are going to heal her heart. They are most impressive and most profound accomplishments that I will ever contribute to this world.

And, to my village! My sisters, Jeannie, Eloisa, and Francis Diana; brother, Elvert; brothers-in-law, Jerry and Tito; nieces, Jordan, Tyler, Tiffany, Tristyn, and Tory; and my nephew, Jared are the community that grounds me. These are my peeps who always have my back. Your unconditional love and support have no bounds and you all teach me how fortunate I am to have strength in numbers. You remind me that I am never alone and that I have to enjoy the journey as much as the destination, which ironically our misadventures are the best memories I have. Thank you cannot encompass the magnitude of my appreciation, love, and respect for each and every one of you.

I am whole because of these amazing people in my life and I hope I can repay the debt I feel I owe them for always showing up for me. I love you all to infinity and beyond!

To my CGU allies, thank you for sharing your wisdom and support. Specifically, thank you to Marco Antonio Cruz and Rachel Camacho, I am eternally grateful for your advice, advocacy of my success, and sage counsel. You both helped me, motivated me, and believed in me, and I celebrate this final milestone with you. I am indebted and grateful to Alana Olschwang, my dynamic duo writing partner. Oh my goodness, you have been a fantastic writing and thought partner. I completed my proposal because of your support. And, thank you to the Writing and Rhetoric Center that helped me become a better writer. Even more so to Jung-Hsien Lin, her tremendous help in reading and editing my proposal made it possible to write a comprehensive dissertation.

Finally, thank you to Dr. Susan Paik. Her Research Methods & Design course helped me flush out my initial theoretical framework (TF). She pushed me to find the theory I would use to explore my study and was so unwavering in her belief of me as researcher that it gave me even more confidence to breakthrough obstacles I faced searching for my TF. Importantly, she had all her students pick a motto that was meant to help motivate us complete our doctoral studies. Alfred Tennyson's Idyll's of the King and a Selection of Poems authored the quote below. This was my motto and every time I read it I felt empowered. The red bold font below encompasses who I am and how I was able to reach this journey's finish line because I never yielded.

"Though much is taken, much abides; and though

We are not now that strength which in old days

Moved earth and heaven, that which we are, we are;

One equal temper of heroic hearts,

Made weak by time and fate, but strong in will

To strive, to seek, to find, and not to yield*."*

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Chapter 1: Introduction

Statement of Problem

A student's first college year can be overwhelming. College dropout is highest in a student's first year, and this is often due to students being unable to connect academically or socially to their environment (Tinto, 1975; Astin, 1984; Kerby, 2015). Assimilation into a new environment can be difficult and this can interfere with college persistence. The national average first-year college retention rate is 75%, while approximately only 22% of first-generation students persist (Bentz, Radford, Lew, Dunlop Velez, & Ifill, 2011). First-generation college students (FGCS) are first in their families to go to college and may not have the resources to help them navigate a college setting. Some likely factors that accentuate FGCS higher risk of dropping out may be due to their lack of connection and are possibly less prepared to academically and socially adapt to the rigors of a college environment (Bourdieu, 2011; Factsheet: First Generation Students). Therefore, they may have a harder time acclimating into their educational environment and find it difficult to adjust potentially disrupting their ability to fit in smoothly (Dumais & Ward, 2010). When students leave college prematurely, they acquire an associated cost for their attendance but do not reap the benefits of a college degree, which can contribute to their future job prospects.

Retaining students is paramount to institutions. The key to helping students commit and engage in their educational environment is by integrating them (Heiberger & Harper, 2008). There is research that suggests there are ways to retain students and provide better support systems that help them graduate. Studies on peer or peer groups have shown that peer-to-peer interactions can motivate learning, development, and achievement within a college setting (Vollet, Kindermann, & Skinner, 2017). Although there have been different methodological

approaches in studying peer effects this is a promising area to investigate how peer-to-peer interactions can promote college success that has been overlooked in the literature. Therefore, the ability to identify what types of peer interactions and in what specific context those interactions occur may influence a student's first college year success. This is especially important for FGCS who may face greater barriers and are more susceptible to dropping out that could help to enhance their persistence and ultimately degree attainment. My study will focus on measuring intentional student-to-student involvement in curricular and co-curricular activities for FGCS to determine whether deliberate peer interactions have a significant effect on their first-year persistence and academic outcomes.

Purpose of Study

The purpose of this study is to measure if first-year first-generation peer-to-peer interactions have an effect on these students' first-year persistence and academic performance (i.e., first college year GPA) based on the level of involvement in curricular (e.g., working on a class project with a classmate) and co-curricular (e.g., joining a club/organization) activities in a college setting. Specifically, my goal is to (a) measure the quantity of student-to-student interactions in curricular and co-curricular activities that impacts persistence and first college year GPA and (b) identify which curricular and co-curricular activities impacts students' persistence and first college year GPA. The next section discusses the importance of this study and how it may be able to contribute to the knowledge gap in the current literature when studying how peers influence their peers' college success through deliberate involvement in specific educational activities inside and outside the classroom.

Significance of the Study

There is not enough information about the type of student-to-student interaction that influences educational success; therefore, this study is an appropriate attempt to ascertain how peer involvement can procure successful educational outcomes from a student developmental lens. While this study will give attention to peer-to-peer interactions because it is relevant in measuring peer influence, attention will also be given to what type of context these effects may occur. This may shed further light on how institutions can create a deliberate environment that is conducive in building peer relationships that promote their academic and social involvements; hence, can contribute to students' educational achievements, especially for more at-risk populations like FGCS.

This study will focus on FGCS who are poised to be less successful in a college setting by taking into consideration what makes them vulnerable in not persisting and how the institutional environment may serve as another barrier to these students' educational success. This could potentially help to isolate the amount of curricular and co-curricular activities peers should engage in that may produce a significant effect on educational outcomes, especially for FGCS. If enhancing peer-to-peer contact may help to diminish some of the obstacles first-generation students will encounter during their first college year that lends support to their educational success, then this study is a worthy investigation.

Furthermore, this study is critical because by investigating how students influence their peers based on how they deliberately interact with one another in a college setting, this may reveal which educational experiences can lead to their persistence, particularly for students who are less likely to persist, such as first-generation students. This study can also offer educational institutions specific policies or practices to organize or structure their environment in a way that

encourages these specific interactions resulting in student persistence and their overall educational attainment. Several studies have found that a peer relationship can influence students' academic and social outcomes although findings have been mixed regarding the magnitude that a peer has on their peer's educational outcomes, and these findings have been context specific (Astin, 1984 & 1993; Renn & Arnold, 2003; Sacerdote, 2014; Kilgo, Mollet, & Pascarella, 2016). Astin (1984 & 1993) claimed the importance of student involvement, both with their educational environment and with their college peers, which will promote developmental growth and learning, which can lead to their overall success in college. It is commonly understood that engaged students are more successful in a college setting than disengaged students, but there is still a lot more information absent in the literature on this topic that requires attention.

The Involvement Theory offers significant insight on creating an environment that amplifies student development through peer-to-peer involvement. This theory brings attention to how educational institutions can facilitate intentional peer interactions, especially for students who may have difficulty initiating their involvement during their first college year, such as FGCS, which can contribute to their educational success. The use of the Involvement Theory for this study allowed me to engage an important lens in studying peer effects that has not been emphasized in the literature. Correspondingly, the findings from this study may be able to offer useful knowledge to enact specific policies and practices that support student success for FGCS enrolled in higher education institutions. The theoretical framework for this study that I will rely on is the Involvement Theory's Input-Environment-Output (I-E-O) model. The following section describes the rationale of why this is a useful theory to evaluate peer effects, while Chapter 2 will describe this theoretical framework in full detail.

Theoretical Rationale

College peers have a high degree of influence on each other's educational experiences. Institutions can enhance their environment to promote a successful student experience through deliberate peer formation and direct involvement with one's peers because "the student's peer group is the single most potent source of influence on growth and development during the undergraduate years" (Astin, 1993, p. 398). The Involvement Theory claims that student involvement can either be specific or broad; is a continuous process and is different for each individual, in each instance, and each time a student becomes involved; can be measured quantitatively (e.g., hours spent studying) or qualitatively (e.g., how much they understand their homework assignments); the quantity and quality of the investment is important; and an effective student development program is linked to how much that program engages students to become involved (Astin, 1984). Basically, "peer approval is a powerful source of prosocial influence, and may be an appropriate target for intervention in itself" (Moroz, 2002, p.243). Importantly the Involvement Theory postulates "student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience," which can be enhanced through one's peer group (Astin, 1984, p. 518). Therefore, a modified way to measure peer effects is through the intentional connection between peers that generates student-to-student involvement, which can result in positive outcomes (i.e., persistence). Figure 1 is a simplistic illustration of the Involvement Theory's Input-Environment-Output (I-E-O) model, whereby Input is the population being examined for this study; Environment is the setting the population both resides and interacts with others in; and Output is the desired outcome of the involvement that transpired in that setting. Chapter 2 offers the complete discussion of how this study will apply the I-E-O model, which incorporates a breakdown of selected student developmental

theories that articulates each component of the model and provides a detailed illustration of the theoretical (see Figure 2) and conceptual (see Figure 3) frameworks.
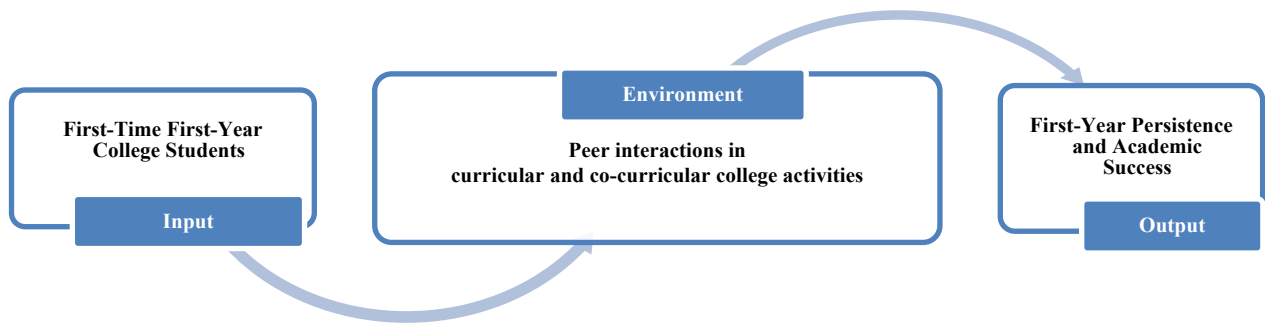
Figure 1. Involvement Theory I-E-O Model

Intentional involvement can successfully socialize a student into an educational environment that will support their acclimation into that college setting. Developmental and social theories, such as the Involvement Theory looks specifically into how a person develops overtime in specific environments and focuses on who and what directly contributes to that individual's growth and learning. Foreman and Reallick (2013) underscored that more consideration should be given to the outcomes that are produced when students are involved with their peers in an educational environment, so institutions are better equipped to produce policies and programs that promote student development to enhance their educational experiences. Institutions also have the flexibility to focus on different practices and programming that changes the dynamic of peer-to-peer interactions (Liu, Patacchini, & Zenou, 2014). Moreover, student involvement can be a holistic benefit that promotes both the academic achievements of the student as well as their psychosocial well-being (Kilgo et al., 2016). In a college setting, there are greater opportunities to measure where peer relationships form and their interactions since students spend most of their time together inside and outside the classroom, thus enabling studies to capture and measure when and how students become involved.

The relationship of how peers influence one another's educational experiences (i.e. academic and social outcomes) is not measured by a single or commonly held research design or methodological approach; although studies favor an empirical versus an inductive approach. Research over the last four decades on peer effects had significant limitations in capturing the influence of peer interactions to produce high confidence in the external validity or generalizability of the results to generate policies or programs (Manski, 1993; Robertson & Symons, 1996; Hanushek, Kain, Markman, & Rivkin, 2003; Eisenkopf, 2010). Findings revealed "the size and nature of peer effects estimated are highly context specific," so the setting where peers interact matters in whether a peer effect manifests (Sacerdote, 2014, p. 253). Related issues point to correlated effects (my peer resembles me); exogenous or random effects (peer effects are not due to a peer relationship); or endogenous or non-random effects (you cannot distinguish between who the influencer is, my peer or me) making it difficult to know where the effect actually exists. Hence, there is a lack of understanding as to how peer effect findings can be applied toward institutional policies or program intervention (Renn & Arnold, 2003; Sacerdote, 2014). Ultimately the goal is to assist students who are more likely to drop out in their first college year or altogether abandon their college education. To understand when peer effects show up, it would be essential to pinpoint the context or setting of when the peer interaction occurs, and the specific types of activities peers are involved in to determine the appropriate policy or program to implement. The next section lists my study's research questions that isolate the gap in what is not known about measuring the peer influence.

Research Questions

To seek answers that may capture the context in which peers influence their peers' educational outcomes, especially FGCS, I have specified the research questions of this study

accordingly. The overarching research question to my study seeks to understand *How does a first-year first-generation student's level of involvement with her peers influence her ability to educationally succeed?* Below are the specific research questions of my study.

- **Research Question #1:** *Does the frequency of involvement in curricular activities between peers contribute to first-year first-generation students first college year persistence rate?*

- **Research Question #1.a:** *Does the frequency of involvement in curricular activities between peers contribute to first-year first-generation students first college year academic GPA?*

- **Research Question #2:** *Does the frequency of involvement in co-curricular activities between peers contribute to first-year first-generation students first college year persistence rate?*

- **Research Question #2.a:** *Does the frequency of involvement in co-curricular activities between peers contribute to first-year first-generation students first college year academic GPA?*

Definition of Terms

- First-Generation status is when neither parent completed a bachelor's degree.

- Peer is a friend, classmate, roommate, or other college peer.

- Involvement is the quantity and quality of a student's interaction in a specified activity.

- Curricular refers to an academic activity (e.g., working on a project).

- Co-curricular refers to an extracurricular activity (e.g., joining a club; socializing with friends).

- Persistence is when a student continues at the same college from one year to the next.

Organization of this proposed study

There are three areas of examination that are important to this study, which include: a better understanding of first-generation students' first college year experience; the students' fit into their college setting; and how college peers can influence educational outcomes. Chapter 1 provides the relevance to studying first-generation students' persistence issues with attention towards how peer-to-peer interactions may promote successful educational outcomes. Chapter 2 focuses on the literature review to support the claim that first-generation students may benefit from intentional interactions with their college peers but there is much to be considered about the barriers FGCS face, the institutional mismatch issue, and the complexity of studying peer effects. Chapter 2 will also elaborate further about the disadvantages of first-generation students, how a lack of institutional fit exacerbates first-generation students' ability to adapt into their educational environment, and will explain how a possible way to off-set this mismatch is through potentially enhancing deliberate college peer interactions. Also included in this chapter is the full description and visual of the I-E-O theoretical and conceptual framework models. Chapter 3 provides the methods applied to this study that measured the research questions, description of the population, along with the quantitative and qualitative data collection and analyses that were conducted. Chapter 4 provides the quantitative and qualitative results of this study. Chapter 5 provides the discussion and interpretations of the findings from this study. Chapter 6 summarizes this study's key concepts and findings with attention to additional limitations, future research and recommendations, and implications for policy and practice.

Chapter 2: Literature Review

First-Generation College Students

First-generation college students (FGCS) will need to overcome several academic and social challenges in their college environment that impede their ability to persist and negatively influence their degree attainment. It is important to explain what a first-generation student label means in order to identify why they are a vulnerable population. There are two ways to define a first-generation student, both of which is based on student's parental educational level. One common way to define a first-generation student is that one or both of their parents completed only primary and/or secondary schooling. An alternative, and predominant definition of a first-generation student is when neither parent has completed a bachelor's degree. In either definition, students who are first-generation come from a family background that differs from non-first-generation students where both parents completed at least a 4-year degree. For the purposes of this study, I will use the latter definition primarily because it captures a higher proportion of FGCS who will experience various barriers during their educational pursuit that differ from non-first-generation college students (non-FGCS).

First-generation students face several obstacles accessing, persisting, and completing their postsecondary educational goals compared to their non-first-generation peers. These students face greater financial burdens, are educationally underprepared by their high schools, and less socially prepared to enter a college setting (Fruiht & Chan, 2018). Degree completion has been historically lower for underserved students, such as first-generation students, because they are typically academically underprepared and come from a lower social class status, which means less access to financial support (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008). Consequently, first-generation students have fewer resources at home and school prior to

matriculating into college that can also be a burden when they become a college student. Overall, FGCS are less likely to enroll, persist, and complete their college degree compared to their non-first-generation college peers.

For FGCS to successfully complete their degree, then they must persist through their first college year. Betnz et al. (2011), reported that first-generation students' national retention rate average is roughly 22%, while their counterparts' national retention rate average is approximately 75%. The National Center for Education Statistics (2018) reported a decline of first-generation students enrolling in higher education between 1999 and 2011; 37% to 33%, respectively. First-generation students have a higher dropout rate in their first college year, which is actually four times higher than students who were not first-generation (Azmitia, Sumabat-Estrada, Cheong, & Covarrubias, 2018). These statistics show that FGCS are also less likely to persist in their first college year compared to non-FGCS. These trends of FGCS failing to enroll and stay in higher education are problematic both to the institution and society at-large. To better understand this disparity, this section focuses on what makes first-generation students more vulnerable than their counterparts.

Educational Attainment Gaps

The educational attainment gap disparity by social class has broadened rather than shrank. Approximately 75% of FGCS enrolled in a four-year institution failed to earn a degree within four-years, while 90% did not complete a college degree within six-years from enrollment (Demetriou, Meece, Eaker-Rich, & Powell, 2017). First-generation students, who are predominately from a low social class, reportedly have lower GPA, test scores, high school course work is less rigorous, and fewer cumulated college credits (Próspero & Vohra-Gupta, 2007; Seidman, 2012). FGCS are less prepared for college-level coursework than non-FGCS,

which is detrimental not only to their overall academic performance, but potentially to their ability to complete their degree. Educational attainment is greatly influenced by the student's social class because it explains the amount of knowledge that they have acquired to navigate a higher education landscape (Moschetti & Hudley, 2015). Eventually, the success of first-generation students is hindered by their limited knowledge of how to successfully integrate academically and socially into a higher education environment. This lack of educational capital (i.e., academic and social aptitudes) is a key reason why FGCS experience difficulty persisting, which ultimately threatens their educational attainment goals.

Types of Capital

Educational capital incorporates students' cultural and social capital they possess based on their social class upbringing. These types of capital offer insight on how educational attainment inequities exist for students who belong to a lower social class status, which can result in a lower rate of persistence potentially due to financial and academic barriers. Pierre Bourdieu, a renowned French Sociologist, coined the term cultural capital, which describes the level of a person's context specific knowledge proficiencies that have helped them successfully socially adapt into particular environments that award their conformity (Winkle-Wagner, 2010). Bourdieu's work on the types of capital people use to navigate their social experiences helped to delineate a level of exposure to culturally and socially relevant knowledge that differed by social classes. He further described three states of capital: embodied, objectified, and institutionalized. This review will underscore the last capital concept, institutionalized, which refers to cultural capital "as a theoretical hypothesis which made it possible to explain the unequal scholastic achievement of children originating from different social classes by relating [benefits to] academic success" (Bourdieu, 2011, p. 82). Essentially, cultural and social capital are formed by

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one's socioeconomic class status and transmitted through two primary key agents: parental and educational institutions.

One of the ways educational mobility is fostered is through one's parental/family background, specifically their socioeconomic status because it serves as a gateway in accessing certain resources and knowledge needed to succeed in higher education. FGCS receive little to no support or advice from their family about how to academically or socially integrate into a college setting (Strayhorn, 2007; Plaskett, Bali, Nakkula, & Harris, 2018). Leaving it up to first-generation students to figure out how to succeed in college on their own has proven to be detrimental based on consistent data regarding low persistence and degree completion rates. To support students who do not have the same types of resources as their peers in achieving educational success, it is important to unpack how the lack of cultural and social capital impacts FGCS.

Cultural Capital. The theory of cultural capital sheds light on the continued reasons for the disproportionate outcomes across certain groups of the student body enrolled in postsecondary institutions. This theory points to a student's ability to engage and interact in social environments based on the type of knowledge they have acquired and accumulated based on their social class background (Bourdieu, 2011). The types of resources and knowledge a student has available to them is largely based on their social class status that will inevitably play an important role in the choices they believe they can make. For example, the knowledge of different types of institutions they could apply to (e.g., public versus private institutions) or the pathway they choose to take from enrollment to degree completion. Cultural capital is a way to gauge the collection of one's intellect; social behaviors; preferences; how they have learned to interpret, govern, and respond to those they interact with; and how they translate the way they

obtain pedigree to develop and enhance their stature in a given context, such as an institutional environment (Anderson & Jaeger, 2016; Bourdieu, 2011; Sullivan, 2001; Tzanakis, 2011). The transmission of cultural capital occurs between the parent and child; the parent shares their accumulated knowledge and skills based on their social class upbringing. If a parent has inadequate knowledge about higher education, then they have no notable experiences to pass on to their child would help them successfully assimilate in that environment. Focusing attention on the Cultural Capital Theory is a benefit in helping to understand the potential and often negative trajectory of FGCS' educational attainment compared to non-FGCS.

Based on the Cultural Capital Theory, a first-generation student's social class status, which a student inherits from their parents, encompasses the knowledge, skills, and attitudes to maneuver in an educational institution. Since by definition first-generation students are unaware of the cultural norms and practices of being a college student, they lack the competency to effectively create a roadmap of how to engage and interact in both the academic and social settings of their institution (Winkle-Wagner, 2010). Although there may be some FGCS who enter college with having been exposed to some resources that help them better understand college expectations comparable to the AVID (Advancement Via Individual Determination)[1] program, overall their success rates are still further behind nationally compared to non-FGCS. This may be partly because FGCS do not possess the same wherewithal to navigate both the academic and social spheres in a college setting as easily as their counterparts based on their limited exposure and understanding of the postsecondary educational landscape. Lower cultural capital can lead to diminished educational success, especially for first-generation students

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[1] AVID is a high school program that helps students obtain knowledge and skills meant to support their college transition and persistence.

because they have greater difficulty adjusting to a college setting. When you look at first-generation students in a college setting, they are still statistically falling short in educational completion rates ("National Center for Education Statistics (NCES) Home Page, part of the U.S. Department of Education", 2018). To help these students circumnavigate this deficit may be a crucial ingredient in facilitating their educational success by amplifying their cultural capital as well as their social capital, which encompasses a standard set of learned behaviors and norms that can ease the transition into college life.

Social Capital. Parents of first-generation students often are unable to provide context about what to expect in college and can only offer limited advice on how to seek the help they need to be successful. FGCS will encounter challenges both inside and outside of the classroom that can hinder their educational success. Strayhorn (2007) found first-generation students have a different social experience than their peers, which can be more negative, especially in nonacademic settings. A reason that social experiences can vary relates to behaviors learned from norms they are exposed to based on their social class. The Social Capital Theory asserts that having "networks of relationships can help students manage an unfamiliar environment by providing them with relevant information, guidance, and emotional support" (Moschetti & Hudley, 2015, p. 235). The premise around this theory focuses on a student's ability to engage in appropriate behaviors and attitudes expected of them in academic and social activities to help them navigate their educational setting more proficiently. Students are less likely to understand how to fulfill behavioral and attitude expectations if they have not been regularly exposed to those norms due to their social class upbringing.

FGCS lack some important social capital that help them integrate into their institutional setting because they were not shown certain behaviors and norms expected of a college student.

These students are typically from a low socioeconomic background, are academically underprepared, and have parents who are unable to help advise in their educational decision-making (Stephens, Hamedani, & Destin, 2014). FGCS also have limited resources at their disposal due to their low social class background, and therefore, are less likely to know about or seek out resources early on to help them adjust and situate themselves into an unfamiliar college setting. First-generation students' "experiences often involve unique cultural, academic, and social transitions," which can adversely impact their ability to integrate into a college environment (Strayhorn, 2007, p. 100). Studies have shown that these students spend less time studying, participating in co-curricular activities, and will often need to find a job to help support them compared to their non-first-generation peers (Próspero & Vohra-Gupta, 2007; Fruiht & Chan, 2018). First-generation students are less familiar with how to develop relationships with college peers, faculty, and staff that could enhance their knowledge to be successful in their first college year when they are the most vulnerable.

FGCS limited resources and lack of accumulated social capital can impede their ability to build relationships with their non-FGCS peers and faculty members at their institution. Greater attention in promoting first-generation students' involvement in their college setting and non-first-generation peers could be instrumental in how FGCS obtain relevant cultural and social capital, which can improve their overall success in higher education (Próspero & Vohra-Gupta, 2007; Moschetti & Hudley, 2015). First-generation students cannot be expected to find success within an educational environment that does not buffer or compensate for the gap of knowledge and dispositions they were not exposed to based on their social class upbringing. The cultural and social factors that negatively influence FGCS educational outcomes can be thwarted by having students become more involved in their educational experiences inside and outside of the

classroom, which can promote academic achievement and social integration. The other key agent that can help a student's ability to integrate into their college setting is the institution itself, which can supplement the gap in cultural and social knowledge and etiquette that certain students, like FGCS, may lack.

Lack of Institutional Fit

The transitions first-generation students need to make in a college setting can be daunting, especially if the educational environment's cultural setting does not match that first-generation student's cultural background, which can lead to a disconnect. Institutional norms are highly derived from the middle social class, and first-generation students typically come from a lower or working social class background (Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012). As a result, students from a lower social class status are expected to meet a standard of educational knowledge and behaviors that stems from the middle to upper social class status values and norms causing a mismatch between FGCS and their institutional environment. Understanding the "rules of the game" play an important factor in how a student is able to acclimate into their setting (Upcraft, Gardner, & Barefoot, 2004; Stephens, Fryberg et al., 2012). FGCS will have a different college experience compared to non-FGCS based on their inability to navigate within an institutional culture dissimilar from their own; this refers to the Cultural Mismatch Theory that can lead to a lack of an institutional fit.

Unfortunately, this sets up first-generation students for failure since they are socialized with different social class norms; hence, may inadequately understand other social class ethos. FGCS, then behave incompatibly because they lack the necessary cultural and social capital needed to steer their college experience. To have a long-term effect on first-generation students' educational success they need to engage in their academic and social landscape. Institutions

could play a greater role in how they construct their mission and services to promote deliberate involvement between students and their environment that is more inclusive of all the different social classes of their student population. FGCS can become disconnected from their environment if there is a mismatch or lack of fit between these students and the institution they are enrolled in, which diminishes their overall educational success.

Students, especially FGCS, may be incompatible with their environment if the institution's organizational culture embodies different values and norms leading to a disconnection that causes students to depart prematurely. Higher education institutions have not openly addressed the potential cultural mismatch between the institution and their students' values and norms. An institution or individual's values and norms are rooted in a social class background and the student-institution fit is context-dependent (Stephens, 2010; Sommet, Quiamzade, Jury, & Mugny, 2015). If the values and norms are incongruent between institutional and student expectations, then the mismatched students will find it difficult to personify behaviors they are unfamiliar with or integrate into the institutional ethos seamlessly (Stephens, 2010). Students who were socialized outside of their institution's social class context will have difficulty translating dissimilar values and norms from their own without some assistance from the institution or their college peers. Without institutional support to minimize the cultural gap that is acquired through one's social class the likelihood of an institutional cultural mismatch increases for the student; hence, they lack an ability to fit into that institution's setting.

When a student does not share the same social class values and norms with their institution, a mismatch will occur and a greater potential for a lack of fit. An institution's cultural context are rooted in the middle social class characteristic traits (Stephens, Fryberg, et al., 2012;

Stephens, Townsend, Markus & Phillips, 2012). The values and norms of lower and working

social class differ from middle and upper social class behaviors and attitudes. FGCS are typically

from a lower or working social class background, so when they enter college, they ultimately

will encounter several cultural and social barriers that impedes their educational success. These

students have less cultural and social capital to navigate a college or university setting as easily

as their non-first-generation college peers (Winkle-Wagner, 2010; Bourdieu, 2011). FGCS are

highly vulnerable to dropping out in their first college year partly because they lack the

appropriate knowledge and relationship building skills to steer their educational path as

successfully as their non-FGCS counterparts.

  If students do not feel like they fit into their institutional environment, they are less likely

to engage and assimilate into that setting. Students who have dissimilar values and norms from

their enrolled institution will face a mismatch that may eventually lead to their attrition

(Stephens, Fryberg, et al., 2012; Stephens, Townsend, et al., 2012; Townsend & Truong, 2017).

FGCS who notice that their institution has different mores to which they are not accustomed to

may experience a host of negative outcomes related to persistence, academic performance, and

degree completion. Higher education institutions can serve as a conduit to help FGCS adjust to

their college environment. A major part of an institution's role is to provide the support their

students need to acclimate and succeed in college. A mismatch or lack of fit between FGCS and

the institution they attend can be a major obstacle in why their educational goals are deterred.

The following section will explain the Cultural Mismatch Theory, and how an institution's

organizational culture impacts how students are able to familiarize themselves into their college

setting and why students are unable to fit in.

Cultural Mismatch Theory

It is important for both the institution and the student to understand why a mismatch or lack of fit can occur in order for both parties to accommodate a behavioral adjustment. Cultural values and norms are established in one's social class background, and the Cultural Mismatch Theory (CMT) highlights the difference between the middle-class and lower-class dispositions. If the institutional culture embraces middle social class values and norms, then students socialized in lower and working social class values and norms will clash with the dominant institutional culture causing a mismatch. Stephens pointed out that CMT reveals students are "attuned to environmental cues about whether they belong or not" (2010, p. 3). CMT emphasizes a difference between *independent* and *interdependent* characteristic traits. Institutional expectations are rooted in middle social class values that fosters *independent* characteristic traits, which encompass individualistic and autonomous values; however, *interdependent* characteristic traits, which are rooted in lower social class values that fosters building collaborative social relationships above self-promotion (Stephens, 2010; Stephens, Fryberg, et al., 2012; Stephens, Townsend, et al., 2012). A mismatch or lack of fit between the student and institution will occur if the institutional setting displays more *independent* or middle-class social norms and standards.

Independent. CMT defines *independent* characteristic traits cultivates individualism. The *independent* characteristic traits of the CMT reflects a particular set of culturally-specific assumptions derived from the middle-class context (Fryberg & Markus, 2007; Stephens, 2010; Stephens, Fryberg, et al., 2012; Stephens, Townsend, et al., 2012). Students who are able to take charge of their educational pathway and willingness to seek help and guidance from faculty, staff, and administrators have a greater sense of independence. If autonomy is rewarded within the higher education landscape, then students who grew up in a social class setting that

encouraged individualism and the ability to self-regulate are used to practicing these values and norms. These students are more successful at acclimating into a college environment who share the same ethos as their institution. Consequently, FGCS who were socialized with different values and norms due to their social class upbringing are less adept at conforming to an institution's *independent* principles; therefore, some FGCS find themselves at a critical juncture of feeling an institutional mismatch because they exhibit more *interdependent* attributes.

    Interdependent. *Interdependent* characteristic traits focus on a person's desire to first serve others above themselves, to become a role model in order to give back and continue to develop ties to their community. Basically, students with *interdependent* characteristic traits adopt a community connectedness approach when needing and giving help; basically, they have less of an individualistic disposition to address their issues alone. Typically, FGCS who come from a lower social class status are socialized to promote community connectedness behaviors versus individualism unlike their upper social class counterparts, which can complicate acclimating in a college environment (Stephens, 2010; Stephens, Townsend, et al., 2012; Fruiht & Chan, 2018). Essentially, *interdependent* characteristic traits represent a cooperative approach in building a community within their college setting, while paying less attention to their individualistic development (Stephens, 2010). Alternatively, higher education institutions consequently promote values and norms that demonstrate a person's ability to capitalize on their independence, autonomy, and individualism (Stephens, Townsend, et al., 2012). If institutions do not help to moderate this mismatch of values and norms, then FGCS may be unable to adjust in time that permanently displaces their educational pursuits. The social structure of any organization can be influenced by its changing cultural environment; thus, should be amendable on how to best serve its diverse institutional members (Hatch, 2013). An educational

environment can be structured to support students by intentionally connecting with these students who may initially not fit into their college setting because they do not possess the same social values and norms that causes them to not fit in. An institution's organizational culture can either be welcoming or another barrier that a FGCS will have to overcome.

Organizational Culture

Historically, education was a privilege not a right; hence, access was consequently embedded in one's socioeconomic class. It is important that educational organizations construct their environmental and social settings to take into account the diverse student populations enrolled in their institutions. American higher education institutions have transcended from Medieval Ages roots that catered to the privileged social classes toward a democratization of society that gave way to the rise of public education, which would hopefully become the great equalizer (Kibre, 1962; Cremin, 1997). Even though access into colleges and universities expanded, the organizational culture of higher educational institutions is still deeply embedded in the middle to upper social class values and norms (Stephens, 2010; Stephens, Fryberg, et al., 2012; Stephens, Townsend, et al., 2012; Phillips, Stephens, & Townsend, 2015). When a student's values and norms align with the institution's values and norms, they share a common understanding of behaviors and expectations that promote a student's integration and long-term educational success. Conversely, when there is a mismatch or lack of fit between the student and institutional values and norms, then there is a chance the student feels disconnected from that environment, which can lead to negative outcomes that include dropping out, poor academic performance, and not completing a degree. FGCS typically come from lower socioeconomic backgrounds whose socialized values and norms may be in conflict with their selected institution, which can be a reason they are not compatible in their college setting.

FGCS face two problematic barriers when fitting into a higher education institution; they enter college lacking a certain amount of knowledge and social aptitudes to easily fit in. The first barrier FGCS have is they have parents who have not received a four-year degree, which diminishes the amount of cultural and social capital to help effectively navigate their college setting. The second barrier FGCS face is they were most likely socialized with *interdependent* norms, whereby having a community connection is highly emphasized rather than being more behaviorally individualistic and autonomous, which can cause an identity crisis when trying to fit into an *independent* institutional culture (Stephens, 2010; Stephens, Fryberg, et al., 2012). Whereas students who cultivated *independent* values and norms acquired knowledge that helped them better navigate an educational environment and easily adjust to the demands and expectations in that higher education setting. FGCS are less adept to this transition, hence are more susceptible to falling behind, feeling a lack of belonging, and finding greater difficulty in acclimating into a college setting as successfully as their counterparts (Dumais & Ward, 2010). Without being completely cognizant of it, colleges and universities may be onus for the potential culture mismatch FGCS experience in their educational context. FGCS feel less connected to their environment and have issues persisting compared to non-FGCS because they cannot assimilate to the middle social class values and norms (Prieur & Savage, 2011; Chen, 2012). These obstacles can result in a cultural and social mismatch.

FGCS will need some assistance or support in evolving their cultural understandings that decode the institution's expectations into compatible knowledge that they can use to integrate into their college setting. Basically, if a FGCS feels they fit into their college environment they have a greater probability of flourishing and successfully persisting. Alternatively, a mismatch between the student and the institution can threaten their academic performance, increasing

dissatisfaction and attrition (Phillips et al., 2015). FGCS will continue to face barriers that deter their educational goals if the organizational structure of the institution they attend does not help them align to the institutional values and norms or help them acquire the lack of educational cultural and social capital (Jury, Smeding, & Darnon, 2015). A solution to this threat is found in the Cultural Capital Theory, which refers to social agents as a way to help educational institutions infuse the appropriate knowledge, values, and norms to prevent a mismatch (Bourdieu, 2011). Institutions can potentially avoid the pitfall that FGCS may feel a lack of fit or do not think they belong by addressing the mismatch of their institutional cultural standards before these students even matriculate (Prieur & Savage, 2011; Townsend & Truong, 2017). If higher education institutions do not generate a more equitable or compatible climate for students socialized outside the middle social class mores, then it risks losing these students due to the mismatch or lack of fit they are experiencing within the organization.

A cultural mismatch between the student and the institution can create negative and disconnected feelings that impact their ability to fit in, which can lead to their attrition. An institution's organizational culture can help to diminish student attrition by either not promoting *independent* middle-class values and norms as the dominant culture or be more inclusive of *interdependent* lower social class values and norms into the higher educational environment (Kuh, 2001). FGCS will typically find it harder to feel they are part of a college community if they do not fit into the cultural ethos. Institutions can help alleviate the disconnectedness FGCS experience by making a more concerted effort to broker a relationship that leverages the disparity between social class norms (Stephens, Townsend, et al., 2012; Duncheon & Relles, 2018). An educational institution's organizational structure may originally be rooted in the *independent* concept of the CMT, whereby the middle social class values and norms is the bedrock of the

college, but there is opportunity to evolve. An institution's organizational structure can move beyond its middle-class values and norms and be more inclusive of different social class principles by composing different peer-to-peer interactions to enhance cultural and social capital that some students may lack, such as FGCS.

Peers

Educational institutions can help foster a more inclusive environment for students who have difficulty fitting into a college setting through intentional activities that engages an array of college peer interactions, which can promote persistence and other academic achievements. There are many factors that contribute to student learning and development, which include family and school dynamics, but an area of importance that has emerged in the literature and needs further attention is the effect peer relationships may have on each other's educational outcomes. Understanding what a peer effect is will clarify the importance of how a peer relationship influences educational success. The study of peer effects is relevant to educational institutions seeking to reorganize or restructure their middle-class ethos to broaden the educational experiences for students who do not share the middle-class values and norms through deliberate student interactions.

Essentially, a peer-to-peer relationship has a substantial effect on behavior and the outcomes from that relationship is worth further exploration. The peer relationship is a composite of interactions a person has with a friend or classmate that is shaped by a host of factors derived from an individual's background and social status that situates how peers are formed. Peer effects in its simplest definition encompasses how friends, classmates, roommates, or other college peers influence each other's behavior. A mutual affection occurs between people based on shared meanings of social action, whereby a relationship (e.g., friendship) is formed through common

values structured on consistent interactions that offer mutually beneficial outcomes (Weber, 2009, pp. 118-123). Although an individual's disposition can be influenced by others around them as well as their environmental context (Bourdieu, 2011). Understanding how student-to-student interactions influence the level of academic and social engagement occurs in different educational settings may help to facilitate how peers support each other's educational performance.

Findings have shown that peers do have a significant effect on educational outcomes although they vary and are context specific. Peers can significantly affect one another's behavior that impacts educational outcomes; however, the degree of influence that this relationship exhibits can also vary depending on the context or environment in which the student-to-student interaction resides (Renn & Arnold, 2003; Sacerdote, 2014). Other studies showed that college peers can affect each other's development and learning, but it has been difficult to locate the setting in which their interaction produces its influence or how the influence occurs (Astin, 1984 & 1993; Renn & Arnold, 2003). There are policy implications about the effect peers have on one another in an institutional setting that promote or exacerbate educational attainment; hence it is important to understand the types of activities (i.e., academic and social) that students engage in that produces such outcomes. The next section focuses on unearthing the influence peers have on each other's educational attainment.

The Peer Effect

A seminal report on the topic of what influences students' educational outcomes conducted by James Coleman in 1967 pointed to multiple components that influenced educational attainment, which included family background, peer composition, teachers, and school curriculum. Since Coleman's study researchers have expanded evaluating demographic

background (i.e., race/ethnicity, social class), academic ability (i.e., high school GPA and SAT/ACT scores), school setting, and peer groups to measure students' college success (Duncan, Biosjoly, & Mullan-Harris, 2001; Becker, 2009; Krumrei-Mancuso, Neton, Kim & Wilcox, 2012; Sacerdote, 2000 & 2014). Many researchers have agreed that attention to what areas and in what context we measure how peers influence each other could possibly shed more light on the impact they have on students' academic and social experiences, which may explain a peer's effect on educational attainment.

The concept of a peer effect hypothesizes that people who have mutual interactions with each other can yield a cause and effect relationship that produces certain outcomes based on the context the interaction occurs. Studies that have attempted to disentangle the nuances between peer effects on educational attainment compared to other notable effects on student success analogous to family, neighborhood, and schools the student comes from has produced inconsistent findings (Sacerdote, 2014). The research on peer effects reveals there is a significant impact that peers influence one another in both academic and social settings, but these results vary and require more consideration in pinpointing how peers influence each other.

If peer influence is context specific, then it is relevant to identify the setting and type of interactions that are conducive to peer effects. Peer relationships can reside in almost any environment, so the population and location selected in studying this interaction is important to identify how the effect occurs. By changing the context or environment we study students in and what interactions they have in that specific type of setting can result in different outcomes making it difficult to locate if the effect is the peer relationship or something else. Sacerdote concluded that "the size and nature of peer effects estimated are highly context specific" (2014, p. 253). Manski (1993) found a main issue in correlating how peers affect each other's

disposition can influence their educational outcomes is associated to what Manski called a reflection problem. His study described the reflection problem to mean that peers shift their behavior according to who is part of their peer group, who is not part of their peer group, and whether they share the same institutional environment making it difficult to infer if the peer influence is due to the relationship between peers or simply due to external factors, such as their shared environment that cannot be distilled (Manski, 1993, pp. 532-533). The above studies point to some notable issues when studying peer effects; however, greater attention is needed to expand the explanation of peer effects on student achievement by isolating whether one's background characteristics sway the influence peers have on one another versus the setting peers interact in.

Background Characteristics. A student's background can have a direct or indirect influence on the peers they interact with, and their individual characteristics may also play a part in explaining peer formation that leads to the impact they have on each other's educational attainment. Furthermore, data from other studies indicated that peer effect on educational achievement were myriad due to the variation among peers who interacted with one another and the environment this relationship was measured (Duncan et al., 2001; Rivkin, 2001; McEwan, 2003; Zimmerman, 2003; Angrist & Lang, 2004; Arcidiacono & Nicholson, 2004; Lefgren, 2004; Henry & Rickman, 2005; Booij, Leuven, & Osterbeek, 2015). Rivkin (2001) looked at the causal relationship between peers' backgrounds and whether academic and social development improved because their peers came from a more privileged background, which was linked to the peer's socioeconomic status. Hoxby (2000) observed peer effects were prevalent within rather than across racial composition, while gender had no observable effect on educational attainment. A follow-up study from Hoxby and Weingarth (2005) found evidence of peer influence on

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academic achievement when peers shared the same racial composition, sex identity, and socioeconomic status albeit this factor only had a modest effect on educational outcomes. Peer formation is influenced by a student's race, gender, and socioeconomic class that explains a portion of how peers interact with one another that possibly contributes to their peers' educational outcomes. Another area of importance in understanding peer effects is the context or setting (i.e., school dynamics) that this relationship is studied in, which can offer additional insight on this phenomenon.

School Dynamics. Peer influence is evident in an educational environment but there is not a definitive claim as to the type of setting in that environment, which may promote peer interactions that impact academic and social outcomes. Studies have shown a school's racial composition strongly emphasized the achievement gap between black and white students; accordingly, schools could manipulate their environment to reflect this demographic composition to influence the magnitude of peer effects, but consequently some studies cautioned that altering a school's composition setting does not necessarily result in student interactions that lead to positive educational outcomes (Hoxby, 2005; Hanushek & Rivkin, 2006). An earlier study found school structure to be an important component when studying peer effects but there is a confounding correlation on learning gains based on the school setting and peers' background (Thrupp, Lauder, & Robinson, 2002). Stewart (2008) studied peer effects based on the school structural characteristics, student effort, peer associations, and parental involvement and found that student achievement is rooted in a compilation of how much effort and involvement the student, their peer, and parents put into learning more than the school structure itself. Hout (2011) discovered that there is a possibility that students' educational success is muddied by what is called a "spillover effect". He claims that educational success for any student is a result of on-

going or spillover of "advantages and disadvantages from generation-to-generation," whereby background characteristics, the level of a parent's education, and socioeconomic status are constant contributing factors to educational attainment including external settings that promote "patterns of racial inequality…[and] residential school segregation" (pp. 165-166). The school dynamic can be designed so that their educational environment encourages peer interactions that generates an opportunity for peer-to-peer engagement and learning to occur more regularly.

Peer Arrangement. An educational institution can organize its setting to promote peer interactions that occur overtime and often, which can amass a peer's influence on their peer's academic and social successes based on frequent or regular peer contact. The impact peers can have on their peers' educational achievement has been associated to streaming or mixing peer groups that promote students' academic achievement (Arnott & Rowse, 1987; Angrist & Lang, 2004; Gamoran, 2009). Other studies found peer effects were likely to contribute to academic and social performances between classmates or roommates due to the direct interaction of this relationship (Sacerdote, 2000; Lefgren,2004; Henry & Rickman,2005; Bonesrønning, 2006; Stinebrickner and Stinebrickner, 2006). Findings from the Dartmouth College study on peer effects lends some evidence to the above claim (Sacerdote, 2000). This study evaluated Dartmouth College, a private liberal arts institution, that randomly assigned first-year students who lived in on-campus residential housing. His analysis found these first-year students' first college year GPA performance was significantly influenced by their peers (i.e., roommates) who persuaded them to join a fraternity/sorority or other social group (Sacerdote, 2000, pp.13-17). This result may be associated to the similarities between students at this college; hence, his research found it simpler to focus on behavioral outcomes (i.e., joining a co-curricular club) as a means to explain academic achievement causality of peer effects between roommates.

Additionally, Zimmerman (2003) evaluated whether college roommates' academic performance was promoted by their roommate's academic ability at Williams College, also a private liberal arts college, whereby he found peer effects were significantly low in this setting. It is worth noting that this college is highly selective who admit students with strong academic backgrounds and appear homogenous as a group, which may explain why his study did not find a high level of peer-to-peer influence on academic performance (Zimmerman, 2003, pp. 17-21). The U.S. Air Force Academy conducted a study where the researchers exogenously assigned 30 cadets as roommates, which resulted in many interactions with one another. This study found a positive and significantly large peer effect outcome in this setting (Carrell, Fullerton, & West, 2008, pp. 1-6). This result could be related to the organizational structure of the U.S. Air Force Academy, since conformity and unity are the cornerstone of military educational institutions. Overall, peer effect findings endorse some positive academic and social outcomes, which can help educational institutions contextualize their setting to mediate peer-to-peer interactions. However, there are a few limitations when studying peer effects that colleges and universities need to consider before they enact any policies.

Limitations in Studying Peer Effects

Peer effect studies show that over the last four decades there is not a single or commonly held approach in studying a peer-to-peer relationship that definitively explains the influence this peer association has on their peer's educational experiences and outcomes. The studies on peer effects noted multiple factors that interfere in identifying how peer interactions contribute to their peers' educational outcomes. Since the study of peer effects takes into consideration both the individual's background and external factors, then reviewing those inputs can significantly influence what independent variables are entered into the model that measures the peer

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relationship. Researchers have tested a host of predictor variables that include racial composition, parental education, social class status, and different school dynamics that may influence a student's academic experience and overall educational success. Furthermore, peer effects have been measured in multiple institutional settings or type (e.g., primary/secondary and higher education), classrooms, and between classmates and roommates. Peer effect studies also focus on various types of outcomes by estimating how much influence a peer has on their peer's academic performance (e.g., GPA), school resources (e.g., expenditure allocations), or social behavior (e.g., joining an extra-curricular club/organization). The different approaches in studying peer effects also reveal the mixed findings of the effect of a peer relationship. Although, a common albeit inconsistent effect shows there is a significant impact that peers influence one another in both academic and social settings but results can substantially vary based on context; thus, requires further inquiry.

To examine peer effect findings further, there is a need to disentangle as much as isolate other notable effects and identify what is revealed when you change the context this phenomenon is studied that can help locate the precise cause to the effect of this relationship. Studies point to relevant limitations to consider when examining peer effect findings. The measurement of peer effects is problematic because of issues related to correlated effects (my peer resembles me), exogenous or random effects (my peers background is the reason for the effect and not because we have a relationship), or endogenous or non-random effects (you cannot distinguish between their influence and your own abilities) making it difficult to know where the effect actually exists (Manski, 1993; Moffitt, 2000; Rivkin, 2001; Sacerdote 2000 & 2014; Hanushek et al., 2003; Arcidiacono & Nicholson, 2004; Henry & Rickman, 2005; Bonesrønning, 2006; Carrell et al., 2008; and Burke & Sass, 2013). Likewise, Manski (1993) noted the reflection problem in

measuring peer effects stem from the inability to distinguish between one person's influence or whether the influence is actually that person's own reflection; a mirror image. Moreover, models used to study peer effects have significant limitations in capturing peer interactions to produce high confidence in the external validity or generalizability of the results to generate policies or programs (Manski, 1993; Robertson & Symons, 1996; Moffitt, 2000; Hanushek et al., 2003; Bonesrønning, 2006; Eisenkopf, 2010; Sacerdote, 2014). The impact of peer interactions may be completely unintentional, whereby it is not the interaction with my peers that generates an effect, but rather it is more random (it was my peer's background that was the stimulus for the outcome). Furthermore, if our peer group is formed in an intentional or non-random way, it becomes difficult to distinguish whether what motivates the outcome are the similarities between me and my peer, or if the outcome is controlled by something aside from the peer composition or relationship that we cannot observe; this warrants more consideration.

Previous research indicated there are gaps in the comprehension of peer effects that still need focused attention. Seeking ways to better capture the unobservables and utilizing different approaches when studying peer influence like in Hoxby and Weingarth's (2005) study or Eisenkopf's (2010) work on peer motivation and learning may also advance the knowledge about peer effects. A student's family background, social class, neighborhood, and peers each offer some understanding of how they contribute to a student's academic success. Notably, since peer effects are context specific then inquiring about the setting this phenomenon occurs in broadens the opportunity of how to understand the way an environment supports student-to-student interactions that contribute to their educational success. A good primer to guide future research is found in Sacerdote's (2014) summarized findings on school composition and peer effects across multiple studies where he addresses how to model peer effects to advance the research design.

This literature review offered pertinent studies that have contributed to the findings about the relationship of peers on student outcomes. More importantly, the models used to study peer effects do not capture the reality of peer interactions as accurately to produce strong confidence when applying generalizations; therefore, peer effect findings without supplementary empirical evidence should be used with caution when generating policies (Sacerdote, 2014). Yet, there is plenty of opportunity to study peer effects further by attuning to student development theories to explore gaps in the literature that may possibly offer meaningful findings, which can be used by educational institutions and policy makers alike to promote educational attainment.

Theoretical Framework

Educational institutions interested in promoting student success can investigate how to generate policy or programming around peer-to-peer interactions using a student development framework, which influences educational outcomes. Measuring the involvement of college peers' engagement in their environment and whether that impacts their educational success may stimulate institutions intentional programming to address a host of issues that include attrition, academic probation, time to degree, and lack of completion. While there is mixed evidence in peer effects, and these effects are context specific, fostering interactive peer relationships can influence a student's educational attainment (Berger, 2000; Krumrei-Mancuso et al., 2013). This study focuses on FGCS because they enter college with greater disadvantages than their non-FGCS counterparts, whereby institutional and peer involvement can help them navigate a higher education environment to improve their persistence and overall educational success.

Peer-to-Peer Involvement

A way to support persistence and other positive educational outcomes is deliberate attention to engaging students with their peers, since they spend a good portion of time together

inside and outside the classroom setting. When a student becomes involved in their educational environment, they improve the likelihood of integrating into their college setting more successfully (Astin, 1984 & 1993; Braxton, Jones, Hirschy, & Hartley, 2008; Tinto, 2010). Student developmental theories explain the process of *how* a peer relationship forms in a college setting, and how the result of that peer-to-peer involvement can be used to measure the influence peers have on each other's educational outcomes. The following section discusses the Input-Environment-Output (I-E-O) theoretical model derived from Astin's Involvement Theory to explain the theoretical framework that will be used in this study.

Involvement Theory

The college peer relationship is a composite of interactions students have over time in their educational environment. The Involvement Theory asserts: 1) Student involvement can either be specific or broad, for instance, engaging with one's roommate to being engaged in the overall student experience; 2) Student involvement is a continuous process and is different for each individual, in each instance, and each time a student becomes involved; 3) Student involvement can be measured quantitatively or qualitatively, similar to the amount of time spent studying or how much they understand their homework assignments; 4) Student development is equated to their investment into any given activity; and 5) Any program or policy related to developing students is directly related to how much they engage students to become involved (Astin, 1984, p. 519). Direct involvement with one's peers can be "the single most powerful source of influence on the undergraduate student's academic and personal development…[, and] cooperative learning can be viewed as an effort to capitalize on the power of the peer group to enhance student learning" (Astin, 1993, p. 5). Students who become actively involved in academic or social activities at their institutions can promote learning that helps them acclimate

and persist but there are other barriers to student success, especially for FGCS that the I-E-O model needs to take into consideration.

There are several explanations of the disparate outcomes of educational attainment, especially for FGCS who intend to succeed but are faced with several challenges that may impede this goal. First-generation students enter college less academically and socially prepared and are more susceptible to feel a mismatch in their educational environment than their counterparts (Strayhorn, 2007; Stephens, 2010; Bourdieu, 2011; Plaskett et al., 2018). Astin (1984) revealed persistence was influenced by satisfaction with the level of engagement and interaction with their institutional environment that positively shaped their self-confidence, faculty contact, and forming friendships. The lack of cultural and social capital hinders FGCS ability to acclimate and feel a sense of belonging in a college setting, which consequently affects their educational persistence. There are implications for how institutions can choose to organize their environment and structure peer-to-peer involvement that support first-generation students' persistence and academic success.

Students' interactions in an educational environment can occur spontaneously or be manufactured based on the student's interest level to engage and whether the setting encourages a connection. Astin's Involvement Theory stipulated, "student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience…[and] is more concerned with the behavioral mechanisms or processes that facilitate student development (the *how* of student development)" (1984, pp. 518-522). The main premise about involvement is it requires someone to participate in an activity that hopefully builds a connection that is continuous. Essentially, the amount of time students spend in an activity enhances their ability to achieve completing their goal for that given activity. Students choose to become

engaged or involved based on self-selection through multiple outlets that include but are not limited to: (a) the college's structured and unstructured academic or social activities; (b) through impromptu interactions that naturally manifest by being around classmates and roommates; and (c) through friendships that are formed inside and outside the classroom. A student's level of participation to their environment, based on this theory offers insight of how institutions can be more deliberate in helping peer formations to occur.

Student involvement can be procured through a variety of interactions in any college setting to enhance students' connectedness that helps them to acclimate into their educational environment. The Involvement Theory claimed that students who adeptly fit into their college setting were more likely to be engaged in their environment and with their college peers; Astin postulated how students spend their time in college can influence their educational experience (Astin, 1984 & 1993). Basically, when students allocate time for academic or social activity it promotes a level of involvement and commitment in their college setting, which can stimulate positive educational outcomes. This theory proposes that intentional engagement between peers can generate the connection needed to develop peer relationships, which can promote successful academic and social experiences for students. It is germane this study unpacks peer effects further if the basic assumption that one peer can change the other peer's disposition resulting in the outcome that peers may influence positive educational achievements.

The Involvement Theory highlights attention to higher education college students and how these educational institutions can enhance their environment to improve student learning and development that motivates engagement. Figure 2 provides a visual of the theoretical framework that was used in this study. This figure explains the Involvement Theory I-E-O model with complimentary theories that rationalize each component of this model. The Input

component of the model turns to the Social Reproduction Theory to help describe entering students' characteristics they possess bring with them prior to their college matriculation, which may influence their ability to integrate in a college setting. The Environment component of the model is significant because this is where the peer-to-peer interactions occur; thus, this component refers to the Development Ecology Theory to illustrate the complex ecological system students are immersed in, which shapes various exchanges that influence a student's disposition or habitus. And, the Output component of the model examines the result of a student's experience with their college peers in an educational environment based on deliberate interactions overtime, which links to the Social Development Theory. The subsequent sections articulate each of these theories as they are located within the I-E-O model.

I-E-O Theoretical Framework
(Astin, 1984 & 1993)
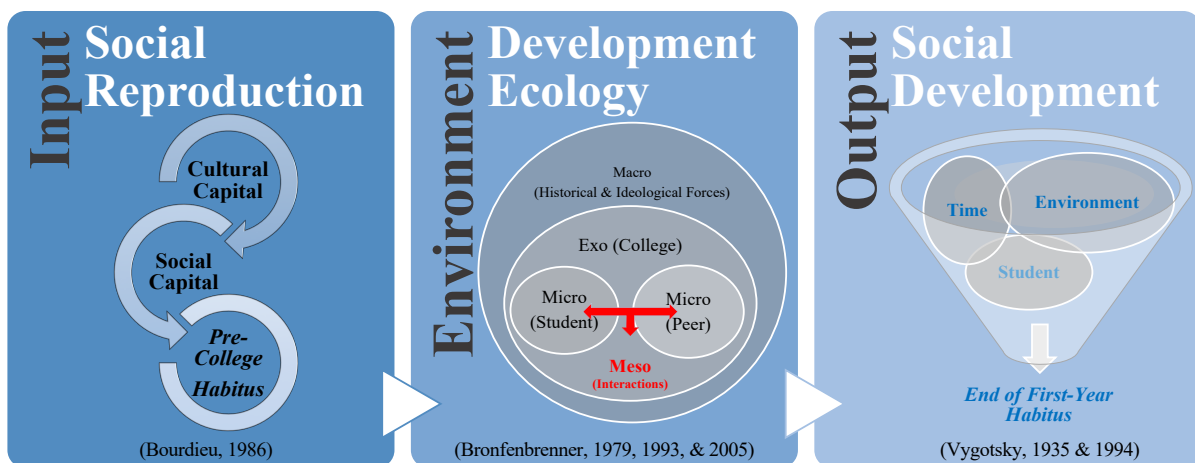
Figure 2. Involvement Theory I-E-O Theoretical Framework

Input - Social Reproduction Theory. A student's educational success is linked to the social class they belong to. Cultural and social capital play a significant role in a student's ability to navigate their educational surroundings to achieve positive outcomes (Yosso, 2005; Bourdieu,

2011). As discussed earlier in the literature, cultural capital is the knowledge and wherewithal a student possesses based on their social class, while social capital are the behaviors and norms a student enacts in a given setting. A student's social class provides the type of financial resources available that help improve the level of academic preparedness and social skills students will need in a college setting. Social class situates the neighborhood where one lives, the types of schools to which one has access to attend, and even the peers with which one regularly comes into contact with that all subsidizes one's accumulated cultural and social capital. Educational attainment is possible partly due to the fact that a student's family background has exposed them to information about the postsecondary educational experiences that parents would have shared with their children; thus, developing their capital (Ball, 2010). Basically, families from middle and upper social class statuses can and will continue to invest in their children's educational success because they have both the financial resources to do so as well as the familiarity to influence and engineer their children's pathway into the best schools, teachers, and classrooms. Alternatively, FGCS who typically come from a lower or working social class background do not have the same support and resources compared to non-FGCS, potentially putting their higher educational endeavors at risk. FGCS are less likely to successfully adjust into their college setting because they will come to college with less cultural and social capital.

Cultural and Social Capital. A student's cultural and social capital is derived from one's family, primarily their parents' social class strata that has a profound influence on their educational attainment. Several studies pointed out the negative impact that a student who comes from a low socioeconomic background can have on their academic achievement (Jaeger 2011; McKay & Devlin, 2016; Potter & Roska, 2013; Thomas, 2014). Since values and norms are transmitted from parent to child, the accumulation of knowledge and abilities contribute to the

overall experiences a child is exposed to; therefore, either can be a proponent or hindrance to that child's academic success (Potter & Roska, 2013). The acquisition of capital will vary by social classes, which creates a divide between the type of knowledge and behavioral attributes a student accrues.

Reasonably then, FGCS who come from a lower social class possess less cultural capital and are at a higher risk of making uninformed educational choices (e.g., type of college to attend, major selection, course enrollment, or faculty contact), which can impact their educational trajectory. Since the prevailing knowledge for navigating higher education is rooted in the student's parental education status, then students whose parents lack postsecondary experiences also lack the standard knowledge of what to expect in a college setting (Brown, 2016). They are primarily unaware or lack the experience and information needed that would inform them of broader educational opportunities and options to help them achieve educational success. Alternatively, their non-FGCS counterparts come from a higher social class with a greater support system, better financial resources, and higher rates of exposure to important knowledge and social skills that produce better academic outcomes. Ultimately, the knowledge a student amasses from a higher social class, specifically non-FGCS, will prepare these students to enter into postsecondary education potentially more equipped to steer their experiences compared to FGCS who come from a lower social class background.

Social class also affords the different types of access to an array of cultural experiences that expands students' knowledge and skills. Some key findings from studies showed that cultural and social capital does influence academic performance when a student is exposed to activities, which can include attending museums and plays or reading often (Gaddis, 2013; Sullivan, 2001). Sullivan (2001) found when students participated in cultural events their

developmental knowledge and competency increased their examination performances. This is partially shaped by how a parent's social class exposes their children to cultural activities, which have been known to influence the knowledge they gain. Moreover, this type of exposure can also promote higher levels of social skills of engagement that are advantageous when entering college. Gaddis (2013) asserts the lack of cultural and social capital may only partially explain the inequalities in educational attainment, but rather points to the student's disposition (i.e., habitus) as another barrier to why some students are not academically successful.

Habitus. A student's behavior and attitude are derived from their upbringing and background. Bourdieu's theory on cultural capital encompasses the concept of habitus. Habitus is an individual's disposition; their attitudes, behavior, and way of thinking that are shaped by socialized norms through interactions in various social structures (Edgerton, Roberts, & Peter, 2013). Gaddis further argued that cultural capital affords the wherewithal to take advantage of educational resources although this does not guarantee educational attainment, rather if students "develop the proper habitus to navigate the education system" they can "acquire valuable educational capital," which does influence their ability to steer through their institutional setting and feel confident about academically succeeding (2012, pp. 2, 9-10). On top of understanding cultural capital, it becomes imperative to grasp Bourdieu's theory more comprehensively by considering the role of habitus in shaping how cultural and social capital are not just accumulated, but how it can be transformed into an amplification of how one attains capital by enhancing one's disposition. This is important in the context of higher education, especially for FGCS, because it offers these students who enter college with less cultural and social capital the opportunity to engage in different social environments with non-FGCS that supplements their disposition (i.e., habitus), which in turn may help to negate stalling their educational attainment.

Imagine that cultural capital is construed through one's background from their parents and the neighborhood they lived in, while habitus is continuously being matured through the array of social interactions they are exposed to. The nuances of a person's demeanor are encompassed by their behavior and outlook, which takes shape when they socially engage; this concept is formally known as habitus. Habitus can be resocialized when a person changes their environment, which conceptually is called the field, also known as the setting or environment a person is situated in. Edgerton et al., explains the field as a social sphere where both formal and informal activities take place, whereby understanding the "'rules of the game'" enhances the use of one's capital (2013, p. 305). A person adapts to each field they interact in, which modifies their disposition in order to successfully maneuver the idiosyncrasies of that setting. In the educational context, both the individual and the institution can play a greater role in increasing cultural and social capital because a student's disposition or habitus is not fixed, rather it is amendable to change and adapt in different fields (James, Busher, & Suttill, 2015). If the goal is to alleviate the impediments of one's limited cultural and social capital, then attention should be given towards intentional engagement between students who come from different social class backgrounds since their habitus is discrete by socioeconomic status. This deliberate interaction could serve as a moderator for students from lower social class statuses, such as FGCS that exposes them to a person from a different social class. In turn, FGCS interact with non-FGCS who possess a different habitus that is more familiar with the higher education environment, which could support FGCS acquisition of certain knowledge and skills that they lack.

Habitus can help to transform a student's lack of capital through active engagement in their educational environment, which includes their college peers who have accumulated more knowledge about an institutional setting. FGCS are a vulnerable population in a college setting,

and institutions can help create an environment that supports their lack of academic wherewithal that expands a student's habitus (Lee & Kramer, 2013). A college peer, such as a non-first-generation student, can help to modify a first-generation student's disposition that may change and improve their acculturation process into a college setting that otherwise would have been more difficult. This would create a more deliberate opportunity for FGCS to acquire cultural and social capital in a college setting that their social class or upbringing had not afforded them.

The <u>Input</u> of the I-E-O model helps to explain the importance of students' entering characteristics to describe the types of impediments these students enter college with that can hinder their educational persistence and attainment. Astin's theory also provides provisions to understanding the significance the educational environment plays in a student's acculturation process, whereby the structure of the environment makes a difference in student outcomes. The <u>Environment</u> component of the I-E-O model focuses on how the institutional context plays an important part in how students acclimate in a college setting because it is where peer relationships are formed and a focal point to capture peer effects.

Environment - Development Ecology Theory. The educational environment plays a critical role in helping students fit into the college setting and form connections with their college peers. In Astin's (1984 & 1993) I-E-O model, the environment plays an important role in student success, specially FGCS because of their potential to not fit in to a college setting as easily as non-FGCS. The level of a student's engagement is not surprisingly related to the degree of interaction and how involved they become in their environment, which can have a significant impact on their disposition that influences their educational experiences. Bronfenbrenner's Development Ecology Theory elaborated that student development is context specific, and the ability to identify what type of environment that encourages student development and which

interactions students have in that environment can offer a better way to understand the influence of student-to-student interactions and student-to-environment interactions on educational performance (Patton, Renn, Guido, & Quaye, 2016). The Ecology Theory focuses on the people in a particular ecological system that interact and influence each other's behaviors based on the context and the amount of time spent in that context lending support to the Involvement Theory's environmental component of the I-E-O model. The ecological system I referred to in this study is in a higher education setting and the students that reside in that context. The first area in Bronfenbrenner's theory I underscore is the proximal process.

Proximal Process. The proximal process is an important point in the Ecology Theory because it takes into account that student development occurs between how the person interfaces with a specific environment to achieve a certain goal. Renn and Arnold (2003) synthesized the proximal process of Bronfenbrenner's ecology system in their study to expound how student development changes occur within the student, in their environment, and the interactions they have with their peers' overtime. Wong (2001) underscored that student development occurs through a mutual relationship formed from a common set of interactions in a shared context. Wong referenced Bronfenbrenner's Ecology Theory in his analysis because this theory points to the level of intimate to impersonal interactions a person will engage in that will influence their disposition and actions. Importantly, the process of development happens overtime, and the amount of time spent in an environment supports the construction and reconstruction of shaping a person's ideal form. As discussed earlier, a student's disposition or habitus is transformative and can evolve. A part of my study will focus on FGCS' first college year experiences and whether a change in their habitus had any influence on their educational attainments. In turn, the

proximal process is contingent upon the student's personality type known as developmentally instigative characteristics.

Developmentally Instigative Characteristics. Each student develops differently and acquires different attributes as they progress in their proximal process. Bronfenbrenner mentioned four types of characteristics important to the developmental process that students would developmentally progress through in an educational context. The type of attributes a student possesses will depend on (a) if their inclined to be openly welcoming or closed off to their college experience; (b) if they are more or less prone to exploration and new experiences (i.e., selective responsivity) in their college setting; (c) their ability to successfully navigate the complex layers of their developmental process and choose to take on the challenges that arise (i.e., structuring proclivities) while in college; and (d) students who put forth the effort into succeeding are more likely to accomplish their educational goals (i.e., directive beliefs) (Patton et al., 2016). These characteristics imply a student would need a level of commitment to engage in their college setting to be successful. FGCS are an ideal population for this study because they have demonstrated their commitment to a postsecondary education by overcoming the hurdles to access higher education, even without the same support and resources as their non-FGCS counterparts. FGCS may lack a certain amount of cultural and social capital but their instigative characteristics can be enhanced through peer involvement; thus, supplementing their pre-college habitus. Additionally, the type of educational context that is conducive for FGCS to engage in is an important piece to why the Ecology Theory is a compliment to the issues of the lack of institutional fit or cultural mismatch.

Context. The Ecology Theory describes a layered schema of direct and indirect influences on a person's decision-making process. The educational ecosystem is the overarching arena

where student development happens. The <u>microsystem</u> describes the people in an environment, such as the student and their college peer. The <u>mesosystem</u> captures the interactions between the students in the environment and is the foci for direct influence between an individual and the peers they interact with as well as promoting development of an individual's instigative characteristics. The next outer layer is the <u>exosystem</u>, which refers to the social forces that exert influence on the student. These external forces press upon the student in the institutional environment that considers what they bring into the setting, and how that shapes their interactions in that setting. The <u>macrosystem</u> is the philosophical, ideological, and historical perspective derived from the environmental culture of different social structures that influences the behavior of the people (i.e., students) in the overall ecosystem (i.e., higher education). Context is therefore imperative to understanding how a student develops. Relatedly, the Cultural Mismatch Theory or CMT highlights how FGCS can be vulnerable to not fitting into their institutional context when the student and institution do not share the same attitudes and norms. Basically, Bronfenbrenner's theory supports how relevant the educational environment is to a student's development and, for FGCS, is a central point in their ability to acclimate into a college setting successfully. Thus, student development in a higher education environment would require students to spend a certain amount of time in that setting for the environment to have some influence on their growth and shape their educational outcomes, which is why this study will measure FGCS' growth overtime in their first college year.

Time. Bronfenbrenner's theory highlights the importance of time, whereby the lifespan of the student interacting in their educational environment is crucial to their development. <u>Microtime</u> relates to the continuity of the student in a college setting. <u>Mesotime</u> captures the elapsed time interval or period a student experiences in college. <u>Macrotime</u> captures the change

that occurs in the student over the duration of time at their institution. Ultimately Bronfenbrenner's theory infers that a person in a particular environment is linked to the amount of time they spend in that context and with whom they spend time with that plays a major factor in influencing their development (Wong, 2001; Patton et al., 2016). More specifically, this theory nests the people, setting, and time that interconnect these layers so development can occur. Students who interact overtime with other students in their college setting will develop and change based on those interactions. My study focused on whether the deliberate involvement between FGCS and non-FGCS over the course of their first college year will influence FGCS habitus and educational outcomes. The component of time in the Ecology Theory corroborates the importance of longitudinally tracking students' first-year college experiences to bring about a better understanding of peer effects. The final component in the I-E-O model is the Output, which captures the development of the student. This last component facilitates the chance to measure the different types of FGCS to non-FGCS interactions overtime during their first year in college involved in specific curricular and co-curricular activities to evaluate first-year persistence and academic GPA.

Output - Social Development Theory. The connection between the student and their peer and the college setting these interactions occur in overtime, is where we expect to see social growth. The person will relate to their educational environment based on the academic demands placed upon them, and they will also be constantly interacting with their peers in that setting; this contributes to their development as they spend time in various settings in that environment. Vygotsky's Social Development Theory emphasizes there is a connection, a relationship between the people, and the people and the environment that promotes developmental learning (Wong, 2001). This learning can occur through interactions with others overtime in a specific setting,

such as an educational institution. The longer one spends in that environmental context, the greater the influence that setting and the people in that environment have on the individual.

A person changes over time and the environment they are in contributes to that change, especially if the context of the environment is focused on learning. Vygotsky's work stressed that the reciprocity of engaging with others in a learning activity could amplify educational outcomes (Wong, 2001). The application of Vygotsky's perspective of human development enhances if not reveals greater understanding and depth of Bronfenbrenner's proximal process and time space explanation on the holistic understanding that students develop overtime by interacting with another student in a given environment, such as a college setting. The potential for this interaction leads to dispositional (i.e., habitus) change in students that may produce positive outcomes of persistence and academic performance, which supports studying peer effects in a college setting. To further elaborate on the use of the Involvement Theory as this study's theoretical framework, I have mapped my overarching research question into a conceptual framework model to make the I-E-O model and the accompanying student development theories into a digestible illustration as shown in Figure 3.

Conceptual Framework

The literature covered in this proposal shows peer interaction can influence a student's educational attainment. The I-E-O model along with the embedded theories described in the theoretical framework section leads to a reasonable assumption that generating deliberate student-to-student involvement in certain activities overtime in an educational setting will promote a peer effect on educational success. Figure 3 is the conceptual framework model that visualizes how this study will evaluate peer-to-peer interactions using the I-E-O model and the accompanying theories embedded within each component of the model. The overarching

research question to my study seeks to understand *How does a first-year first-generation student's level of involvement with her peers influence their ability to educationally succeed?* This figure shows the pathway of how the I-E-O model is applied to evaluate this main research question and the complementary student development theories. More specifically, the <u>Input</u> component includes the student's pre-college matriculation information; the <u>Environment</u> component situates the context where this study will take place and the types of student involvement that this study will focus on in that setting; and the <u>Output</u> component identifies how these deliberate peer interactions in this college setting will be measured to determine if there was an influence on FGCS' persistence and academic performance. Chapter 3 will discuss in full detail the proposed methodology of this study.

I-E-O Conceptual Theoretical Framework Model

Input

FGCS & Non-FGCS Background Characteristics
• Race/Ethnicity
• Socioeconomic Status
• Parental Education
• Academic Preparation

<u>Social Reproduction</u>
• Cultural/Social Capital
• *Habitus*
  • Pre-College Disposition

Environment

Scripps Women's College (Private Liberal Arts)

<u>Development Ecology</u>

Peer-to-Peer Involvement:
• Curricular Activities
• Co-Curricular Activities

Output

<u>Social Development</u>
• Student: FGCS and Non-FGCS
• Environment: First-Year College Experience
• Time: Pre-College Matriculation through End of First College Year
• *Habitus*: End of First-Year College Disposition

Comparing FGCS and Non-FGCS end of first college year experiences to pre-college matriculation expectations

Outcome #1 First-Year Persistence
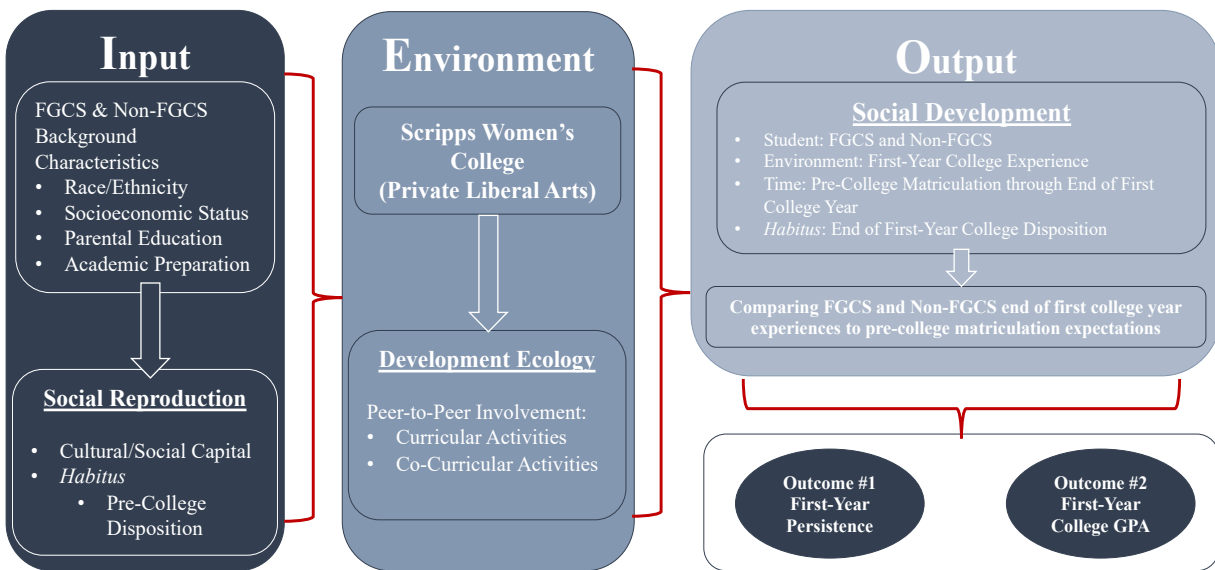
Outcome #2 First-Year College GPA

Figure 3. Involvement Theory I-E-O Conceptual Framework

Chapter 3: Methodology

Chapter 1 introduced the importance of studying peer effects, especially among first-year first-generation college students who are susceptible to a lower college persistence rate compared to their non-first-generation counterparts. Chapter 2 reviewed the literature on educational outcomes for FGCS, issues related to these students' institutional mismatch, and an explanation of peer effects. Studies show that peer effects are context specific (Sacerdote, 2014) and the application of the I-E-O theoretical model can gauge the amount and type of student-to-student interactions that help explain this relationship's effect on educational outcomes, such as persistence and academic performance (Astin, 1984 & 1993). This chapter will provide details on the research design, population, instrumentation, the procedures for this study that include quantitative and qualitative data collection and analyses including limitations of this study. It is noteworthy to claim my positionality before diving into the remainder of this chapter.

Research Positionality

My primary reason for choosing this topic is because I care about why students do not succeed in an educational environment. Being a first-generation woman from a low socioeconomic background who immigrated into America as a toddler affords me the unique perspective of the population I am studying. I know first-hand the hardship and barriers to pursue a postsecondary education, and I can easily recall who and what influenced my educational achievements. I have spent my entire professional career devoted to unearthing cause and effect relationships to explain who succeeds and who does not in a higher education environment in hopes of helping institutions better support the communities they serve.

Institutional decision-making relies on reliable and valid data outcomes that can result in a policy or program to help improve students' educational experiences, which promote their

persistence and degree completion. Importantly, researchers should seek relevant and substantive questions that selects an appropriate and competent research design with careful consideration of the methodological approach, so the analysis provides useful and meaningful information that contributes to the knowledge of that topic (Murnane & Willett, 2011). Therefore, to combine my personal and professional desire to help institutions enhance their ability to support students who may face greater obstacles in their educational pursuits, I have focused my study on Scripps College first-year students, my current place of employment. I hope this study will add further insight about how student involvement can enhance educational success for Scripps students, especially about first-generation students at the College.

Research Questions

The overarching research question to my study seeks to understand *How does a first-year first-generation student's level of involvement with her peers influence her ability to educationally succeed?* The following research questions specifically identify the type of involvement and outcome this study will measure.

- **Research Question #1:** *Does the frequency of involvement in curricular activities between peers contribute to first-year first-generation students first college year persistence rate?*

- **Research Question #1.a:** *Does the frequency of involvement in curricular activities between peers contribute to first-year first-generation students first college year academic GPA?*

- **Research Question #2:** *Does the frequency of involvement in co-curricular activities between peers contribute to first-year first-generation students first college year persistence rate?*

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- **Research Question #2.a:** *Does the frequency of involvement in co-curricular activities between peers contribute to first-year first-generation students first college year academic GPA?*

Population and Sample

The population of my study is on college-aged women who entered as new first-time first-year students at Scripps College. The access to this population is convenient, since I work for the College, but it affords me the opportunity to evoke my research positionality that supports my personal and professional passions in helping Scripps support students' educational success. Scripps is a women's private residential liberal arts college that offers degrees in more than 50 majors in Arts, Letters, Social Sciences, and Natural Sciences and Mathematics. This College is also part of The Claremont Colleges, a consortium of five elite private undergraduate institutions and two graduate schools. Scripps also shares the Keck Science Department with two of the other undergraduate institutions that consists of students who are science majors. Even though Scripps is a women's college, because of the shared geographic space and the consortium relationship, students are able to cross-register for courses and share multiple resource centers across the other undergraduate colleges that exposes them to both a single-sex and coeducational college experience. This population is therefore unique because although my study isolates the peer effects among college-age first-year women at Scripps, these students were regularly exposed to and interacted within a coeducational environment.

The population I will study is a census of first-year Scripps College students who entered the college in the falls of 2015, 2016, and 2017 semesters who provided a response to a national student engagement survey that longitudinally tracked respondents pre-college matriculation anticipated activities until the end of the students' first college year where they reported actual

activities that they were involved in. The data foci of this study are these first-year students'

survey feedback with specific attention to first-generation students. The pre-college matriculation

survey feedback responses were collected from the Beginning College Survey of Student

Engagement (BCSSE), which was administered to new first-year students during new student

orientation prior to the first day of class. The follow-up survey of new first-year students' college

experience feedback responses were collected using the National Survey of Student Engagement

(NSSE), which was administered in the latter part of the spring semester approximately towards

the end of these students' first college year. These surveys are complimentary instruments to use

because I can longitudinally track first-year respondents between BCSSE and NSSE.

All first-year students were administered the survey but not all first-year students

responded to the survey, and response rates may vary based on each question that asked the

student about their level of involvement. Table 1 reports the total number of first-year students

who entered in the falls of 2015, 2016, and 2017 disaggregated by their first-generation status.

This table also includes the breakdown of these students who responded to the BCSSE, NSSE,

and the students who were tracked longitudinally that responded to both BCSSE and NSSE

during their first college year. Nearly all first-year students responded to BCSSE. FGCS overall

response rates to NSSE and LONG was approximately 59%, while non-FGCS response rates to

these surveys was 75%. Albeit the actual population size of FGCS was not large it is sufficient.

Table 1

Scripps College Headcount of First-Year Students

Population	First-Year Students	BCSSE Respondents		NSSE Respondents		Longitudinal BCSSE and NSSE Respondents	
FGCS	129	127	98%	76	59%	75	58%
Non-FGCS	745	732	98%	566	76%	554	74%
Total	874	859	98%	642	73%	629	72%

Protection of Human Subjects

Scripps College annually administers a first-year survey as part of the College's ongoing data collection to capture their students' undergraduate experiences before they matriculate and at the end of their first college year. The College's survey data administration process is exempt from IRB approval due to the institution's educational use for the data collected. As the administrator who oversaw the survey administration based on my role as the Director of the Assessment and Institutional Research office, I can attest that no harm came to participants in this study. Furthermore, participant information is already protected and secured that complies with the Higher Education Act of 1965 (HEA) and the Family Educational Rights and Privacy Act of 1974 (FERPA), which safeguards these students' privacy in the Scripps College secure network system. I maintained these files in the secured location within the Scripps College network, and access to these files are password protected using the College's authentication process.

I first sought approval to access both survey and institutional data of Scripps College first-year student respondents of BCSSE and NSSE from the Vice President for Student Affairs and Dean of Students at the College. The Vice President/Dean of Students oversees the approval to access these data items for external research use and has provided me complete access to all the survey and accompanying institutional data for this study, which I included as part of my Institutional Review Board (IRB) application (see Appendix A). I submitted my IRB application to Claremont Graduate University (CGU) that requested an exemption status. IRB and CGU confirmed this study was exempt from IRB supervision under CGU policy and federal regulations (see Appendix B).

Instrumentation

The BCSSE and NSSE surveys are nationally administered psychometric surveys that are regularly assessed for their validity and reliability including additional quality control that I used for this study. Complete access to the psychometric report can be found using this link: http://nsse.indiana.edu/html/psychometric_portfolio.cfm. The selected BCSSE and NSSE questions asked the expected and actual level of involvement students participated in during their first college year in curricular and co-curricular activities. These questions asked how often during the academic year and how many hours in a typical week these students engaged in academic and social activities. Since I am using three administration survey years, I have included the 2015, 2016, and 2017 BCSSE survey instruments in Appendix C, while the 2016, 2017, and 2018 NSSE survey instruments are in Appendix D. The selected questions in BCSSE and NSSE support the curricular and co-curricular activities noted in the I-E-O conceptual framework discussed in Chapter 2.

The specific curricular survey questions related to **Research Question #1 and #1.a**, *Does the frequency of involvement in curricular activities between peers contribute to first-year first-generation students first college year persistence rate and academic GPA?*, asked how often a respondent interacted with their peers in the following activities including: (a) Asked another student to help you understand course material; (b) Explained course material to one or more students; (c) Prepared for exams by discussing or working through course material with other students; and (d) Worked with other students on course projects or assignments.

The specific co-curricular survey questions related to **Research Question #2 and #2.a**, *Does the frequency of involvement in co-curricular activities between peers contribute to first-year first-generation students first college year persistence rate and academic GPA?*, asked how

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many hours in a typical week a respondent interacted with their peers including: (a) Participating in co-curricular activities (e.g., organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.) and (b) Relaxing and socializing (e.g., time with friends, video games, TV or videos, keeping up with friends online, etc.).

Quantitative Data Collection Procedures

Scripps College Office of Assessment and Institutional Research provided both survey and institutional data on first-year survey participants in this study to longitudinally track their pre-college matriculation and the end of their first college year survey responses and educational outcomes. I matched institutional data to BCSSE and NSSE survey respondents across all three identified cohorts, specifically the entering fall cohorts of 2015, 2016, and 2017. The institutional data includes background and social identity characteristics (i.e., race/ethnicity, first-generation status, social class status), pre-college matriculation academic preparedness variables (i.e., high school GPA, standardized test scores, and high school type), and first college year outcomes (i.e., first year persistence flag and college GPA). I identified first-generation and non-first-generation college students as my treatment and control groups, respectively. I cross-checked the students' self-identified first-generation status compared with parental education data to match this study's definitional use that neither parent has a four-year degree. There was not a pilot study conducted; the survey and institutional data were previously collected by the Office of Assessment and Institutional Research as part of their ongoing responsibilities for the institution. My exempt status from IRB and CGU as well as the approval of Vice President Johnson for Scripps College granted me survey and institutional data access for this study. I accessed these data securely stored files using Scripps College password protected network and authentication system.

The Assessment and Institutional Research office provided Scripps College data that includes first-time first-year students who entered in the fall semesters of 2015, 2016, and 2017 following completion of their high school diploma that responded to the following surveys:

1. BCSSE pre-college matriculation responses in fall semesters 2015, 2016, and 2017;

2. NSSE end-of-first-year responses in spring semesters 2016, 2017, and 2018.

This office also provided accompanying institutional data that consisted of pre-college matriculation demographic and social characteristics including first college year outcomes, such as persistence and academic college GPA for these first year entering student cohorts. The second data collection process entailed a qualitative approach that examines a closer look into first-generation students' lived college experiences using a follow-up survey (see Appendix E for the entire Lived Experience Follow-Up Survey questionnaire).

Qualitative Data Collection Procedures

A complementarity design was employed in addition to the quantitative data collection to better understand first-generation college students' lived experiences during their first year in college. The complementarity approach affords this study an opportunity to capture the entire social experience of FGCS in this study that exposes a fuller picture of what the first college year was like for them (Hesse-Biber, 2010). I sequentially selected only first-generation respondents in BCSSE and NSSE and administered the Lived Experience Follow-Up Survey that asked these students to reflect on the level of preparedness they felt as a newly matriculated college student and different ways they engaged with their college environment. The purpose for the qualitative data collection was to try and understand how FGCS experienced their first year in college with their peers to determine if those interactions supported their acclimation as a college student and whether that contributed to their persistence or attrition from the College.

The follow-up survey was administered during the summer months between June and July 2019 to the 129 first-generation college students who responded to the national engagement surveys (BCSSE/NSSE). Approximately 23, or 18%, of these first-generation students responded to my request to complete the Lived Experience Follow-Up survey but not every respondent answered every question. The survey questions focused on obtaining information about first-generation students' perception on who helped contribute or not contribute to their readiness of being a college student, what types of obstacles they faced during their first college year, how Scripps College did or did not help them adjust, and if their college peers were supportive in helping them become more academically and socially involved. The feedback from FGCS offers additional insights and understanding about these students' perspective about adjusting in a college setting. Their responses may shed more light about how they now view their first college year having some years distance from when they were actually a first-year student at Scripps.

Data Analysis

This study includes a quantitative secondary data analysis with a complementarity qualitative supplement. I analyzed the data using SPSS statistical software version 25. Descriptive statistics were performed to provide a description of the survey respondents' background and pre-matriculation characteristics including persistence ratio and average first-year college GPA to assess the balance of the treatment and control groups.

An independent sample t-test was conducted to measure any mean differences in the amount of interaction in curricular and co-curricular activities for these identified groups:

- Group 1: An analysis that examined whether FGCS and non-FGCS responses were significantly different between each group's reported <u>expected</u> level of involvement in BCSSE .

- Group 2: An analysis that examined whether FGCS and non-FGCS responses were significantly different between each group's reported <u>actual</u> level of involvement in NSSE.

- Group 3: An analysis that longitudinally tracked FGCS and non-FGCS responses at the beginning and then again at the end of their first college year, which I refer to as the LONG population, examined whether there were any significant differences between each group's reported expected level of involvement in BCSSE and reported actual level of involvement in NSSE.

A multiple regression was also applied to Groups 1, 2, and 3 that measured the level of involvement with one's peers in curricular and co-curricular activities (independent variables) and whether those interactions had any influence on first-year persistence and college GPA (dependent variables). First, a naïve regression was conducted to show results without controlling for any predictor or independent variables in the model. A full regression analysis was also performed that included all predictor or independent variables in the model. All analyses were evaluated at the p-value of .05 unless otherwise stated. A complete description of the dependent and independent variables used in the quantitative portion of this study include:

Quantitative Variables

<u>Dependent Variables (DV):</u>

- DV_1 = First-Year Persistence (Fall to Fall)

- DV_2 = First College Year Academic GPA (4.0 scale)

  o This is a cumulative calculation based on course enrollment during the students' first year in college with an actual grade provided, which excludes incompletes, withdrawals, and no-credit grade marks awarded.

Independent Variables (IV):

- IV$_{\text{Demographic & Social Identities}}$ = Background and Social characteristics

  a) First-Generation Status

     i. FGCS (treatment group) = 1

     ii. Non-FGCS (control group) = 0

  b) Racial/Ethnic Identity

     i.   Asian/Pacific Islander = 1; Else = 0

     ii. African American/Black = 1; Else = 0

     iii. Latinx = 1; Else = 0

     iv. White = 1; Else = 0

     v.   Unknown Race/Ethnicity = 1; Else = 0

  c) Socioeconomic Status

     i. Low-Income Status = 1; Else = 0 (Pell grant recipient served as a proxy to

        identify low-income status)

  d) Pre-College Academic Preparation

     i.   SAT Math Scores

     ii. SAT Writing Scores

     iii. ACT Scores

     iv. High School GPA (4.0 scale)

  e) High School Type: Public = 1; Else = 0 (Else includes schools not designated as

     public such as private or private charter)

  f) U.S. Residency: California Resident = 1; Out-of-State Resident = 0 (this excludes any

     international students)

- IV$_{\text{Curricular Involvement}}$ = Student involvement in curricular activities (4-point Likert scale ranging from 1 (*Not at all*) to 4 (*Very much*))

  a) Asked another student to help you understand course material

  b) Explained course material to one or more students

  c) Prepared for exams by discussing or working through course material with other students

  d) Worked with other students on course projects or assignments

- IV$_{\text{Co-Curricular Involvement}}$ = Student involvement in co-curricular activities (hours per week)

  a) Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)

  b) Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)

- IV$_{\text{FGCS Curricular Involvement Interactions}}$

  a) Interaction between FGCS and Asked another student to help you understand course material

  b) Interaction between FGCS and Explained course material to one or more students

  c) Interaction between FGCS and Prepared for exams by discussing or working through course material with other students

  d) Interaction between FGCS and Worked with other students on course projects or assignments

- IV$_{\text{FGCS Co-Curricular Involvement Interactions}}$

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a) Interaction between FGCS and Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)

b) Interaction between FGCS and Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)

Qualitative Variables

FGCS participated in the Lived Experienced Follow-Up Survey. A complete description of the survey variables used in the qualitative portion of this study include:

- Level of Preparedness (4-point Likert scale ranging from 1 (*Not at all*) to 4 (*Very much*))
  - How much did your parent(s) or guardian(s); sibling(s); high school counselor and teachers; peers (e.g., classmates or friends); and other people (e.g., extended family members, friends' parents, pastor/minister, neighbor) help prepare you to be a college student?
  - What did you do to prepare yourself for college?
- Obstacles: Reflecting on your first year at Scripps, what obstacles did you face during your first year in college?
- Adjustments: Reflecting on your first year at Scripps, how did Scripps help you adjust or not adjust into your first college year?
- Peer-to-Peer Curricular Involvement: Reflecting on your first year at Scripps, how did your college peers (e.g., roommates, classmates, friends) support or not support your academic involvement in course projects or assignments?
- Peer-to-Peer Co-Curricular Involvement: Reflecting on your first year at Scripps, how did your college peers (e.g., roommates, classmates, peers) support or not support your social

involvement in campus clubs/organizations, joining a sport, or making time to relax and socialize with friends?

Limitations

Quantitative. Limitations in this study could be due to the possible low population size of first-generation respondents in both the BCSSE and NSSE surveys, which represented approximately 15% (129/874) of the entire first-year cohorts in 2015, 2016, and 2017. This small first-generation population size potentially increases the margin of error for any significant outcomes found in this study (Ellis, 2010). Additionally, missing information on first-time first-year students who responded to the BCSSE survey but left the college prior to the administration of the NSSE survey would prevent the ability to longitudinally track these students and calculate the difference in their peer involvement between the beginning and end of their first college year. Another area for concern is the issue of non-respondents to any curricular or co-curricular questions selected in this study that also would prevent longitudinal tracking within and across first-generation and non-first-generation college students. Furthermore, students may have participated in other curricular and co-curricular activities at the College or within the consortium that were not asked in the BCSSE and NSSE survey questions selected for this study, which may have a potential influence on the types of peer-to-peer interactions that effect these students' educational success. Any of these issues could complicate a proper comparison between student-to-student interactions to isolate the peer effects and its influence on first-year persistence and college GPA.

Qualitative. The Lived Experience Follow-Up Survey population was roughly 18% or 23 of the 129 first-generation students who responded to the follow-up survey. Not all 23 of the 129 FGCS responded to every question in the survey, which also limits the amount of content this

study was able to analyze. Furthermore, since I wanted to capture the in-depth experiences of FGCS in this study, the non-respondents could have potentially provided alternative reflections that were not captured from those who did respond. Hence, the respondent size may not be representative of what the first-generation population in this study experienced at Scripps College (Merriam, 2015) The follow-up survey was limited to only asking FGCS about their reflections of their first year in college; therefore, this study cannot determine if non-FGCS first college year experiences significantly differed, so a lack of comparison exists even if it is just to offer better context. Moreover, this follow-up survey was administered after students first year at Scripps and for some depending on when they entered the College their responses about their lived experiences during their first college year were a reflection several years after the fact.

The results presented in Chapter 4 provide a complete description of the population in this study along with the findings of how the level of involvement with one's peers may have influenced first-generation students' first-year persistence and college GPA.

Chapter 4: Results

This study measured whether deliberate peer-to-peer interactions had an influence on first-generation college students' educational outcomes. The population included in this study were all first-year students who entered in falls of 2015, 2016, and 2017 at Scripps College, a single-sex institution. There were approximately 874 first-year students in the population, while 129 or 15% were identified as a first-generation student (see Table 1 located in Chapter 3). First-year students were surveyed using psychometric national engagement survey instruments. Feedback was collected from the Beginning College Survey of Student Engagement (BCSSE), which was administered to first-year students prior to their college matriculation and the National Survey of Student Engagement (NSSE), which was administered to the same first-year

students at the end of their first college year. Additionally, all first-year survey respondents were longitudinally tracked based on their responses in both surveys, BCSSE and NSSE respectively, which I will abbreviate and refer to this population as LONG. In this study, first-generation college students are referred to as FGCS and non-first-generation college students are denoted as non-FGCS.

To capture the quantitative data for this study about deliberate peer-to-peer interactions in academic and social activities, feedback was gathered from the BCSSE and NSSE surveys. The overall average BCSSE response rates for both FGCS and non-FGCS were approximately 98%. FGCS had a 59% response rate and non-FGCS had a 76% response rate in NSSE. Roughly 58% of FGCS and 74% of non-FGCS responded to both BCSSE and NSSE (LONG). Tables 2.1 through 2.3 provide the total number of respondents for each survey (i.e., BCSSE, NSSE, and LONG) disaggregated by first-generation and non-first-generation students across all the curricular and co-curricular involvement questions.

Table 2.1

Headcount of Scripps College First-Year BCSSE Participants

Survey Questions	FGCS (N=127)	Non-FGCS (N=732)	Total (N=859)
Expected to ask another student to help understand course material	125	717	842
Expected they would explain course material to one or more students	125	717	842
Expected to prepare for exams by discussing or working through course material with other students	125	718	843
Expected to work with other students on course projects or assignments	126	717	843
Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)	125	718	843
Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)	125	713	838

Table 2.2

Headcount of Scripps College First-Year NSSE Participants

Survey Questions	FGCS (N=76)	Non-FGCS (N=566)	Total (N=642)
Asked another student to help understand course material	75	562	637
Explained course material to one or more students	75	562	637
Prepared for exams by discussing or working through course material with other students	76	562	638
Worked with other students on course projects or assignments	76	558	634
Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	75	519	594
Relaxed and socialized (time with friends, video games/tv, keeping up with friends, etc.)	73	523	596

Table 2.3

Headcount of Scripps College First-Year Longitudinal BCSSE and NSSE Participants

Longitudinal Tracked Survey Questions	FGCS (N=75)	Non-FGCS (N=554)	Total (N=629)
Change between expectation and actually asking another student to help understand course material	73	541	614
Change between expectation and actually explaining course material to one or more students	73	540	613
Change between expectation and actually preparing for exams by discussing or working through course material with other students	74	542	616
Change between expectation and actually worked with other students on course projects or assignments	74	536	610
Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	71	500	571
Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	70	500	570

Furthermore, to capture the qualitative data for this study the Lived Experience Follow-Up Survey was administered during the summer of 2019 to only the 129 first-generation students in this study's population to seek more in-depth feedback about their first college year lived experiences. Approximately 23 or 18% of first-generation students responded to the qualitative follow-up survey but not every respondent answered every question in the survey. The total

number of FGCS respondents for each of the questions in the follow-up survey were recorded as such:

- There were 23 FGCS respondents that rated how much their parents, siblings, peers, high school counselors and teachers, and other extended family or friends helped prepare them to be a college student using a 4-point Likert scale ranging from 1 (*Not at all*) to 4 (*Very much*).

- There were 10 FGCS that provided actual comments explaining how their parents, siblings, peers, high school counselors, and teachers did or did not contribute to their level of preparedness to be a college student. Only five respondents commented on how other extended family members or friends did or did not contribute to their level of preparedness to be a college student.

- There were 16 FGCS that provided feedback about how they prepared themselves to be a college student.

- There were 15 FGCS that provided feedback about the obstacles they faced during their first college year.

- There were 15 FGCS that provided feedback about how Scripps helped or did not help them adjust during their first college year.

- There were 14 FGCS that provided feedback about how their college peers (e.g., roommates, classmates, friends) supported their academic involvement, while 13 commented about how their peers did not support their academic involvement.

- There were 14 FGCS that provided feedback about how their college peers (e.g., roommates, classmates, friends) supported their social involvement, while 11 commented about how their peers did not support their social involvement.

All participant responses to both the national institute and follow-up surveys asked students about their experiences at their current college of enrollment, which for this study is Scripps College.

Scripps College is an elite, private liberal arts, women's college situated in Claremont, California and is part of The Claremont Colleges Consortium. The consortium is comprised of five undergraduate colleges and two graduate schools. With over 60 majors to choose from, 200+ clubs/organizations to join, and the ability to cross-register to any of the colleges, which regularly exposed them to a co-educational experience. Scripps College students have access to approximately 98 or 77% of full-time faculty and 208 or 88% full-time staff and administrative personnel that offer various support services, while there are only 57 or 16% of the College's total employees who serve in a part-time faculty or staff capacity. Scripps offers several resources to support first-year students such as a week-long orientation program prior to their matriculation in the fall term, including a three-day pre-orientation program for first-generation students designed to help them transition and navigate into the college environment, support them to build community, stay connected, and promote self-advocacy.

> Scripps College was founded by Ellen Browning Scripps, a reporter, global adventurer, suffragist, businesswoman, and philanthropist—a woman ahead of her time. She would have been an exceptional woman in any era—her lifetime achievements were truly remarkable. [Her mission for the College etched into the entry wall states,] *"The paramount obligation of a college is to develop in its students the ability to think clearly and independently, and the ability to live confidently, courageously, and hopefully."* [2]

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[2] A complete history of Scripps College and its founder Ellen Browning Scripps along with this short description of her can be viewed at http://www.scrippscollege.edu/about/history.

The pursuit of the College is to ensure students thrive. This chapter lays out the results of Scripps College first-year students in this study and reports whether peer-to-peer involvement had any influence on FGCS first-year persistence rate and college GPA. Chapter 4 is divided into two major sections. The first section focuses on the quantitative analysis conducted for this study using the national student engagement surveys that displays descriptive statistics, the independent sample t-tests, and multiple regression outcomes for Groups 1, 2, and 3, which was also broadly discussed in the data analysis section in Chapter 3.

- Group 1: Examined whether the reported FGCS expected level of peer-to-peer curricular and co-curricular involvement (BCSSE) predicted first-year persistence and college GPA.

- Group 2: Examined whether the reported FGCS <u>actual</u> level of peer-to-peer curricular and co-curricular involvement (NSSE) predicted first-year persistence and college GPA.

- Group 3: Examined whether the <u>change</u> in FGCS expected and actual levels of peer-to-peer curricular and co-curricular involvement (LONG) predicted first-year persistence and college GPA.

The quantitative data is organized based on the findings from the analyses performed for Groups 1, 2, and 3 that addresses the designated research questions in this study. The results report whether peer-to-peer involvement had significantly influenced persistence and college GPA for FGCS. The layout for the quantitative outcomes associated Astin's I-E-O Model, so that Group 1 corresponds to <u>Input</u>, Group 2 corresponds to <u>Environment</u>, and Groups 3 corresponds to <u>Output</u>. The research questions for this study were:

- *Does the frequency of involvement in <u>curricular</u> activities between peers contribute to first-year first-generation students first college year persistence rate and academic GPA?*

- *Does the frequency of involvement in <u>co-curricular</u> activities between peers contribute to first-year first-generation students first college year persistence rate and academic GPA?*

The second section focuses on the qualitative aspect of this study that captured first-generation students' self-reported reflections on the level of preparedness they felt, obstacles and adjustments they faced, and their thoughts about how they engaged with their peers in academic and social activities. Their feedback was obtained from the Lived Experience Follow-Up Survey, which was administered between June and July 2019 The qualitative data is also organized in reference to Astin's simple I-E-O model that displays the in-depth feedback FGCS provided in the follow-up survey. Tables 12 through 16 lays out the identified themes and the associated outcomes reported by first-generation respondents.

Quantitative Outcomes

The first part of this study measured deliberate peer-to-peer involvement at two different points in time between first-generation and non-first-generation college students to determine if there was an effect on first-year persistence and college GPA based on the amount of curricular and co-curricular peer-to-peer interactions these students had. An additional analysis was also performed on whether a change in their reported amount of expected peer-to-peer involvement prior to entering college compared to their actual amount of peer-to-peer involvement at the end of their first college year had any influence on their first-year persistence and college GPA. The following section reports the results on the analysis for Group 1 based on their responses in the Beginning College Survey of Student Engagement (BCSSE), which captured what students expected out of their college experience prior to entering college. This coincides to the first part of Astin's I-E-O model, <u>Input</u>, because the BCSSE feedback concentrates on what first-year

students reported that they expected to be involved in with their peers before they entered college, which is influenced by their cultural and social capital, as well as their habitus.

Group 1: Expected Levels of Involvement (Input)

The student population included in Group 1 for this study were first-year students at Scripps College who responded to BCSSE prior to their college matriculation. To gain insight about these first-year survey respondents, Table 3 reports the descriptive statistics and whether there was a difference between FGCS and non-FGCS students who responded to the BCSSE survey. Nearly all the FGCS and non-FGCS responded to BCSSE (98.4% and 98.3%, respectively). As reported in Table 3, although there were no differences between FGCS and non-FGCS' first-year persistence rate (91% and 92%, respectively. There was a significant difference in FGCS and non-FGCS first-year college GPA (3.33 and 3.53, respectively). FGCS and non-FGCS also differed across racial/ethnic categories except for Asians/Pacific Islanders. There was also a higher proportion of FGCS students who had a low-income status compared to their counterparts, 43% versus 5%, respectively. FGCS were academically less prepared than non-FGCS as measured by entrance exam test scores and high school GPA, although there was no difference whether these students came from a public or private high school. This study isolated specific questions from BCSSE that asked students the expected amount they would engage with their peers on curricular and co-curricular activities. FGCS on average were more likely to prepare for exams by discussing or working through course materials with other students and work on projects or assignments with other students, compared to non-FGCS. FGCS noted on average they were less likely to spend time relaxing and socializing with their peers compared to their non-FGCS counterparts.

Table 3

Descriptive Statistics and Balance for First-Generation and Non-First-Generation BCSSE Survey Participants

Variables	First-Generation (N=129)	Mean	SD	Non-First-Generation (N=745)	Mean	SD	Diff
First-Year Persistence	127	0.91	0.282	732	0.92	0.275	-0.005
First-Year GPA	127	3.33	0.658	732	3.52	0.480	-0.193*
Asian/Pacific Islander	127	0.19	0.393	732	0.22	0.414	-0.031
African American/Black	127	0.11	0.314	732	0.02	0.155	0.086*
Latinx	127	0.37	0.485	732	0.09	0.285	0.281*
White	127	0.32	0.466	732	0.57	0.496	-0.252*
Unknown Race/Ethnicity	127	0.02	0.125	732	0.10	0.300	-0.084*
Low-Income Status	127	0.43	0.496	732	0.05	0.222	0.373*
California Resident	116	0.45	0.499	676	0.45	0.498	-0.003
SAT Math	47	634	72.907	334	677	62.030	-42.757*
SAT Writing	47	663	74.018	334	695	60.882	-31.419*
ACT	73	29	2.677	419	31	2.309	-1.750*
High School GPA	123	3.99	0.464	720	4.08	0.413	-0.087*
Public High School	125	0.47	0.501	713	0.50	0.500	-0.032
Expected to ask another student to help understand course material	125	3.20	0.684	717	3.10	0.745	0.098
Expected they would explain course material to one or more students	125	2.78	0.747	717	2.80	0.732	-0.014
Expected to prepare for exams by discussing or working through course material with other students	125	3.36	0.665	718	3.22	0.728	0.144*
Expected to work with other students on course projects or assignments	126	3.21	0.730	717	3.06	0.752	0.145*
Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)	125	3.43	1.291	718	3.40	1.191	0.031
Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)	125	3.66	1.245	713	3.94	1.236	-0.282*

Note: Curricular survey questions were based on a 4-point Likert scale ranging from 1 (*never*) to 4 (*very often*), while co-curricular questions had answer options that were in five-hour increments from 0 to more than 30 hours per week.
The Diff column represents the mean difference from an independent samples t-test outcome between FGCS and non-FGCS.
*Significant at the p-value ≤ .05 level.

To obtain a better sense of whether there is a significant difference in reported expected level of involvement between these two groups, an independent samples t-test was applied. The t-test measured if there was a significant difference in reported mean values for each curricular and co-curricular activity for FGCS compared to non-FGCS' responses in BCSSE. As noted in

Table 3, there were some differences in how FGCS expected to become involved with their peers during their first college year compared to non-FGCS. Specifically, FGCS expected to prepare for exams by discussing or working through course material with other students more often than non-FGCS. This result was positive and significantly differed between FGCS (M=3.36, SD=0.67) and non-FGCS (M=3.22, SD=0.73) conditions; t(841)=2.07, p < .05. Similarly, FGCS expected to also work with other students on course projects or assignments more often than non-FGCS. This too was significantly different between FGCS (M=3.21, SD=0.73) and non-FGCS (M=3.06, SD=0.75) conditions; t(841)=2.00, p < .05. Basically, both these results suggest that FGCS had a higher expectation to discuss or work through course material, course projects, or assignments more often with their peers, while non-FGCS had a lower expectation of their peer involvement in these curricular activities. FGCS reported they were less likely to relax and socialize with their peers compared to non-FGCS. This result was negative and significantly differed between FGCS (M=3.66, SD=1.2) and non-FGCS (M=3.94, SD=1.2) conditions; t(836)= -2.35, p < .05. Consequently, FGCS expected they were less likely able to relax and socialize with their friends unlike their non-FGCS counterparts.

To fully understand whether the reported expected amount of peer involvement had any significant effect on first-year persistence and college GPA for first-generation students, a regression analysis was performed. A naïve regression was initially conducted to test if a student's first-generation status significantly predicted FGCS' first-year persistence and college GPA. The result of this analysis showed that having a first-generation status does not significantly predict first-year persistence (B = -.005, t(858) = -.175, p > .05). Although, student's first-generation status does significantly predict first-year college GPA (B = -.193, t(858) = -3.940, p < .01). To expand this analysis, multiple regression analyses were also carried

out to measure the association of FGCS' first-year persistence and college GPA. The analyses held constant the predictor or independent variables that represented students' demographic and social characteristics (i.e., race/ethnicity, socioeconomic status, SAT/ACT exam scores, high school GPA and type, and state residency) to adjust for these potentially confounding variables in the model. Each multiple regression model separately adjusted for each of the deliberate peer-to-peer curricular and co-curricular involvement activities plus the interaction variables between FGCS and each of the peer-to-peer curricular and co-curricular involvement activities. The full regression models measured whether there was a significant peer effect on FGCS' first-year persistence and college GPA outcomes by holding all of the independent variables constant.

The outcomes of the interaction variables for each curricular and co-curricular activity students expected to participate in their first college year from each of the regression models, holding all other predictor or independent variables constant, are reported in Tables 4 and 5. As found in the naïve regression model there was also not a statistically significant difference in FGCS' first-year persistence in any of the expected curricular and co-curricular peer interactions in the full regression, which are displayed and labeled as Models 1-6 in Table 4.

Table 4

Multiple Regression Analyses Results on First-Generation First-Year Persistence based on Expected Peer-to-Peer Interactions

	Naïve	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Variable	B	B	B	B	B	B	B
First-Generation College Student	-0.005	0.098	-0.082	0.172	0.119	0.128	0.152
	(0.026)	(0.770)	(0.442)	(0.744)	(0.517)	(0.238)	(0.269)
Asian/Pacific Islander		0.141	0.128	0.134	0.129	0.179	0.125
		(0.097)	(0.100)	(0.099)	(0.099)	(0.102)	(0.103)
African American/Black		0.287	0.246	0.265	0.252	0.278	0.280
		(0.166)	(0.172)	(0.174)	(0.171)	(0.168)	(0.174)
Latinx		0.103	0.103	0.134	0.115	0.142	0.114
		(0.102)	(0.107)	(0.111)	(0.103)	(0.103)	(0.108)
Unknown Race/Ethnicity		0.002	-0.008	-0.010	-0.005	0.028	-0.006
		(0.097)	(0.100)	(0.101)	(0.100)	(0.100)	(0.106)
Low-Income Status		-0.025	-0.027	-0.057	-0.044	-0.068	-0.038
		(0.128)	(0.130)	(0.132)	(0.127)	(0.129)	(0.129)
California Residency		0.025	0.024	0.015	0.024	0.016	0.029
		(0.069)	(0.071)	(0.073)	(0.072)	(0.072)	(0.075)
SAT Math		-0.001	-0.001	-0.001	-0.001	-0.001*	-0.001
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
SAT Writing		0.000	0.000	0.000	0.000	0.000	0.000
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
ACT		0.051*	0.055*	0.056*	0.055*	0.058*	0.060*
		(0.020)	(0.021)	(0.021)	(0.021)	(0.020)	(0.021)
High School GPA		-0.024	-0.019	-0.022	-0.020	-0.026	-0.037
		(0.091)	(0.096)	(0.094)	(0.094)	(0.095)	(0.097)
Public High School		-0.017	-0.009	0.006	-0.005	-0.008	-0.002
		(0.072)	(0.075)	(0.077)	(0.074)	(0.074)	(0.079)
Expected to ask another student to help understand course material		-0.104					
		(0.055)					
FGCS*Expected to ask another student to help understand course material		-0.028					
		(0.201)					
Expected they would explain course material to one or more students			-0.019				
			(0.048)				
FGCS*Expected they would explain course material to one or more students			0.011				
			(0.148)				
Expected to prepare for exams by discussing or working through course material with other students				0.024			
				(0.055)			
FGCS*Expected to prepare for exams by discussing or working through course material with other students				-0.059			
				(0.201)			
Expected to work with other students on course projects or assignments					0.003		
					(0.044)		
FGCS*Expected to work with other students on course projects or assignments					-0.045		
					(0.141)		
Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)						0.042	
						(0.029)	
FGCS*Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)						-0.045	
						(0.060)	
Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)							0.015
							(0.033)
FGCS*Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)							-0.050
							(0.060)

Standard error is reported in parentheses.
*Significant at the p-value ≤ .05 level.

Furthermore, these models also revealed there were no significant outcomes of FGCS' first-year

college GPA in the full regression analyses in any of the expected peer-to-peer interactions for

each curricular and co-curricular activity reported in BCSSE, , which are displayed and labeled

as Models 1-6 in Table 5.

Table 5

Multiple Regression Analyses Results on First-Generation First-Year College GPA based on Expected Peer-to-Peer Interactions

Variable	Naïve	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	B	B	B	B	B	B	B
First-Generation College Student	-0.193*	-0.184	-1.416	-0.648	-0.953	-1.358*	-0.940*
	(0.049)	(1.355)	(0.759)	(1.250)	(0.886)	(0.410)	(0.467)
Asian/Pacific Islander		0.106	0.101	0.063	0.106	0.027	0.096
		(0.170)	(0.171)	(0.167)	(0.170)	(0.176)	(0.178)
African American/Black		-0.343	-0.455	-0.516	-0.413	-0.396	-0.397
		(0.293)	(0.296)	(0.291)	(0.292)	(0.289)	(0.302)
Latinx		0.090	0.047	-0.018	0.071	0.056	0.101
		(0.180)	(0.184)	(0.186)	(0.177)	(0.178)	(0.187)
Unknown Race/Ethnicity		0.073	0.054	0.110	0.071	0.018	0.065
		(0.171)	(0.172)	(0.169)	(0.171)	(0.173)	(0.183)
Low-Income Status		0.367	0.442*	0.474*	0.404	0.418	0.365
		(0.226)	(0.223)	(0.222)	(0.218)	(0.222)	(0.224)
California Residency		0.047	0.048	0.103	0.057	0.051	0.040
		(0.121)	(0.122)	(0.122)	(0.123)	(0.125)	(0.131)
SAT Math		-0.002	-0.002	-0.002	-0.002	-0.001	-0.002
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
SAT Writing		0.001	0.001	0.001	0.001	0.001	0.001
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
ACT		0.004	0.007	-0.002	0.005	0.010	0.010
		(0.035)	(0.036)	(0.036)	(0.036)	(0.035)	(0.037)
High School GPA		0.010	0.000	0.017	0.011	0.033	0.013
		(0.160)	(0.165)	(0.157)	(0.161)	(0.164)	(0.168)
Public High School		0.295*	0.283*	0.233	0.288*	0.312*	0.324*
		(0.126)	(0.129)	(0.128)	(0.127)	(0.127)	(0.137)
Expected to ask another student to help understand course material		-0.105					
		(0.097)					
FGCS*Expected to ask another student to help understand course material		-0.166					
		(0.354)					
Expected they would explain course material to one or more students			-0.086				
			(0.083)				
FGCS*Expected they would explain course material to one or more students			0.187				
			(0.254)				
Expected to prepare for exams by discussing or working through course material with other students				-0.175			
				(0.093)			
FGCS*Expected to prepare for exams by discussing or working through course material with other students				-0.052			
				(0.337)			
Expected to work with other students on course projects or assignments					-0.090		
					(0.076)		
FGCS*Expected to work with other students on course projects or assignments					0.035		
					(0.241)		
Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)						-0.078	
						(0.049)	
FGCS*Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)						0.141	
						(0.103)	
Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)							0.007
							(0.058)
FGCS*Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)							0.023
							(0.105)

Standard error is reported in parentheses.
*Significant at the p-value ≤ .05 level.

Basically, there was no relationship found between peer interactions (as measured by the survey) and first-year persistence or college GPA outcomes. Although, the full regression performed on Model 5 reported a potential peer effect on FGCS' first-year GPA based on their expectation to participate in co-curricular activities (e.g., join a club/organization), this outcome significantly predicted a decrease in their first-year college GPA outcome at the p-value < .20 instead of the traditionally accepted .05 level (B = .141, t(77) = 1.367, p = .18). Alternatively, the magnitude of the coefficient was positive, but the result was not significant at conventional levels. To view all of Group 1's regression models that held constant all the predictor or independent variables and each of the expected peer-to-peer involvement variables, refer to Appendix F.

The second component of Astin's I-E-O model is Environment. In Astin's model, Environment focuses on the setting in which students actually engage with one another. The next section displays the analyses for Group 2 who provided feedback in the National Survey of Student Engagement (NSSE) based on their actual first-year experience within the Scripps College setting.

Group 2: Actual Levels of Involvement (Environment)

The student population included in Group 2 were first-year Scripps College students who participated in the NSSE follow-up survey at the end of their first year that provided feedback on the amount of actual peer-to-peer curricular and co-curricular involvement they engaged in. Overall, 74% of first-year students responded to NSSE, which was administered at the end of their first college year. To disaggregate that overall participation rate, approximately 59% of FGCS and 76% of non-FGCS provided their responses to the survey. Table 6 provides the descriptive statistics and whether there was a difference between FGCS and non-FGCS students who responded to the NSSE survey. As reported in Table 6, there were no significant differences

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between FGCS and non-FGCS' first-year persistence rate (97% and 93%, respectively) but had a p = .167 (p-value < .20). There was a significant difference between FGCS and non-FGCS first-year college GPA (3.37 and 3.57, respectively). Similar to BCSSE respondents, NSSE FGCS and non-FGCS respondents also differed across racial/ethnic categories except for Asians/Pacific Islanders. Again, there was a higher proportion of FGCS students who had a low-income status compared to their counterparts, 51% versus 5%, respectively. FGCS were academically less prepared than non-FGCS (i.e., SAT/ACT test scores and high school GPA) and there was no difference whether these students attended a public or private high school. FGCS on average were less likely compared to non-FGCS to seek out their peers to help them with course materials, prepare for exams or work on projects or assignments. According to Table 6, FGCS seem to have participated more than non-FGCS in co-curricular activities but spent less time socializing and relaxing with other students compared to their non-FGCS counterparts.

Table 6

Descriptive Statistics and Balance for First-Generation and Non-First-Generation NSSE Survey Participants

Variables	FGCS (N=129)	Mean	SD	Non-FGCS (N=745)	Mean	SD	Diff
First-Year Persistence	76	0.97	0.161	566	0.93	0.250	0.041
First-Year GPA	76	3.37	0.388	566	3.57	0.390	-0.199*
Asian/Pacific Islander	76	0.18	0.390	566	0.21	0.407	-0.024
African American/Black	76	0.13	0.340	566	0.02	0.155	0.107*
Latinx	76	0.47	0.503	566	0.09	0.289	0.382*
White	76	0.20	0.401	566	0.60	0.491	-0.398*
Unknown Race/Ethnicity	76	0.01	0.115	566	0.08	0.271	-0.066*
Low-Income Status	76	0.51	0.500	566	0.05	0.228	0.458*
California Resident	71	0.44	0.590	529	0.45	0.498	-0.0152
SAT Math	30	645	73.800	228	676	60.577	-30.368*
SAT Writing	30	639	73.152	228	698	60.626	-58.605*
ACT	38	29	2.666	337	31	2.381	-1.958*
High School GPA	75	3.99	0.457	552	4.08	0.406	-0.091**
Public High School	76	0.55	0.501	548	0.52	0.500	0.036
Asked another student to help understand course material	75	2.71	0.897	562	2.80	0.795	-0.092
Explained course material to one or more students	75	2.67	0.811	562	2.75	0.753	-0.081
Prepared for exams by discussing or working through course material with other students	76	2.54	0.944	562	2.73	0.873	-0.194**
Worked with other students on course projects or assignments	76	2.63	0.830	558	2.68	0.798	-0.044
Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	75	2.75	1.316	519	2.63	1.229	0.113
Relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	73	3.63	1.196	523	3.93	1.397	-0.303*

Note: Curricular survey questions were based on a 4-point Likert scale ranging from 1 (*never*) to 4 (*very often*), while co-curricular questions had answer options that were in five-hour increments from 0 to more than 30 hours per week.
The Diff column represents the mean difference from an independent samples t-test outcome between FGCS and non-FGCS.
*Significant at the p-value ≤ .05 level.

A way to identify whether there were differences found in the actual peer-to-peer involvement between what FGCS and non-FGCS an independent samples t-tests between these two groups was performed. The t-test measured if there was a significant difference in reported mean values for each curricular and co-curricular activity between FGCS and non-FGCS'

responses in NSSE. FGCS, on average, did not actually prepare as much for exams by discussing or working through course material with other students compared to non-FGCS. This result was negative and significantly differed between FGCS (M=2.54, SD=0.94) and non-FGCS (M=2.73, SD=0.87) conditions; $t(93)$= -1.692, $p < .10$. Although this finding was significant at the p-value of .10 level versus the .05 level, it was worth mentioning as a relevant outcome since there were no other differences found across the other curricular involvement activities for this population. Basically, these results suggest that FGCS and non-FGCS had no differences in how involved they were with their peers except when it came time to prepare for exams with peers that showed a modest effect with a p-value = .094 (p-value < .10 level), albeit not at the accepted conventional .05 level. Additionally, there were no differences found in the actual amount of time each group participated in co-curricular activities with their peers but FGCS seemed to relax and socialize less often with their peers compared to non-FGCS. This result was negative and significantly differed between FGCS (M=3.63, SD=1.2) and non-FGCS (M=3.93, SD=1.4 conditions; $t(102)$= -1.98, $p < .05$. Specifically, FGCS did not relax and socialize with their friends as much as non-FGCS had done.

Regression analyses were also conducted to fully understand whether differences in the reported amount of actual peer involvement had any effect on first-year persistence and college GPA for first-generation students. First, a naïve regression was initially performed to test if a student's first-generation status significantly predicted FGCS' first-year persistence and college GPA. This initial analysis shows a student's first-generation status did not significantly predict first-year persistence (B = .041, $t(641)$ = 1.382, $p > .05$), however having a first-generation status did significantly predict first-year college GPA (B = -.199, $t(641)$ = -4.169, $p < .01$). Separate multiple regression analyses were performed that adjusted for potentially confounding variables

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that included race/ethnicity, socioeconomic status, SAT/ACT exam scores, high school GPA and type, state residency, each of the deliberate peer-to-peer curricular and co-curricular involvement activities, and all the interaction variables to test if any peer effects were present for FGCS first-year persistence and college GPA.

The outcomes of the interaction variables for each curricular and co-curricular activities students participated in their first college year for each of the regression models, holding all other predictor or independent variables constant for first-year persistence and college gpa are reported in Tables 7 and 8, respectively. There were no peer effects found on FGCS' first-year persistence or college GPA in any of the actual peer-to-peer involvement variables across all the curricular and co-curricular activities (Models 1-6) for Group 2 at the p-value < .05 level, which is displayed and labeled Models 1-6 in Table 7.

Table 7

Multiple Regression Analyses Results on First-Generation First-Year Persistence based on Actual Peer-to-Peer Interactions

	Naïve	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Variable	B	B	B	B	B	B	B
First-Generation College Student	0.041 (0.030)	0.864 (0.679)	0.340 (0.680)	0.064 (0.607)	0.045 (0.613)	0.669* (0.254)	0.233 (0.877)
Asian/Pacific Islander		0.150 (0.138)	0.167 (0.137)	0.178 (0.135)	0.178 (0.134)	0.294 (0.147)	0.145 (0.140)
African American/Black		0.575* (0.208)	0.554* (0.200)	0.547* (0.200)	0.544* (0.201)	0.497* (0.243)	0.397 (0.259)
Latinx		0.217 (0.117)	0.245 (0.112)	0.245* (0.117)	0.240* (0.115)	0.308* (0.114)	0.210 (0.119)
Unknown Race/Ethnicity		-0.107 (0.116)	-0.102 (0.117)	-0.101 (0.117)	-0.098 (0.117)	-0.050 (0.118)	-0.098 (0.118)
Low-Income Status		-0.399* (0.139)	-0.371* (0.137)	-0.382* (0.141)	-0.379* (0.138)	-0.436* (0.145)	-0.436* (0.150)
California Residency		-0.109 (0.082)	-0.107 (0.084)	-0.114 (0.091)	-0.112 (0.088)	-0.093 (0.081)	-0.063 (0.092)
SAT Math		-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.002* (0.001)	-0.002* (0.001)
SAT Writing		0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
ACT		0.065* (0.024)	0.060* (0.024)	0.059* (0.023)	0.060* (0.023)	0.069* (0.023)	0.064* (0.025)
High School GPA		0.203 (0.114)	0.204 (0.122)	0.221 (0.122)	0.220 (0.122)	0.215 (0.114)	0.180 (0.127)
Public High School		-0.024 (0.092)	-0.017 (0.092)	-0.014 (0.093)	-0.015 (0.093)	-0.015 (0.093)	-0.004 (0.094)
Asked another student to help understand course material		0.023 (0.051)					
FGCS*Asked another student to help understand course material		-0.206 (0.250)					
Explained course material to one or more students			0.012 (0.055)				
FGCS*Explained course material to one or more students			-0.011 (0.251)				
Prepared for exams by discussing or working through course material with other students				-0.001 (0.049)			
FGCS*Prepared for exams by discussing or working through course material with other students				0.112 (0.263)			
Worked with other students on course projects or assignments					-0.011 (0.051)		
FGCS*Worked with other students on course projects or assignments					0.119 (0.265)		
Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)						0.069 (0.041)	
FGCS*Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)						-0.115 (0.077)	
Relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)							-0.032 (0.039)
FGCS*Relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)							0.043 (0.200)

Standard error is reported in parentheses.
*Significant at the p-value ≤ .05 level.

Table 8 displays the peer effect outcomes on first college year GPA. Model 3 for FGCS' college GPA outcome captured a small peer effect for peer-to-peer interaction in preparing for exams by discussing or working through course material with other students. Essentially, there was a

modest peer effect for FGCS' first-year college GPA when they engaged with their peers to prepare for an exam but at the p-value < .10, which is not at the conventional level of .05. To view all of the regression models for Group 2 that report the peer effects for all independent variables along with each of the actual peer-to-peer involvement variables, refer to Appendix G.

Table 8

Multiple Regression Analyses Results on First-Generation First-Year College GPA based on Actual Peer-to-Peer Interactions

	Naïve	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Variable	B	B	B	B	B	B	B
First-Generation College Student	-0.199*	-0.874	0.034	-1.415*	-1.438*	-0.351	-0.597
	(0.048)	(0.792)	(0.775)	(0.672)	(0.690)	(0.301)	(0.992)
Asian/Pacific Islander		0.139	0.102	0.139	0.152	0.157	0.098
		(0.161)	(0.156)	(0.150)	(0.151)	(0.174)	(0.158)
African American/Black		-0.507*	-0.484*	-0.513*	-0.510*	-.232	-0.386
		(0.242)	(0.229)	(0.222)	(0.226)	(0.288)	(0.293)
Latinx		-0.096	-0.102	-0.060	-0.100	-0.110	-0.177
		(0.137)	(0.128)	(0.130)	(0.129)	(0.135)	(0.134)
Unknown Race/Ethnicity		0.086	0.073	0.093	0.079	0.106	0.102
		(0.135)	(0.134)	(0.130)	(0.132)	(0.139)	(0.134)
Low-Income Status		0.004	-0.011	-0.097	-0.061	0.080	0.077
		(0.162)	(0.156)	(0.156)	(0.156)	(0.171)	(0.170)
California Residency		0.027	0.007	-0.056	-0.023	0.028	0.070
		(0.096)	(0.096)	(0.101)	(0.099)	(0.096)	(0.104)
SAT Math		-0.002	-0.001	-0.001	-0.001	-0.001	-0.001
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
SAT Writing		0.000	0.000	0.000	0.000	0.000	0.000
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
ACT		-0.004	0.000	-0.008	-0.005	-0.002	-0.010
		(0.028)	(0.027)	(0.026)	(0.026)	(0.028)	(0.029)
High School GPA		0.092	0.073	0.178	0.163	0.114	0.106
		(0.113)	(0.139)	(0.136)	(0.137)	(0.135)	(0.143)
Public High School		0.275*	0.267*	0.300*	0.285*	0.253*	0.244*
		(0.107)	(0.105)	(0.103)	(0.104)	(0.111)	(0.107)
Asked another student to help understand course material		0.000					
		(0.059)					
FGCS*Asked another student to help understand course material		0.182					
		(0.292)					
Explained course material to one or more students			0.069				
			(0.062)				
FGCS*Explained course material to one or more students			-0.166				
			(0.286)				
Prepared for exams by discussing or working through course material with other students				0.058			
				(0.055)			
FGCS*Prepared for exams by discussing or working through course material with other students				0.476			
				(0.292)			
Worked with other students on course projects or assignments					0.007		
					(0.057)		
FGCS*Worked with other students on course projects or assignments					0.470		
					(0.298)		
Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)						0.002	
						(0.048)	
FGCS*Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)						-0.051	
						(0.091)	
Relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)							-0.048
							(0.044)
FGCS*Relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)							0.038
							(0.227)

Standard error is reported in parentheses.
*Significant at the p-value ≤ .05 level.

The final component in Astin's I-E-O model is <u>Output</u>. The student population in Group 3 is comprised of first-year students' responses in the LONG survey (BCSSE-NSSE), which captured the change in what the student expected to be involved in with their peers before they

matriculated into college versus what they actually experienced with their peers during their first college year. The next section reports Group 3 or LONG findings, which aligns to the Output component in the I-E-O model because the LONG BCSSE-NSSE analyses measured whether the change between expectations and actual levels of peer-to-peer involvement over the course of their first college year at Scripps had any influence on educational outcomes, such as first-year persistence and college GPA, specifically for FGCS.

Group 3: Change between Expected and Actual Level of Involvement (Output)

The analyses conducted on the students included in Group 3 of this study evaluated the change in first-year participants' responses between expected level of peer-to-peer involvement and actual level of peer involvement in curricular and co-curricular activities reported in the BCSSE and NSSE surveys. Group 3 population included students who were longitudinally tracked based on responses they provided in BCSSE at the beginning of students' first-year at Scripps and their matched responses in NSSE, which followed-up at the end of their first year that provided feedback on the amount of curricular and co-curricular involvement they engaged in, which is identified as LONG participants. In order to measure the change between expected and actual levels of involvement across curricular and co-curricular activities, newly formed variables were constructed, which are reported in Tables 9-11 in this section for Group 3 with a label that begins with "Change". These variables were created to easily view the calculated difference between respondents across both first-generation and non-first-generation students expected and actual peer-to-peer involvement values.

Overall 72% of first-year students were captured in the LONG analysis, which were students who responded to both BCSSE and NSSE. FGCS LONG participation rate was approximately 58%, while non-FGCS LONG participation rate was 74%. Table 9 provides the

descriptive statistics and whether there was a difference between FGCS and non-FGCS LONG participants. There were no reported differences between FGCS and non-FGCS LONG participants' first-year persistence rate (95% and 95%, respectively). There was a significant difference found in first-year college GPA between FGCS and non-FGCS (3.37 and 3.57m respectively). FGCS and non-FGCS LONG participants also differed across racial/ethnic categories except for Asians/Pacific Islanders, which is similar to both populations described in Groups 1 and 2. Again, there was a higher proportion of FGCS LONG (51%) students who had a low-income status compared to their counterparts (5%). FGCS LONG students were academically less prepared than non-FGCS LONG counterparts (i.e., SAT/ACT test scores and high school GPA), but there was no difference between these groups and whether they attended a public or private high school. Essentially, both FGCS and non-FGCS reported expectations of peer-to-peer involvement for curricular and co-curricular activities were higher than the amount they actually were involved with their peers except relaxing and socializing. Furthermore, FGCS on average expected to be more involved with their peers prior to starting their first college year (BCSSE responses) but by the end of their first year in college their reported feedback on peer-to-peer involvement across all curricular and co-curricular activities were much lower (NSSE responses) than non-FGCS. The independent samples t-tests performed for Group 3 measured whether any significant differences existed and initially these findings showed no marked differences between FGCS LONG and non-FGCS LONG (see Table 9, Diff column).

Table 9

Descriptive Statistics and Balance for First-Generation and Non-First-Generation Longitudinal BCSSE-NSSE Survey Participants

Variables	FGCS (N=129)	Mean	SD	Non-FGCS (N=745)	Mean	SD	Diff
First-Year Persistence	75	0.95	0.226	554	0.94	0.244	0.010
First-Year GPA	75	3.37	0.391	554	3.57	0.387	-0.197*
Asian/Pacific Islander	75	0.19	0.392	554	0.21	0.410	-0.0263
African American/Black	75	0.12	0.327	554	0.02	0.152	0.097*
Latinx	75	0.48	0.503	554	0.09	0.287	0.390*
White	75	0.20	0.403	554	0.59	0.492	-0.394*
Unknown Race/Ethnicity	75	0.01	0.115	554	0.08	0.271	-0.066*
Low-Income Status	75	0.51	0.503	554	0.05	0.223	0.454*
California Resident	70	0.47	0.503	517	0.45	0.498	0.019
SAT Math	27	643	74.245	224	677	60.884	-34.015*
SAT Writing	27	636	72.554	224	697	60.549	-61.587*
ACT	39	29	2.533	330	31	2.369	-2.027*
High School GPA	74	3.98	0.459	541	4.09	0.403	-0.110*
Public High School	75	0.55	0.501	537	0.52	0.500	0.029
Change between expectation and actually asking another student to help understand course material	73	-0.38	1.009	541	-0.29	0.875	-0.093
Change between expectation and actually explaining course material to one or more students	73	-0.04	1.020	540	-0.03	0.893	-0.011
Change between expectation and actually preparing for exams by discussing or working through course material with other students	74	-0.73	1.051	542	-0.50	0.953	-0.226
Change between expectation and actually worked with other students on course projects or assignments	74	-0.50	1.037	536	-0.41	0.955	-0.091
Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	71	-0.63	1.650	500	-0.78	1.358	0.150
Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	70	0.01	1.479	500	0.04	1.426	-0.022

Note: Curricular survey questions were based on a 4-point Likert scale ranging from 1 (*never*) to 4 (*very often*), while co-curricular questions had answer options that were in five-hour increments from 0 to more than 30 hours per week.
The Diff column represents the mean difference from an independent samples t-test outcome between FGCS and non-FGCS.
*Significant at the p-value ≤ .05 level.

To measure if the change between expected and actual peer-to-peer involvement among

FGCS and non-FGCS LONG participants existed an independent samples t-test between these

two groups was performed. The t-test measured whether there was a significant difference in

reported mean values for each curricular and co-curricular activity reported by FGCS LONG compared to non-FGCS LONG populations. There were no significant differences at the p-value < .05 level across all curricular and co-curricular activities between FGCS and non-FGCS LONG. Although, there was a noticeable change between expectation and actually preparing for exams by discussing or working through course material with other students between FGCS and non-FGCS LONG participants but only at the p-value < .10 level. In other words, FGCS LONG were even less likely to prepare for exams by discussing or working through course material with their peers compared to non-FGCS LONG. This result was negative and significantly differed between FGCS (M= -.73, SD=1.05) and non-FGCS (M= -.50, SD=0.95) conditions; t(90)= -1.755, p < .10. Although this finding was significant at the p-value of .10 level versus the .05 level, it was worth pointing out as a relevant outcome especially because there were no other significant differences found with the other curricular and co-curricular peer-to-peer involvement activities for this population.

A multiple regression was applied to measure whether peer involvement had any effect on first-year persistence and college GPA for first-generation students. Initially, a naïve regression was performed to test if a student's first-generation status significantly predicted FGCS' first-year persistence and college GPA for Group 3 or the LONG population. Similar to the FGCS who were in Group 1 (BCSSE) and Group 2 (NSSE) populations, FGCS LONG did not show a significant effect in first-year persistence, but did there was a significant result in their first-year college GPA. This initial analysis shows a student's first-generation status in the LONG population did not significantly predict first-year persistence (B = .010, t(628) = .331, p > .05), however having a first-generation status did significantly predict first-year college GPA (B = -.197, t(628) = -4.124, p < .01). Separate regression analyses were conducted that adjusted

for each of the deliberate peer-to-peer interactions across all the curricular and co-curricular involvement activities, which measured the association of FGCS and first-year persistence and college GPA that held constant all the identified potentially confounding predictor or independent variables (i.e., race/ethnicity, socioeconomic status, SAT/ACT exam scores, high school GPA, state residency, all the curricular and co-curricular involvement activities, and interaction variables) in the model.

Based on the regression models on FGCS' first-year persistence and college GPA outcomes, Tables 10 and 11 provides results of the peer effects from each of the six models based on the recorded change between expected and actual peer-to-peer involvement they had across all the curricular and co-curricular activities holding all other predictor or independent variables constant. The analysis of the calculated change in Group 3 or the LONG population reported no significant peer effects on FGCS' first-year persistence or college GPA based on peer-to-peer involvement across all the curricular and co-curricular activities. To view all of the regression models for Group 3 or the LONG population for each of the actual peer-to-peer involvement with accompanying independent variables, refer to Appendix H.

Table 10

Multiple Regression Analyses Results on First-Generation First-Year Persistence based on Change of Peer-to-Peer Interactions

Variable	Naïve	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	B	B	B	B	B	B	B
First-Generation College Student	0.010 (0.030)	0.257 (0.182)	0.314* (0.154)	0.192 (0.254)	0.216 (0.200)	0.309 (0.177)	0.376* (0.165)
Asian/Pacific Islander		0.153 (0.130)	0.171 (0.136)	0.192 (0.133)	0.191 (0.132)	0.211 (0.134)	0.225 (0.141)
African American/Black		0.516* (0.190)	0.560* (0.195)	0.601* (0.207)	0.603* (0.205)	0.510* (0.237)	0.394 (0.258)
Latinx		0.235* (0.112)	0.228 (0.113)	0.246* (0.109)	0.247* (0.110)	0.283* (0.114)	0.263* (0.115)
Unknown Race/Ethnicity		-0.170 (0.120)	-0.176 (0.123)	-0.178 (0.126)	-0.171 (0.122)	-0.177 (0.125)	-0.254 (0.143)
Low-Income Status		-0.350* (0.130)	-0.373* (0.139)	-0.370* (0.133)	-0.385* (0.132)	-0.437* (0.146)	-0.444* (0.150)
California Residency		-0.146 (0.080)	-0.138 (0.083)	-0.123 (0.086)	-0.133 (0.086)	-0.130 (0.085)	-0.143 (0.094)
SAT Math		-0.001 (0.001)	-0.002 (0.001)	-0.002* (0.001)	-0.002* (0.001)	-0.002* (0.001)	-0.002* (0.001)
SAT Writing		0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
ACT		0.069* (0.022)	0.068* (0.023)	0.072* (0.024)	0.074* (0.024)	0.080* (0.025)	0.071* (0.026)
High School GPA		0.180 (0.109)	0.207 (0.114)	0.181 (0.115)	0.179 (0.115)	0.212 (0.119)	0.214 (0.127)
Public High School		-0.042 (0.090)	-0.032 (0.091)	-0.021 (0.090)	-0.020 (0.090)	0.000 (0.095)	-0.024 (0.098)
Change between expectation and actually asking another student to help understand course material		0.082 (0.046)					
FGCS*Change between expectation and actually asking another student to help understand course material		-0.097 (0.145)					
Change between expectation and actually explaining course material to one or more students			0.027 (0.043)				
FGCS*Change between expectation and actually explaining course material to one or more students			0.041 (0.142)				
Change between expectation and actually preparing for exams by discussing or working through course material with other students				-0.009 (0.041)			
FGCS*Change between expectation and actually preparing for exams by discussing or working through course material with other students				-0.094 (0.172)			
Change between expectation and actually worked with other students on course projects or assignments					-0.016 (0.038)		
FGCS*Change between expectation and actually worked with other students on course projects or assignments					-0.120 (0.169)		
Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)						0.020 (0.037)	
FGCS*Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)						-0.049 (0.052)	
Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)							-0.006 (0.042)
FGCS*Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)							-0.011 (0.063)

Standard error is reported in parentheses.
*Significant at the p-value ≤ .05 level.

Table 11

Multiple Regression Analyses Results on First-Generation First-Year College GPA based on Change of Peer-to-Peer Interactions

Variable	Naïve B	Model 1 B	Model 2 B	Model 3 B	Model 4 B	Model 5 B	Model 6 B
First-Generation College Student	-.197* (0.048)	-0.335 (0.221)	-0.441* (0.175)	-0.156 (0.285)	-0.451 (0.237)	-0.566* (0.207)	-0.470* (0.182)
Asian/Pacific Islander		0.107 (0.158)	0.047 (0.155)	0.108 (0.149)	0.137 (0.156)	0.146 (0.157)	0.146 (0.155)
African American/Black		-0.495* (0.231)	-0.489* (0.222)	-0.564* (0.232)	-0.433 (0.243)	-0.231 (0.278)	-0.591* (0.284)
Latinx		-0.108 (0.136)	-0.148 (0.129)	-0.109 (0.122)	-0.102 (0.131)	-0.096 (0.133)	-0.162 (0.127)
Unknown Race/Ethnicity		0.133 (0.146)	0.126 (0.141)	0.176 (0.142)	0.127 (0.145)	0.139 (0.147)	0.245 (0.157)
Low-Income Status		-0.011 (0.158)	0.053 (0.158)	-0.035 (0.150)	-0.024 (0.157)	0.083 (0.171)	0.083 (0.166)
California Residency		0.032 (0.098)	0.021 (0.095)	-0.013 (0.096)	0.010 (0.102)	0.028 (0.099)	0.116 (0.103)
SAT Math		-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
SAT Writing		0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
ACT		-0.004 (0.027)	-0.007 (0.026)	-0.014 (0.027)	0.000 (0.029)	-0.005 (0.029)	-0.030 (0.029)
High School GPA		0.089 (0.132)	0.110 (0.130)	0.121 (0.129)	0.074 (0.136)	0.160 (0.139)	0.167 (0.140)
Public High School		0.277* (0.109)	0.255* (0.103)	0.263* (0.101)	0.281* (0.107)	0.259* (0.111)	0.319* (0.108)
Change between expectation and actually asking another student to help understand course material		0.050 (0.056)					
FGCS*Change between expectation and actually asking another student to help understand course material		0.053 (0.177)					
Change between expectation and actually explaining course material to one or more students			0.096 (0.049)				
FGCS*Change between expectation and actually explaining course material to one or more students			-0.112 (0.162)				
Change between expectation and actually preparing for exams by discussing or working through course material with other students				0.084 (0.046)			
FGCS*Change between expectation and actually preparing for exams by discussing or working through course material with other students				0.155 (0.193)			
Change between expectation and actually worked with other students on course projects or assignments					0.047 (0.045)		
FGCS*Change between expectation and actually worked with other students on course projects or assignments					-0.079 (0.200)		
Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)						0.023 (0.043)	
FGCS*Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)						-0.057 (0.061)	
Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)							-0.098* (0.046)
FGCS*Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)							0.031 (0.069)

Standard error is reported in parentheses.
*Significant at the p-value ≤ .05 level.

To augment these quantitative findings about FGCS reported peer-to-peer interactions, a follow-up survey was administered to the 129 FGCS students who provided feedback in either the BCSSE or NSSE surveys to obtain more in-depth understanding of the first-generation first year lived experience from their perspective. Approximately 23 or 18% of FGCS responded to the Lived Experience Follow-Up Survey, but not all respondents answered every question. The qualitative outcomes section provides the identified themes and outcomes of FGCS feedback organized by the simple I-E-O model developed by Astin (1984 & 1993), which can be found in Chapter 2, Figure 1.

Qualitative Outcomes

Two of the areas this study examined was to better understand the FGCS first-year experience and how these students fit into their college setting. The feedback from the Lived Experience Follow-Up Survey helped to assess the outcomes in these two areas. A follow-up survey was administered to first-year first-generation students who entered Scripps College during the academic years of 2015, 2016, and 2017 and responded to either the BCSSE or NSSE. This survey focused on asking these FGCS to reflect on their lived first-year college experience by having them describe how prepared they felt entering college and who contributed to their level of preparedness; gather their insights about obstacles they faced during their first year; what types of support Scripps College provided or lack thereof; and how their peers supported their level of involvement in academic and social activities. This section lays out the in-depth feedback FGCS provided in the follow-up survey by Astin's (1984 & 1993) I-E-O simple model (see Figure 1 in chapter 2) beginning with the Input component of the model that reports results on the level of preparedness the respondent reported about becoming a college student.

Input: Preparedness to be a college student

  Preparedness. The themes developed for FGCS feedback about how prepared they were to be a college student was created by first coding, then categorizing their responses from the Lived Experience Follow-Up Survey. The survey questions asked FGCS about how much their parents/guardians; siblings; high school counselor and teachers; their peers defined as roommates, classmates, or friends; and others defined as extended family members, friends' parents, pastor/minister, or neighbors help prepared them to be a college student. Respondents first rated how much each of these people helped prepare them to be a college student using a 5-point Likert scale ranging from 1 (*Not at all*) to 5 (*Very much*) and provided some explanation about the rating they gave to those people. Table 12 summarizes the identified themes and associated outcomes based on FGCS responses to the follow-up survey. The identified themes were coded then categorized according to similar patterns found in respondents' feedback. The outcomes were generated using the causation coding, where I tried to link the respondents' explanation of why they felt certain people in their lives were able to or not able to help prepare them to be a college student (Saldana, 2016, p. 186-188). Table 12 is sorted by the average score, from high to low, based on FGCS rating on how much their family members and high school counselors and teachers had helped prepared them to be a college student. This section discusses the themes and outcomes starting with the highest rated person to the lowest rated person that helped prepared FGCS respondents. Some selected feedback is provided following the table to highlight what first-generation respondents stated about how these people did or did not help prepare them to be a college student in order of their average rating from high to low.

Table 12

First-Generation Preparedness Matrix

Person	Average Preparedness Rating*	Themes			
		Academic Support	College Social Life Understanding	Emotional Support	Little/No Support
High School Teacher(s)	3.43	Took academic preparatory coursework; Teachers talked about what to expect academically in college	Offered some insight and advice about what to expect in college and what not to miss out on	Were supportive about college attendance	Limited information about college was provided
Peers	3.43	Researched schools and applied together but had to figure out the process together; some peers had more knowledge about college academics and shared freely	Had none to offer since most did not have any experience with college before but created a connection through the researching what it took to attend college	Peers made them feel they had someone to go through the college process with, did not feel alone; very motivating	Depending on peer group, unable to offer information about college because their peer was also a first-generation student; on their own
High School Counselor(s)	2.70	Discussed academics for college; Provided academic information such as EMERGE and Questbridge	Did not communicate about social aspect about college	Focused on academic preparation information	Had little to no relationship or interaction with counselor
Parent(s)/ Guardian(s)	2.30	Attended a private school; Assisted in researching schools and applying	Had none to offer	Established strong work ethic; Provided basics to live on-campus	Lacked knowledge to help with college; mostly on own about figuring out the college process
Sibling(s)	2.20	Depending on family dynamics there were some discussion about college	Very little discussion about social life in college	Offered emotional support	Siblings were much older and did not offer advice or help about college; Eldest child or no other sibling
Others	1.65	Extended family members' college experience was not relatable	Did not offer any information about college life	None given	Lack of communication or relationship

Notes: This matrix table is based on the Lived Experience Follow-Up Survey, which asked first-generation students how much each person listed in the "Person" column above help **prepare** them to be a college student using a *5-point Likert scale ranging from 1 (*Not at all*) to 5 (*Very much*). FGCS were also asked to please explain the rate they provided for that person. Peers are defined as roommates, classmates, or friends. Others are defined as extended family members, friends' parents, pastor/minister, or neighbor. All themes are sorted based on average rating from high to low.

On average, high school teachers and peers were highly rated by respondents who reported these people had somewhat helped prepared them to be a college student. Generally, high school teachers were supportive in providing students with academic course content that had college rigor and respondents noted the importance their teachers had on their college trajectory.

High school teachers and peers had the highest preparedness rating. Unsurprisingly, since students spend a lot of time in class with their teachers and peers while in high school that level

of exposure especially for students taking college-preparatory courses will inevitably discuss college at some point. Some relevant comments made by respondents described how their high school teachers provided some insight about what to expect academically in their college experience, of which some were based on their own experiences:

> *"My high school teachers provided a rigor and expectations that were similar to college-level expectations, I did feel academically prepared when I began my college courses."*

> *"A lot of my teachers would share their experiences in college and would offer advice about how to navigate it as they reflected on things they wish they knew when they first entered school."*

> *"What they have taught me in high school are very useful in helping me to achieve more academically in college."*

Since there was no significant difference in the type of high school a student attended in the quantitative outcomes that does not mean there were not some students who had teachers that poorly prepared them to be a college student, especially because the academic rigor varies by high school curriculum. Hence, not all respondents felt their teachers prepared them to be a college student.

> *"College was never spoken about in specifics beyond encouraging one to apply to college."*

> *"I don't feel like the classes I took prepared me for my first semester. The pace and expectations were very different."*

> *"more motivational but not really tangible help."*

Peers on average were also rated high. First-generation respondents reported their peers were positive and supportive, as well as commiserated with one another about their experience in the college process including the confusion of looking for a college and applying to institutions. Respondents who connected with a peer who knew more about what to expect in college and shared experiences that they could potentially be exposed to helped them to better understand what it would be like as a college student. For example, the following quotes highlighted some of these experiences:

> *"My high school friends were helpful with looking for colleges and helping with class."*
>
> *"If it weren't for other peers (especially older), I wouldn't know about the things I would need to do in order to succeed."*
>
> *"Because my friend group was also focused on getting into really good colleges, we all leaned on each other during applications and offered tremendous amount of support that I don't think I could have gone through the college process without."*
>
> *"They also ease a lot of my academic and life pressure."*

Not surprisingly, FGCS peers were more often like themselves, also a first-generation student. This comment below adeptly captured the sentiment of many respondents' remarks about their peer group.

> *"Many of my friends are also first-generation college students, so we didn't really know how to prepare each other for college."*

High school counselors were a little helpful when providing information about college, specifically the types of resources related to academic preparation. Counselors also helped

students apply to college but did not offer a lot of context about what to expect as a college student. There was no explanation as to why their high school counselor did not offer that type of input, but based on my own exposure to high school counselors I can infer the reason for this outcome may be due to the likelihood counselors are generally stretched thin with a high case load and simply did not have the bandwidth of time to elaborate beyond offering academic resources. Some insightful comments about the narrow scope of respondents' experiences with their counselors include:

> *"My high school counselors did not do a good job telling us what to expect of college life."*
> *"...helped me decide on which schools to apply to, but we never discussed what being a college student would actually be like."*
> *"I didn't have a close relationship with my counselors"*
> *"My high school resources alone were pretty limited."*

Based on the average ratings from first-generation survey participants, parents and siblings provided very little help in preparing respondents to be a college student but were emotionally and psychologically supportive of their desire to attend college. Strayhorn (2007) and Plasket et al (2018) found in their studies that FGCS received very little to no support or advice about how to be a college student. This could be a result of the fact parents share the same first-generation status as the respondent, and also did not have any postsecondary education knowledge to share, so instead offered their emotional support. And, depending on the age of the respondent's sibling and the context of their relationship may simply not be available to help. For example, some respondents indicated a lack of knowledge their family had by stating,

"Since no one has been to college in my family before, no one knew exactly what

to say or do as I prepared to enter it."

"They just provided the material support, yet they do not have relative experience

of college."

"My parents really didn't know how to help."

"My parents did not go to college and had no notions of what it is like to be a

college student at any university."

"I am the eldest, so I am the one that will have to prepare my brother for

college."

While other comments indicated family members provided emotional and psychological support

or were simply absent in offering information, respondents were candid about how parents and

siblings offered their support by stating,

"They always encouraged me but didn't push me. I found summer programs,

scholarships, looked up colleges, etc."

"My mom knew that she did not have the lived experience, but she tried to put me

in programs and schools that had more knowledge than she has."

"They somewhat mentally prepared me by instilling in me the values of hard

work, resilience, and dedication as I was growing up."

"My older sister went to college which was inspiring."

"I have two older siblings who went to college but we never talked about the

application processes or any experiences."

Respondents, on average, rated the category of others lowest in having helped prepared

them to be a college student, because they also did not have any reference of what a college

experience would entail. The gist of the reasons given for their low rating corresponded a lot to these two first-generation students' statements,

> *"Only a few of my extended family members have college experiences…their experiences are not very relatable."*

> *"They don't understand the college experience so they don't really talk to me about it."*

Respondents were also asked to describe what they did to prepare themselves to be a college student. Some selected feedback is provided to highlight what first-generation respondents stated about how they prepared themselves to be a college student.

Self-prepared. First-generation respondents explained how they prepared to be a college student. Many respondents felt they were not as prepared as they could have been. Students used college readiness preparatory programs, such as participating in AVID, a program for high school students determined to go to college. They were also involved in QuestBridge, which connects low-income students to elite institutions to help them academically and socially enter, acclimate, and be successful in college. Responses ranged from not only taking college readiness courses, but they also signed up for pre-college orientation programs to seek out help and advice from peers, while other first-generation respondents used online platforms, such as YouTube videos to get a better understanding of what they might expect being a college student. Mostly, they felt unprepared to be a college student because they were not sure what to expect or what to do to prepare themselves before entering college. Essentially, students wanted to make connections or be prepared to connect, so it would not be so hard to fit in. As one respondent stated, "I had no idea what to expect so I didn't know what to be prepared for," that surmised many first-generation students' feedback. Respondents were also quick to credit their parents for support

and help even when that support only came in their encouragement to attend college because they did not have any reference to what college was like themselves. A common theme that summarized several respondents feedback was they had to "advocate for [themselves] constantly even though [they] didn't know how [to] most of the time." Some of these FGCS were exhibiting autonomous or independent characteristic traits in their educational trajectory because there was no one else to help them navigate postsecondary education. This important comment captured the lived experience of what many other respondents referenced in their own level of preparedness of being a college student.

> *"I was wildly unprepared for most of college. I didn't know about the difficulty of classes or how to prepare for college academics, making or maintaining friendships, emotional intelligence, drinking and party culture, sex, mental health, speaking to professors, taking care of oneself, resources available to me, or anything to do with college life. My notion of college was simply that it was like high school but with adults. I was very naive and didn't understand that obstacles I could expect."*

Largely, a higher proportion of FGCS in this study come from a lower social class background that influenced their abilities to access the appropriate resources needed to be college ready. Roughly 61% or 14 out of the 23 FGCS who responded to the follow-up survey were from a lower social class. Expectedly, based on the cultural and social capital theories, the lack of higher education knowledge FGCS inherited from their parents serves as one of the barriers to why these students enter college underprepared. This included thinking outside their comfort zone to finagle the resources they thought they needed.

"I did academic programs in order to get better prepared academically, mentally, and emotionally. Although I was restricted by money so I looked for free programs."

"I also worked a job so I could financially prepare for college, since I would be purchasing my dorm items on my own. Mentally I made sure to prepare to be far from home. I spent a lot of quality time with family and friends, but also spent time alone so I could get used to not being near them all the time."

"I reached out to other First Gen people who would be attending Scripps with me and formed relationships with them before coming to school. I also tried to enjoy summer to the fullest before coming to college because I knew that no matter what I did to prepare for college, none of it would really apply."

Many FGCS built their community based on their family, peers, and schools; hence, this creates an interdependence with these people. For those first-generation students who are on their own before they even go to college may exhibit more autonomous or independent behaviors can still face other obstacles, such as being removed from the emotional support and familial community they have at home. This one FGCS responded with her experience being separated from her family that was reflective of her struggles in preparing to become a college student one day by stating,

"My high school was 2-hour train ride away from home, so I decided in high school to live by myself in the city instead of the dorm. It is that experience I learned about living [by] myself, to do my own laundry, to cook for myself...I think the compared to the academic difficulty, the difficulty in life is way harder to overcome for me. Even though I did have some level of independence prepared

before college, that was not enough. Being in a complete environment and without

the guidance of my close loved ones, college was tough at first."

The next section summarizes FGCS feedback about the obstacles they faced at Scripps College and reflections about how the College helped them to adjust or not during their first college year. This section addresses the Environment component in the I-E-O model, whereby the respondents share their actual college experience post matriculation.

Environment: Obstacles and Adjustments

Obstacles. The identified themes from FGCS responses in the follow-up survey described what obstacles they faced during their first college year and the outcomes based on the associated theme is displayed in Table 13. Students faced a range of obstacles during their first year in college that included issues related to their ability to adapt to the social class differences between themselves, their peers, and the environment. They faced issues of loneliness and sense of belonging because the institution and the environment they were in (e.g., roommates, living arrangements, inside/outside classroom) was different from where they were from, which was much more diverse. An important issue of concern was their mental health/well-being complications that students had to manage on their own and feeling a lack of access to resources needed to handle their problems in a helpful way. Related to issues of wellness draws attention to the possible feelings of stigma in needing assistance that may prevent FGCS from seeking support they need because they do not want to be perceived as weak or not capable to be at this elite institution. This highlights the potential for a lack of institutional fit, which can end with a mismatch that leads to negative educational outcomes.

Both issues of cultural and social capital plagued students as they adjusted to new peers and a new setting. Several FGCS reported they felt like "imposters" complicating their ability to

develop relationships and fit in. Respondents provided their feedback sometime after their first

college year took place, so their reflection takes into account that they are recounting their

experiences, which could offer a different perspective in hindsight. Importantly, if FGCS had

already reported they were often on their own to figure college out, then they were already

behind in their ability to succeed in a postsecondary setting. The reported outcomes, according to

designated themes have been interwoven with first-generation comments that help to supplement

the reasons why these students reported the types of obstacles they faced.

Table 13

First-Generation Obstacles Matrix

Themes	Outcomes
Academic Preparedness	Respondents reported they did not feel as prepared to be a college student because they lacked a level of academic preparation but also faced "challenging academics" once they started college.
Balance and Wellness	Finding an academic and social balance between the pressure of performing well at school and fitting in was an obstacle many respondents mentioned. Respondents indicated a need to manage the feelings of being "overwhelmed." First-generation students stated mental health issues as an important obstacle they faced during their first year. These issues were related to eating disorders, needing therapy, and facing "chronic illnesses." The various challenges of living on their own, interacting with people different from themselves, and the academic adjustment were all issues that many FGCS respondents highlighted facing during their first college year.
College Social Life	Fitting into the college scene was not an easy transition for FGCS. Making friends and connecting with the faculty and the college did not come as easily for first-generation students. Issues with roommates and adjusting to the college setting were also factors of acclimating into the social life of the college.
Environment	FGCS felt a culture shock, lack of diversity, and being "surrounded by people who were clearly a part of the elite" made it hard to connect socially with others and the college itself. Respondents noticed the disparity of students of color that was far less than what they were used to and pointed out how noticeable other's socioeconomic status was compared to their own. A few respondents stated they had "feelings of imposter syndrome" because they did not feel as prepared as other students and how "different and more privileged backgrounds" those students were from themselves.
Feeling Alone	An obstacle FGCS faced that was a highlighted issue was the feeling of "loneliness and homesickness." Related to adjusting to their academics, social setting, roommates, and just trying to fit in and meet new people added feelings of isolation. Several students noted they lacked a sense of belonging due to the alone feelings they experienced during their first year in college.
Relationships with Others	FGCS respondents perceived other students were so different from them it made it hard to establish and build relationships that they found themselves sometimes even "eating alone in dining halls [and] asking for help." Another issue related to developing relationships was they felt their "peers had assumptions" about them making it difficult to make friends. A respondent noted that they weren't "sure at all how to make connections/networks with professors" stating they "felt very alone."

Note: This matrix table is based on the Lived Experience Follow-Up Survey, which asked first-generation students "Reflecting on your first year at Scripps, what **obstacles** did you face during your first year in college?" All themes are sorted in alpha order.

Students were also asked to reflect on how Scripps College helped them adjust or not during their first year, those results are displayed in Table 14.

Adjustments. Furthermore, FGCS were asked to describe how Scripps College helped or did not help them adjust during their first year. Table 14 provides the summary findings organized by identified theme through the coding and categorization of responses with summarized outcomes of each designated theme for reported adjustments respondents felt the College did or did not help them with. What seemed to be the most helpful for respondents in adjusting to their first year at Scripps was the amount of different programming offered to incoming students, especially the first-generation programming that helped them meet new people and seek out resources. Peers and professors were equally casted as an influence in helping respondents adjust, based on the feedback that these two groups were people they interacted with regularly and were quite supportive. Although there was positive feedback about different programs offered by the College and the people at Scripps were helpful, there were other respondents who reported Scripps did not help them adjust. For example, a few comments by survey respondents highlighted below stated,

> *"Scripps did not really do much to aid me. It was really up to me to go to certain events, but a lot of times I would have to choose between activities that I wanted to go to or go to work."*
> *"Scripps was pretty horrible at integrating anyone who is not white or wealthy."*
> *"Deans and professors are not well trained in being sensitive or how to approach students in distress. It's disheartening when we reach out to these people and they don't know what to do or what resources to point us to."*

One respondent articulated the sentiment that captured The Cultural Capital Theory (Bourdieu, 2009) and the Development Ecology Theory (Bronfenbrenner, 1979, 1993, & 2005) connects the Input and Environment components of Astin's I-E-O model that supports the Cultural Mismatch Theory that a student does not feel their environment are complimentary to their own background, then there is an incongruency of fitting in for individuals in that environment that is more negative than positive.

> *"I dont personally feel Scripps did anything to not help me adjust, its just more about the issue if lack of cultural and socioeconomic diversity at this institution that creeps into the poor, first-gen student's experience at Scripps."*

Table 14

First-Generation College Adjustment Matrix

Themes	Outcomes
Environment	There was a clear divide on how the College did and did not help first-generation student respondents adjust. A respondent stated, "I think Scripps did very well in terms of helping me adjust to my first college year," while another respondent felt completely opposite by saying, "There was no support system." Poignantly, a respondent stated, "I dont personally feel Scripps did anything to not help me adjust, its just more the issue if lack of cultural and socioeconomic diversity at this institution that creeps into the poor, first-gen student's experience at Scripps." Importantly, it was the desire to have greater access to more support services that many respondents mentioned.
Faculty/Staff	Certain professors and college staff were noted as being very involved in helping these FGCS respondents adapt to their college environment by "making them feel valid and comfortable on campus." Alternatively, there were feelings of inadequate support and training of how faculty and staff were able to support FGCS to be part of an inclusive environment.
Financial Support	Mentions of financial assistance was not as adequate or sustainable related to both the actual financial aid package as well as the "lack of transparency about how [the] financial aid packet worked, which caused stress and confusion." Another issue was the weight of having to carry debt such as high loans that first-generation students accepted to pay for tuition. Ultimately, finances influenced these respondents ability to adjust because they were anxious about this on top of how to fit in.
Peers	A respondent put it simply as "I just became friends with people who made it easier." Several respondents pointed out that having a mentor was critical in their adjustment period during that first year.
Special Programming and Participating in Clubs/Organizations	The different types of programming offered by the college supported FGCS' adjustment during their first college year. One respondent said, "The first generation meetings were also incredibly helpful. Otherwise, I didn't feel a lot of support from the college." The First-Generation programming was credited by another respondent in their ability to "connect to other students who shared [their] similar experiences." Other programming mentioned was the first-year orientation that exposed them to a variety of resources, tutoring that was made available, and having mentors all supported first-generation students ability to adjust to their college setting. Some respondents specifically mentioned certain clubs/organizations that supported their adjustment during their first year in college such as, "The Café con Leche club helped with my transition." and "At SCORE, I have also found my second home." Although, not all respondents felt the clubs/organizations that were meant to help diverse students like first-generation students actually accomplished the task of helping them assimilate successfully into the college.
Self-Adjustment	Some respondents stated the College was supportive or helpful leaving them to self-acclimate into their setting. For instance, a FGCS responded with a comment of "A lot of my peers and professors do not know I am a first-gen, so most of my experience is to overcome the lack of confidence in my academic ability."

Notes: This matrix table is based on the Lived Experience Follow-Up Survey, which asked first-generation students "Reflecting on your first year at Scripps, how did Scripps **help or not help** you adjust into your first college year? All themes are sorted in alpha order. Café con Leche is an organization with an open forum for the discussion of social, political and economic issues that affect women, particularly those of Latina descent. SCORE represents the Scripps Communities of Resources and Empowerment department whose mission focuses on building a community of people dedicated to enhancing and supporting inclusion and equity accessible to Scripps students.

Respondents were asked to also reflect on how their peers supported their academic and social involvement in the Lived Experience Follow-Up Survey. These results are reported in the following section and address the <u>Output</u> component in the I-E-O model that summarizes how the outcomes of the respondents' peer-to-peer academic and social interactions supported them in their first year of college. Specifically, the themes and outcomes of peer-to-peer academic and social involvement are reported in Tables 15 and 16, respectively.

Output: Peer-to-Peer Academic and Social Involvement

       Academic Involvement. FGCS were asked in the follow-up survey how their peers supported their academic involvement in course projects or assignments during their first year at Scripps. Peer-to-peer involvement in academic activities varied. Table 15 reports the identified themes and outcomes of how FGCS described how they were involved with their peers in academic related activities. However, respondents reported that when they interacted with their peers, they primarily supported them in homework, studying, and exam preparations. This supports some of the quantitative findings albeit not significant, whereby FGCS engaged in peer-to-peer interactions related to preparing for exams and working on class projects. Respondents also commented that if they established a personal relationship with their peers, then their peer interactions became more emotionally or psychologically supportive in managing the issues of being a first-year student. This finding flushes out the reported quantitative findings of lower levels of involvement in socializing and relaxing with one's peers, but the reason may have been due to any social interactions were focused on seeking out support in how to maintain self-care and well-being rather than a more casual encounter. Overall, first-generation respondents indicated they felt they were academically supported by their peers who they thought of as their "community" with one respondent noting,

"My college peers were everything. They were the MAIN reason why I was able

to get through it. I would collaborate with my closest friends in those classes we

shared to study and do homework together."

However, some respondents reported they felt a backlash because they were not able to connect with peers, especially if they were science majors. Consequently, respondents also mentioned circumstances of their peers not being helpful in getting them involved, which created more stress in trying to have a relationship with them and caused complications that inflicted them with pain that they preferred not to engage with their peers. A respondent stated,

"...my classmates were not approachable. I also felt incapable and unintelligent

around my classmates because they were more outspoken in class, so I was

always intimidated to ask them questions."

While other respondents felt there was little to no support, and even one respondent expressing a more negative experience with her peers by stating,

"I am often undermined and my intelligence is often questioned due to my

appearance as a brown woman."

In kind, feedback from first-generation respondents regarding peer-to-peer involvement in academic activities focused on the type of support offered or withheld by their peers reported in Table 15. This table reports the themes that links the outcomes based on FGCS feedback on their peer-to-peer interactions on academically related activities while FGCS feedback on peer-to-peer social involvement is reported in Table 16.

Table 15

First-Generation Peer-to-Peer Academic Involvement Matrix

Themes	Outcomes
Academic	Respondents clearly relied on their peers to assist in coursework assignments, homework, and studying. Some first-generation students had their peers "proofread essays and explain the course reading if there is any confusion" as well as "reminded each other of events that we had to attend and assignments that were due." Respondents also remarked on how supportive their college peers were about their academic needs by either pitching in to help them stay up cramming for a final, go with them to events they had to attend for their course, or offer help in areas they "needed to improve on" to enhance their success. Alternatively, there were other FGCS who felt belittled or that "everything was stupid competitive," which left "terrible" feelings that led to their "poor academic performance." One first-generation student highlighted that they were "often overlooked during group work," and that peers "were also not nice." Whereby another respondent found their peers to be "more distracting than helpful...they would not reciprocate." College peers were either all in to help each other academically or did not engage in being academically supportive towards their peers due to feelings of competition and inadequacy of how their peers perceived them.
Confidence	Most respondents had mentioned how their college peers stepped in to "advocate" on their behalf, which turned out to help them feel more reassured about doing their assignments and "boosted [their] confidence academically." Consequently, responses also spanned from not feeling capable or "unintelligent around classmates…intimidated to ask the questions," while other first-generation respondents felt "undermined and undervalued because I am a brown woman, therefore I have to often prove myself more the other [white/male] classmates."
Emotional	A constant theme of psychological well-being came from respondents remarks about how their college peers were very emotionally supportive. One first-generation student noted that when they were feeling overwhelmed their "friends were very supportive and helped by planning meals, bringing food when I wasn't feeling well, studying together, encouraging each other to find tutoring or help, offering to go with me to an event/meeting that is anxiety provoking (even if they're just outside the door), reminding each other to do things through texts or phone calls." This same respondent also wrote their peers "were there when I felt helpless and they really stick up for me." Another first-generation student stated, "they are the strongest support I have in Scripps."
Helpful	College peers appeared to serve as a "community" for one another. A respondent highlighted "my college peers were everything. They were the MAIN reason why I was able to get through it. I would collaborate with my closest friends in thoses classes we shared to study and do homework together." In contrast, a few comments about concerns related to coursework competition that had students "comparing themselves to one another" turned some first-generation students off and resulted in them not wanting to engage because it was not helpful to their own academic performance.
Social	College peers were described as people who "were a good [social] break" from the demands they experienced inside and outside the classroom. Partying and drinking interrupted academic performance and depending on the peers the first-generation student surrounded themselves with, influenced how heavily involved they became in the college social scene that moved them further away from their academics.
Stressors	Some respondents reported peers could often be "not welcoming," "distracting," "lots of drama," "dismissive," "cliquey behavior," or even hurtful towards each other that it was not worth being involved with them.

Note: This matrix table is based on the Lived Experience Follow-Up Survey, which asked first-generation students "Reflecting on your first year at Scripps, how did your college peers (e.g., roommates, classmates, friends) **support or not support** your **academic involvement** in course projects or assignments?" All themes are sorted in alpha order.

Social Involvement. FGCS also reported the types of social involvement they had with their peers in campus clubs/organizations, joining a sport, making time to relax, or socialize with friends. Moroz (2002) reported that one's peer can be a significant positive influence on their peer's social involvement but context and who the peer is matters. FGCS respondents in the follow-up survey had reported their peers helped them engage socially but also served as a "stressor" that had some FGCS disengaging due to feeling overwhelmed. The spectrum of responses covered a gamete of peer-to-peer involvement from the ability to build a community that was truly supportive of helping them become involved across social activities or simply partaking in helping the student manage their own self-care to the inability to connect meaningfully with peers. Some comments that reported positive peer-to-peer involvement included:

> *"My college peers definitely helped facilitate my social involvement when I first started college because I was less afraid to try new things when I was with my friends, this effect became stronger in my 2nd and 3rd years as I became closer to my friends."*
>
> *"I looked forward to seeing my friends and talking with them. It was always fun and good for my emotional well being."*
>
> *"My friends often invited me to socialize and go out with them."*

Consequently, when peers were not supportive of social involvement, one of the reasons was how some of their peers purposefully excluded them. FGCS noted that peers were also more of a distraction of either being too social or not social enough causing ultimately a lack of support to become more involved. Some feedback FGCS provided about their peer-to-peer involvement revealed the following:

"I kept to myself a lot."

"Not at all. I became depressed."

"Being exclusive by trying to talk about shared experiences that I couldn't relate to."

Table 16 reports the summary findings of FGCS responses about how their peer-to-peer interactions on socially related activities culminated into themes and corresponding outcomes.

Table 16

First-Generation Peer-to-Peer Social Involvement Matrix

Themes	Outcomes
Community	Some first-generation respondents felt they had a "super strong community" by pointing to the many different types of programming they participated in such as the First-Generation programming and the Summer Science Immersion program or specific ethnic clubs/organizations they could joined such as the Asian American Sponsor Program and the 5C Vietnamese Student Association. Alternatively, some first-generation respondents did not connect with their peers and "they did not support [them] in social involvement." Also, attending parties helped to forge new friendships while also being "encouraged to go to campus events and socialize."
Engaged	College peers encouraged each other to relax and hangout, "to socialize and go out with them," even would have them "sometimes come knock on [their] door and invite [them] to the living room to watch movies and cook together." Another FGCS stated "my college peers definitely facilitated my social involvement" and proceeds to highlight "this effect became stronger in my 2nd and 3rd years as I became close to my friends."
Self-Care/ Wellness	Well-being was an important point these first-generation respondents highlighted. Peers promoted "emotional well-being" although one first-generation student did not feel supported and stated they were "depressed." A few nods about mental health care such as "taking care for myself" or "encouraged to take time to rest and treat myself after long days or weeks."
Socially Disengaged	Respondents also felt overwhelmed by the amount of social activities their peers wanted them to engage in, which had the opposite affect on their level of involvement. Alternatively, respondents commented that their peers steered them away from being engaged. One FGCS pointed out they were engaged with their roommates but ironically their "roommates would often, but unintentionally, influence me to just to stay in my room and watch Netflix instead of going out and being social."
Time	Respondents were being asked to split up their time between engaging with their friends making it "hard to choose between them, involvement in activities, and then with classes" to needing to go to work where they "found it difficult to adjust to their [friends] schedule."

Note: This matrix table is based on the Lived Experience Follow-Up Survey, which asked first-generation students "Reflecting on your first year at Scripps, how did your college peers (e.g., roommates, classmates, friends) **support or not support** your **social involvement** in campus clubs/organizations, joining a sport, making time to relax, or socialize with friends?" All themes are sorted in alpha order.

The feedback from the Lived Experience Follow-Up Survey that FGCS who responded to either BCSSE or NSSE provided some rich context about what their level of preparedness was to

be a college student and what their first college year was like. Their feedback supplemented the findings of what they expected their peer-to-peer involvement would entail, how much they were actually involved, and the change between the beginning and of their first college year. Chapter 5 provides a discussion and interpretation broken down into two major sections by the quantitative and qualitative findings of this study. Each section will also reference the expanded I-E-O theoretical framework model (see Figure 2 in Chapter 2), which was adapted from Astin's (1984 & 1993) original I-E-O model (see figure 1 located in Chapter 2).

Chapter 5: Discussion and Interpretation

The purpose of this study was to measure whether deliberate peer-to-peer interactions had an effect on FGCS first-year persistence and college GPA. There were two goals this study intended to understand. First, was to measure the quantity of peer interactions in curricular and co-curricular activities influence on persistence and GPA. Second, to isolate which curricular and co-curricular activities did influence persistence and GPA. A two-pronged approach was used to understand how peer involvement may enhance FGCS educational outcomes. Initially, a set of analyses were performed on first-year Scripps College students who entered in the falls of 2015, 2016, and 2017 and who responded to the national student engagement surveys. The first survey was administered pre-college matriculation (BCSSE) and then again at the end of their first college year (NSSE) to determine whether peer-to-peer interactions formed while participating in deliberate curricular and co-curricular activities influenced FGCS first-year persistence and academic performance (i.e., college GPA). The Lived Experience Follow-Up Survey was administered in the summer of 2019 to the 129 FGCS who were identified as part of this study's population. A complementarity approach was applied that provided an opportunity to better understand the lived experiences of FGCS directly from their perspective. FGCS who provided

feedback in BCSSE and/or NSSE offered some insights but quantifying these students' feedback alone was not enough. Instead, by asking them to reflect on their level of preparedness, which aligns to the Social Reproduction Theory situated in the <u>Input</u> component; institutional fit, which aligns to Development Ecology Theory situated in the <u>Environment</u> component; and peer-to-peer involvement, which aligns to the Social Development Theory situated in the <u>Output</u> component that offered more in-depth meaning about their first college year experiences.

The outcomes in this section summarizes the responses of first-year students who participated in a national engagement survey that provided information about their expectations prior to their college enrollment (BCSSE), which is positioned in the <u>Input</u> component of Astin's I-E-O model. First-year students were asked again at the end of their first college year (NSSE) to provide feedback about their lived experiences in the Scripps College environment, which is the <u>Environment</u> component in Astin's model. And finally, the reported outcomes are based on the participants' longitudinally tracked responses that helped determine if there were any differences between the beginning and end of their first-year experiences (LONG), which represents the output of their first college year; <u>Output</u> is the last component in Astin's I -E-O model.

This chapter is organized by the expanded I-E-O conceptual theoretical framework model (see Figure 3 located in Chapter 2), which was adapted from Astin's simple involvement theory model (see Figure 1 located in Chapter 2). Each component of the model reviews the quantitative findings that answered this study's research question: *Does the frequency of involvement in curricular and co-curricular activities between peers contribute to first-year first-generation students' first-year persistence and college GPA?* Additionally, the qualitative findings from the Lived Experience Follow-Up Survey are also situated in each of the I-E-O model complimented with each component's associated social or student developmental theory to supplement FGCS

reflection about their first college year. This study sought to measure whether peer-to-peer involvement had any effect on first-generation students' first-year persistence and college GPA. The discussion and interpretation of the quantitative results for all the analyses performed for Groups 1, 2, and 3 and the qualitative identified themes and outcomes derived from the follow-up survey have been situated in the I-E-O model to explain this study's outcomes.

Input: Understanding First-Year Expectations through Social Reproduction

A student's pre-college habitus lends insight to their disposition. Cultural Capital Theory explains the amount of knowledge, skills, and point of view a person accumulates is derived from their social class they inherited from their parents (Bourdieu, 2009; Winkle-Wagner, 2010). Basically, their abilities and competencies were socially reproduced. This study shed some light in understanding the reported differences between FGCS and non-FGCS that are reported their level of expected peer-to-peer interactions in curricular and co-curricular activities at a private elite women's college (see Table 3). Overall, the first-generation students in Group 1 who provided responses in BCSSE about their expected level of involvement were more racially diverse, had a lower socioeconomic status, and were more academically underprepared than non-first-generation students in this study.

Cultural Capital Theory focuses on the accumulated knowledge students acquired based on their background and social characteristics, which influences what skills and competencies they are exposed to. What students enter college with, or what Astin's model referred to as the *Input* component represented FGCS cultural and social capital that helped to shape their habitus or disposition about going to college. The level of preparedness FGCS enter college with is directly tied to their accumulated capital, which is socially reproduced. FGCS were asked to provide feedback about how much their parents, siblings, high school counselors and teachers,

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and other members in their life helped prepared them to be a college student. Overall, first-generation students reported they had a lot of emotional support but not as much tangible support in preparing them to be a college student. High school teachers were somewhat helpful in sharing information about the college experience but only relatable to academic coursework and the teacher's own college experiences. Peers were also rated more favorably by first-generation respondents in helping have prepared them for college, but the relevant description of those peers' support was cathartic. Basically, they were able to talk about the difficulty in getting into college, since most of the respondents' peers referenced were also first-generation. Mostly, FGCS noted they were "on their own" to figure out how to not only get into college but what it meant to go to college.

First-generation students are designated with this status because neither parent received a college degree and were unable to acquire or amass the educational knowledge and resources needed to navigate a higher education setting. FGCS respondents indicated that they used college readiness preparatory programs, such as SAT/ACT exam preparatory workshops or pre-orientation sessions to help them academically and socially enter, acclimate, and be successful in college. FGCS responded they wanted to be prepared and make connections to fit in.

To test whether there were any significant differences in expected peer-to-peer involvement between FGCS and non-FGCS, an independent samples t-test was performed. There were some initial findings for Group 1 that showed an average difference in FGCS and non-FGCS expected level of involvement with their peers inside and outside of the classroom in their first year of college at Scripps. Specifically, FGCS on average expected to prepare for exams by discussing or working through course material with other students more often than non-FGCS. Also, FGCS on average expected to work with other students on course projects or assignments

more often than non-FGCS. Moreover, FGCS on average expected to relax and socialize less compared to non-FGCS. This may be because many first-generation students felt they were not as prepared as they could have been, hence they expected to focus on academic engagement rather than social engagement.

To expand upon the analyses that noted there were some differences in level of expectation between FGCS and non-FGCS across some academic and social activities, a multiple regression was applied that held all independent variables constant to measure whether peer-to-peer interactions for each curricular and co-curricular activity could affect FGCS' first-year persistence and college GPA (see Table 5). These analyses revealed there were no statistically significant differences in expected peer-to-peer interactions at the p-value < .05 level; therefore, no peer effects were found across any of the curricular or co-curricular activities on FGCS persistence or college GPA. Although the results of this analysis were not statistically significant it did show a negative direction in the association FGCS expected to have in peer-to-peer interactions across academic or social activities. Studies on first-generation college experiences have found FGCS studied less, were less involved with extra-curricular activities, and often had to work (Próspero & Vohra-Gupta, 2007; Fruiht & Chan, 2018). Maybe the lack of cultural and social capital FGCS possesses inhibited their ability to see the advantage of how peer-to-peer involvement could help support their educational success but these students were also operating under a deficit.

FGCS demographic and social identities in this study could reasonably be interpreted as having a background that did not socially reproduce a strong cultural capital. This implies they did not have the wherewithal and resources to know how to navigate in a college setting with their peers that could prove more beneficial to their overall educational success. FGCS parents

were unable to share knowledge about what to expect in college because they lacked the relevant experiences themselves. FGCS enter a college environment with their habitus or disposition reproduced from their parents' social class and upbringing. This does not mean one's habitus or disposition are fixed certainties (James, Busher, & Suttill, 2015). The idea that a person can engage in unfamiliar settings without all the required cultural capital and effectively transform their outlook then benefits their ability to be educationally successful is worth further inquiry.

Environment: Understanding First-Year Actual Experiences through Development Ecology

The college setting (i.e., exosystem of the educational ecosystem) is an important consideration to this study because there is an ability to capture the interactions within that environment (i.e., mesosystem) of the students (i.e., microsystem) that engaged in that context. FGCS responded in the follow-up Lived Experience survey that one of the primary obstacles they faced was that they were academically underprepared. Bronfenbrenner (2009) pointed out that to understand how students develop, then it is important to know the context they are involved in. The college setting this study takes place in may be a private elite institution that has a relatively robust set of resources geared to support students transition after they matriculate but there are still several obstacles FGCS students faced that their counterparts may not have encountered. Issues that may have occurred is that FGCS spent more time adjusting to their new environment, since they are less likely to have accumulated a lot of cultural and social capital in a higher education setting prior to their admittance. Moreover, FGCS may have also experienced a lack of fit leading to a mismatch. In either case, negative outcomes are probable, but the important issue is how does the institution help these students adapt.

The Scripps College environment these students were situated in offers a lot of resources. First-year students learn about the various support services available to them at orientation,

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which included tutoring, counseling, case management, organized social activities, and easy access to faculty and administrators to discuss any needs they may have concerns about. First-generation students are also invited to participate in a first-generation pre-orientation program that provides them an additional orientation prior to their matriculation and matches them to a first-generation peer mentor. These programs are meant to help these students establish some footing to acclimate early on their college career.

FGCS respondents were asked to describe how Scripps College helped them adjust into their new college environment. The recurring theme that helped them adjust was the different types of programming made available to them, especially the first-generation programming. On the other hand, another relevant theme first-generation respondents clearly stated was that Scripps did nothing to help them adjust. Basically, there were some first-generation students who stated the programming offered did help them adjust, while other first-generation students did not find the College's support acceptable in helping them to adjust, even with those pertinent resources available to them. Scripps developed these resources from a different set of values and norms that may not have matched the actual FGCS needs, independent versus interdependent, respectively. Alternatively, the difference may not necessarily be the amount or the type of support the College provided for students to help them adjustment but potentially the willingness of the FGCS to actually engage in the resources offered. This point was not examined in this study but would be an area worth investigating further in future research to better understand the nuances of first-generation students' adjustments. Again, this may be related to the differences among the FGCS background and the actual amount of involvement they participated in with their peers at the College.

Group 2 represented students who provided responses in NSSE about their actual level of peer-to-peer involvement in curricular and co-curricular activities. FGCS in Group 2, on average, were more racially diverse, were from a lower social class background, and were not as academically prepared as non-FGCS. Also, more than half of FGCS in this study attended a public high school and the rigor of those schools' curriculum varied. The FGCS composition may explain why respondents in the follow-up survey indicated they were not adequately as prepared for their college courses as they would have liked, which may have influenced their level of involvement with their peers and the institution.

FGCS did not interact with their peers in academic and social settings as often as their non-FGCS counterparts as reported in NSSE findings. To determine whether a real difference existed between FGCS and non-FGCS, a comparison of means test was performed and determined the only significant difference found between these two groups was the actual time spent with their peers socializing and relaxing (p-value < .05 level). Basically, FGCS seemed to relax and socialize less often with their peers compared to non-FGCS. FGCS indicated in the Lived Experience Follow-Up Survey that they found their social environment and relationships were also difficult to manage. To measure whether there were any significant effects on the actual peer-to-peer involvement across all the academic and social activities a full regression analysis was conducted on Group 2 (see Tables 7 and 8 for all results). No peer effects were found for FGCS' first-year persistence or college GPA for any of the curricular or co-curricular peer-to-peer interactions that took place during these students first college year (p-value < .05 level). There was a modest peer effect found for FGCS' college GPA outcome when the peer-to-peer interaction involved preparing for exams by discussing or working through course material with other students, but only at the p-value < .10 level (the conventional level accepted is at

the .05 level). FGCS lack of cultural and social capital may have contributed in their difficulty

balancing the academic rigors of their coursework and making time to casually hang out with

their peers. These outcomes could also be related to the disconnect or lack of fit they experienced

in their first college year.

FGCS can experience a mismatch to their college environment that is more detrimental to

their educational trajectory and overall success compared to the non-FGCS counterparts.

Bronfenbrenner's Development Ecology Theory (2009) highlights that the time spent in one's

environment can translate into one's ability to acclimate, and it also depends on whether the

population matches to that environment. FGCS are more interdependent, which means they

desire a more community-based environment, whereby they are made to feel they are supported.

Issues of loneliness and sense of belonging were also prominent in how they described their first

year at Scripps, but more importantly a recurring area of concern was their mental health/well-

being. FGCS may have perceived that Scripps College was not as supportive of their needs

because they felt the resources needed to manage their problems in a helpful way may not have

been as easily accessible or the appropriate resource was not even available to them. The

Cultural Mismatch Theory highlights that mismatch occurs when the disposition between the

institution and the student are incongruent with one another, whereby the institution has a

middle-class ethos, while the FGCS ethos is more working class (Stephens, 2010). Considering

the majority of FGCS Group 2 population came from a lower social class status, then it is not

surprising there is a potentially greater mismatch between these first-generation students and

their environment. These issues are related to cultural and social capital. FGCS were troubled

they did not belong, and some stated they were more likely to feel as though they were

"imposters," complicating their ability to develop relationships.

The analyses performed on Group 2 measured their actual peer-to-peer involvement by the end of their first college year rather than the reported amount they anticipated to be involved with their peers before entering Scripps College. This is an important distinction because within the Bronfenbrenner's Ecology Theory, the way students interface in their college environment overtime, also known as the proximal process, can explain how students develop through their interactions with one another . Although Scripps College may have afforded students the accessibility to engage in deliberate peer-to-peer interactions in different academic and social environments, this study was not able to isolate any significant contribution peers had on FGCS first-year persistence and college GPA. The effect size may fall above the p-value < .05 level but that does not discount some of the findings in this analysis that are worth further investigation. The outcomes of this study's lack of significance in peer effects may be related to what Stephens, Townsend et al (2012) indicated that students are more successful when they adopt their institutions middle social class ethos, whereby FGCS could have applied a more individualistic persona and deemed that they did not need as much peer involvement to succeed. Another area this study considered was whether the change between the expected and actual amount of peer-to-peer interactions in academic and social activities influenced FGCS educational outcomes, such as first-year persistence and college GPA.

Output: Change in Expectations and Actual Levels of Involvement through Social Development

Students will naturally change during their first college year because that environment is conducive to learning and questioning what was learned. Group 3 captured whether the change in FGCS expected and actual (LONG) peer-to-peer interactions in curricular and co-curricular activities had any effect on their first-year persistence and college GPA. Vygotsky emphasized

that social development occurs overtime in a specific setting, for example, a college environment and the more time a person spends in that setting building reciprocal relationships enhances the learning that transpires (Wong, 2001). Comparing FGCS expected amount of peer involvement to how much they actually interacted with their peers in different academic and social activities possibly offers insights into their habitus or dispositional growth.

First-year students overall reported a higher expectation to interact with their peers, but in actuality they interacted less during their first year at Scripps. To measure if there were any real differences between what first-year students expected and the actual amount of peer-to-peer interactions, an independent samples t-test was also conducted. Only one modest significant difference was found between FGCS and non-FGCS expected and actual peer-to-peer interaction; this was when they prepared for exams by discussing or working through course material with other students, although this outcome was only significant at the p-value < .10 level, which is not considered the conventional value. To further supplement the means comparison analysis, a full regression was applied holding all other predictor or independent variables constant reported in Tables 10 and 11 and showed no peer effects on FGCS first-year persistence and college GPA across all six models in any curricular or co-curricular peer-to-peer interactions. This result may explain that FGCS were still learning to navigate their environment and trying to create an educational road map to help them succeed, which drew attention away from becoming more involved.

Essentially, these findings indicate FGCS educational outcomes were generally not influenced by their peers at Scripps College. This could be due to their developmentally instigative characteristics were not as different from their non-FGCS counterparts. Patton et al (2016) described the developmentally instigative characteristics associated to Bronfenbrenner's

Ecology Theory that highlights students' development based on their willingness to integrate themselves into an unfamiliar environment, openness to the new experiences that setting offers, and ability to navigate complexities of that landscape successfully and do so because they are committed to their success. There were relatively little to no peer effects found for Groups 1, 2, or 3 in this study but there is more to understand about FGCS and the degree of their involvement than what these quantitative findings have revealed. The Lived Experience Follow-Up Survey supplemented in providing individual-specific contexts of FGCS adjustment into the college setting that the quantitative findings were unable to capture.

Depending on the institution's cultural norms it may contribute to or hinder a student's ability to fit in, especially for FGCS. Importantly, first-generation students face more difficulty adjusting in a college environment because it is unfamiliar to them; they lack educational capital. Vygotsky's Social Development Theory identifies that the amount of time you spend in any given environment with certain people does influence what you experience and your ability to navigate that setting successfully (Wong, 2001). Christensen (2010) remarked that for an individual to socially develop as Vygotsky theorized the individual had to first become involved for a developmental outcome to occur. In essence, some degree of intentional peer-to-peer interactions in a college environment is necessary to help FGCS enhance their aptitudes of being a college student, whereby these students also had to be willing engage with others in that setting. I think Vygotsky and Astin were considerate that a bi-directional reciprocal interaction had to occur to produce an influence.

In the follow-up survey, FGCS were asked how their peer-to-peer interactions helped support their academic and social involvements. FGCS peer-to-peer academic involvement activities were rooted in working on homework, assignments, and projects together or proofread

their work. Peers also served as emotional conduits that built FGCS confidence inside and outside the classroom as well as helped to balance their stressful course load by enticing "social breaks." FGCS peers filled their interdependent need to have a community. Consequently, peers also served as a "stressor" that distracted their academic studies, which some respondents found difficult to manage. Socially, peer involvement helped facilitate the community aspect of FGCS college life and helped them to engage both in formalized organizations or to simply meet and interact casually with new people. FGCS indicated one of the obstacles they faced was managing their well-being. FGCS reported that their peers were extremely supportive in advocating for self-care and wellness. However, FGCS found it difficult to balance their own self-care and wellness coupled with the demands of their academic curriculum. Furthermore, as helpful as FGCS peer groups were in enhancing students' social involvement, it was apparent that sometimes this backfired. Some respondents indicated that "cliques" could develop, and their peers became disengaged in interacting with anyone outside that group. Also, it takes a lot of time to be socially engaged and that was also disruptive to FGCS in balancing their academic workload and social life.

Time with peers meaningfully contributed in FGCS ability to acclimate into a college setting but these interactions also served as a hinderance based on survey responses. Unfortunately, FGCS will continue to face various circumstances in order to adjust as a college student because they still lacked a certain amount of information about how to navigate a college environment due to the social reproduction of limited knowledge from their parents' background, which they inherited. Astin's Involvement Theory would suggest a student's peer group could help ease the difficult transition for the gap FGCS face through deliberate contact and interactions. The desire to be socially involved in one's environment as Vygotsky claimed

generated an output for FGCS that required an ability to balance what characteristics they lacked when they entered college, had acclimated to an unfamiliar environment that they did not share the same norms and values, and potentially reshaped their perspective or habitus in order to fit in. It is important to understand the underlying context of inequitable social reproduction these FGCS inherited in order to truly understand that their acclimation into Scripps College was not as seamless as it could have been if not for lacking cultural and social capital. Chapter 6 provides a summary overview of this study with key findings, followed by the quantitative and qualitative outcomes, some additional limitations to consider, future research and recommendations, and some implications for policy and practice.

Chapter 6: Summary, Future Research, and Implications

Summary

First-generation students have disproportionate postsecondary educational outcomes compared to their non-first-generation counterparts. They are less likely to be retained and have lower degree completion rates, which may be a result of having fewer financial resources and being less academically and socially prepared to navigate a college setting (Carey, 2004; Winkle-Wagner, 2010; Fruiht & Chan, 2018). FGCS typically come from a lower social class they inherit from their parents, which limits the amount of accumulated postsecondary knowledge, skills, and experiences that can play an important role in their level of preparedness to become a college student (Bourdieu, 2009; Moschetti & Hudley, 2015). FGCS are falling short in persisting and completing their degree in higher education and it is imperative they are provided the support they need to succeed.

Studying how peer-to-peer interactions can influence educational outcomes is an important area for higher education institutions interested in promoting student success,

specifically for FGCS who are less prepared to navigate a college environment successfully. A student's first-generation status can make it difficult for students to interact with their peers and immerse themselves into their educational environment as seamlessly as their non-FGCS counterparts (Prieur & Savage, 2011; Chen, 2012). The specific context that students engage in, especially with each other, can promote or inhibit educational attainment (Bronfenbrenner, 2009). The specifications of Astin's I-E-O model (1984 & 1993), which is derived from his Involvement Theory offers a good baseline framework to explain the contribution peer interactions may have on their peer's ability to succeed. Astin's I-E-O model is a relevant framework to better understand the influence of peers.

This study measured the possible likelihood of whether first-generation college students' deliberate academic and social involvement with her peers had any influence on her ability to educationally succeed, specifically her first-year persistence and college GPA. Studying how peers influence each other, in what setting, and the amount of interactions peers have with one another, while taking into consideration that different groups do not experience college the same, especially in their first year, could promote successful educational outcomes. Since this study's population focused on first-year women at Scripps College, which is a single-sex institution immersed in a consortium setting that regularly exposes them to a coeducational experience, the results of this study are one of the first to measure peer effects in this unique setting. I expanded the I-E-O theoretical framework to include social and student developmental theories that took into consideration the disparate outcomes of a particular population, such as FGCS. This approach affords institutions the ability to capture the differences in their student population, how students engaged with their peers in their college environment, and the potential benefits in deliberate peer-to-peer involvement.

Key Findings. The quantitative findings in this study did not reveal any statistically significant peer effects on FGCS first-year persistence and academic success (i.e., college GPA) at the p-value < .05 level. The qualitative findings from responses in the Lived Experience Follow-Up Survey offered more context about Scripps' first-generation students' college experiences during their first year. The findings from this survey highlighted how underprepared FGCS felt to be a college student; for example, academic difficulty they had in adjusting to the rigors of college coursework, and lacking a sense of belonging of fitting into their social environment. Respondents indicated their peers were either very helpful in building their academic confidence or thought their peers perceived them as inadequate and created a competitive environment. Respondents also felt their peers fostered their community connectedness but at times felt disengaged because they were overwhelmed by all the social activities their peers tried to engage them in.

Quantitative Findings. The results of this study showed that on average there were some differences between FGCS and non-FGCS populations. For example, FGCS were more racially diverse, came from a lower social class, and were academically underprepared compared to non-FGCS. There were also some minimal differences between FGCS and non-FGCS level of expectations prior to starting college and actual peer-to-peer involvement during their first college year. On average, not only did FGCS have greater expectations to spend more time with their peers preparing for exams but they actually did spend more time with their peers preparing for exams compared to non-FGCS. This result was only statistically significant in the full regression model at the p-value < .10. Also, FGCS expected to work on course projects with their peers more often compared to non-FGCS, but there were no real significant differences between these groups in their actual peer-to-peer involvement. FGCS reported they did not expect to

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spend as much time socializing and relaxing compared to non-FGCS and, as expected, more

FGCS reported at the end of their first year they actually did not spend that much time

socializing or relaxing with their peers compared to non-FGCS. Although, there was a difference

on FGCS average response to this peer involvement, the results in the full regression model did

not show a statistically significant peer effect outcome on FGCS first-year persistence or college

GPA based on the time spent socializing and relaxing. The qualitative component of this study

offered further insight on first-generation students' college experiences.

      Qualitative Findings. Pragmatically, the Lived Experience Follow-Up Survey provided

more in-depth understanding about FGCS first-year experiences. The survey obtained FGCS

perspectives about their level of preparedness to be a college student, how they faced obstacles

and adjustments in their environment, and how peer-to-peer interactions shaped their first college

year. FGCS revealed they had little help preparing to be a college student and often felt like they

were on their own and had to figure it out for themselves. FGCS stated they had felt

academically underprepared to be a college student taking college level coursework; had

difficulty with time management in balancing their academic and social lives; and being able to

take care of themselves that did not expend their own wellness. FGCS regularly noted they often

combatted loneliness and grappled with a lack of sense of belonging. Essentially, first-generation

respondents indicated a desire for community, which aligned to their interdependent

characteristics but as they experienced their first college year may have needed to develop more

autonomous or independent characteristics traits in order to navigate and balance college life.

Although first-generation respondents indicated their peer-to-peer interactions were quite

positive in helping them become academically and socially involved, FGCS also noted that peer

interactions could be just as taxing on them. This made it difficult for them to balance academic

and social expectations. There are some additional limitations to consider when studying peer effects.

Limitations

Despite the limitations found in measuring peer effects, there is still an imperative need to measure peer effects as it involves other policy-making implications in an educational setting. The research on peer effects and the implications I discussed in the literature review on peer effects show there is a significant impact that peers influence one another in both academic and social settings, but these results vary and require more consideration in pinpointing how peers impact each other and in what context. The social context that individuals engage in that promote or exacerbate educational attainment lends support to Astin's Involvement Theory, whereby the degree a student engages in that environment the greater the likelihood they will have a positive educational experience. Since any environment is conducive to peer formation, then the setting is an important factor in studying peer-to-peer interactions to find where the effect resides. Scripps College has several confounding variables that may have muddied the findings on peer effects. Being a women's college situated in a consortium setting that regularly exposed students to a coeducational and cross-enrollment experience warrants a closer look in understanding how an organization is structured. Access to this unique multi-institutional setting albeit separate institutions, this study was unable to pinpoint and separate the context where the peer interactions had occurred and which peers the interactions were with.

In this study, FGCS had similar persistence rates that were not statistically significantly different compared to their non-FGCS counterparts. So, although a nonsignificant result is reported in the outcome it does not necessarily mean there is not an effect, rather there was not enough statistical power found in the analysis that could be detected (Ellis, 2015, p. 33). The

findings of this study in and of itself may not have presented significant outcomes because there was not enough statistical power on peer effects contribution on FGCS first-year persistence and academic success but there is more to consider than this insignificant finding. The relationship between student involvement and educational outcomes, such as persistence or academic performance has been found to have a correlation (Astin, 1993). Understanding the population and the context will always be an important consideration when measuring peer effects.

Another limitation of this study is potentially associated to Bronfenbrenner's Ecology Theory related to time. Understanding the peer interactions of this population over the duration of only a one-year, identified as *Microtime*, which is based on the continuity of the student persisting in their college setting from one fall term to the next fall term, may have limited our ability to actually capture more influential interactions. Instead, if we focused on *Macrotime* that accounts for the change that occurs over the duration or lifespan of students' undergraduate college career, there is a greater possibility both quantitatively and qualitatively to enhance our understanding of how peers interact and the influence those interactions actually have on educational outcomes. The results of expanding the timeframe could help to isolate consistent peer-to-peer interactions that can be used to support a first-year program that produces a significant effect on first-year persistence and college GPA. Vygotsky's Social Development Theory would support this alternative approach because it situates time spent over a lengthier period that potentially captures a more substantive influence. If we consider the importance of how peer effects are measured, then greater consideration needs to be given to the methodological approaches available in studying peer effects.

Future Research and Recommendations

The use of a postpositivist or deductive approach offers tremendous insight into measuring the influence of peer relationships, but there is difficulty in teasing apart confounding effects such as parents, teachers, schools, as well as peer background. For instance, studies that use a quasi-experiment will need to consider what predictor or independent variables (inputs) are included to explain how peers influence each other and in what context this effect occurs that may be different from the ones included in this study. This could offer a better explanation of how deliberate peer-to-peer interactions can influence their peer's educational outcomes. Most studies on peer effects are conducted using a postpositivist or quantitative approach, but very little research has been done using a constructivist or qualitative approach.

Postmodernism would suggest that society has many layers and a way to deconstruct the reality is through dismantling the language and symbols to interpret differences in people's experiences, since they engage with different lenses. Constructivist or inductive approaches can provide further understanding of peer effects by capturing when and how peer relationships have the greatest influence in academic and social behaviors, but it requires investment in the amount of time given to observe these interactions without interfering in them. This study supplemented the quantitative outcomes by applying a complementarity approach, which provides a better story of the data that helps contextualize the first-generation students' college experiences. Therefore, future research can pay closer attention to a potential hybrid known as mixed methods that may offer greater insight into the influence peers have on educational outcomes. A mixed-method approach can combine "the strengths of one method to counter the weakness of the other to corroborate a finding" (Krathwhol, 2009, p.31). Furthermore, a mixed-methods approach can complement studying peer effects because it can frame its research design to be inclusive of both

testing a hypothesis and welcoming the emergence of new hypotheses about this relationship from the quantitative and qualitative data gathered. This is new territory to consider in studying peer effects that may offer potential missing insight that both quantitative and qualitative methods cannot do separately. Another aspect to consider are the types of theories used to explain a phenomenon that is considered in the research design.

This study's theoretical framework model took into consideration how the social and student developmental theories could be nested in Astin's I-E-O model. Interestingly, when you look at the conceptual theoretical framework in Figure 3 it looks like you could construct a theoretical model on student motivation. Students had to decide to become involved regardless of whether they or their peers initiated the interaction. Students who chose to become involved in any curricular or co-curricular activities with their peers is one way to gauge how immersed they were in their environment to measure peer influence. Basically, engaging in peer-to-peer interactions is also dependent on the level of their motivation because it depends on the student in the end to decide whether to become involved. This study did not evaluate motivation directly but should be taken into consideration for future research as another approach in studying peer effects.

Implications for policy and practice

This study's two-pronged approach attempted to first evaluate peer effects using a quantitative approach and then employing a complementarity approach that captured more in-depth FGCS perspectives about their first college year lived experiences. The goal of this sequential approach was to help supplement our understanding about FGCS educational experiences quantitatively and qualitatively. The outcome of this study can serve as a preliminary model for other higher education institutions interested in measuring whether the amount and

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type of involvement between two or more students at a time can influence their educational performance. This offers a meaningful contribution in studying student success, specifically for first-generation students who are less successful in a college environment.

Although the quantitative findings from this study did not show a statistically significant peer effect, the qualitative findings from this study suggest the importance of not only considering the level of peer-to-peer interactions FGCS engaged in, but to also consider the social and developmental trajectories these students come from. That is, students have accumulated different skill sets when they enter college and may need help to navigate this unfamiliar setting before being able to fully engage with their peers. By helping to alleviate the impediments of one's limited cultural and social capital through intentional engagement, this could transform a FGCS habitus or disposition. Giving FGCS an informed perspective of how to navigate a college setting can help them to overcome their lack of preparedness to be a college student as well as manage other barriers that interfere in their success. This could also generate a more seamless adjustment into the college setting. Furthermore, educational institutions need to consider how to intentionally create more specific peer group interactions that support the formation of different peer relationships that pairs FGCS with non-FGCS, which could influence positive educational outcomes, such as persistence, academic success, and social acceptance.

Institutions should be aware only be aware that students may not have acquired the knowledge and wherewithal needed to academically succeed in a postsecondary setting, since this may negatively impact FGCS educational outcomes, such as first-year persistence and college GPA. Institutions should consider incorporating the types of programming that directly supports peer formation and identify deliberate interactions in different settings to capture how this relationship exists, which could offer further insight on how to measure peer effects. Since

students experience their educational surroundings differently based on their social upbringing, which can produce different outcomes, analyzing the different groups in the population is also crucial. For example, the policy implications of the study conducted by Liu et al. (2014) gives institutions the flexibility to focus on individual or group programming that changes the dynamic of peer interactions. Institutions should therefore align their policies, programming, and practices so the support they provide reflects the students they serve. This will help to identify whether these differences influence the type and amount of peer-to-peer interactions and the effect those interactions have on educational outcomes.

Peer groups are formed based on context, so attention to how the environment shapes students' experiences is an important component for institutions to consider in studying peer effects. Being mindful of this nuance can help to isolate *why* students choose to or choose not to become involved. Limited attention was given to the organizational structure of Scripps College, which may have played a part in shaping peer interactions that this study was not able to capture. Institutions could consider applying this preliminary model to also explain the institution's contribution in peer effects. Moreover, if an institution can recognize their context or ethos are negatively impacting students from disadvantage backgrounds, they may be able to reorganize their own behaviors to be more inclusive of diverse populations that supports their successful adjustment into their environment.

This preliminary model of studying peer-to-peer involvement using the expanded I-E-O theoretical framework model that I adapted from Astin's Involvement Theory, which incorporated social and student developmental theories can be used at any institution by simply inserting their own data. Institutions across the nation have different mission statements and goals in their educational delivery. Institutions can study their population using this expanded I-

E-O theoretical framework model and can easily insert their student population and their peer-to-peer involvement in the conceptual model to create their own roadmap of how to study peer effects in their environment. This could offer insight not only about the students they serve but about what types of interactions motivate positive or negative educational outcomes in their students' experiences. The results of their analyses could guide policies and practices to enhance their students' overall college experience, especially students who enter the college with greater disadvantages, such as first-generation students that promotes their long-term success. The use of this preliminary model for any type of higher education institution to consider how they may be able to study peer effects in their institutional setting may be more exhaustive than what is currently being conducted on their campus, which may further augment their institutional effectiveness.

Importantly, this preliminary model unwraps how to better understand the different student populations that occupy a college setting and help identify a formula of their success. The model takes into consideration who the students are when they enter the college and how important their background characteristics are to their educational trajectory. Also, this model centers around how the student develops, which can be evaluated to determine the precise activities and interactions that produce both positive and negative influences. Even more so, this model can be used in a way to evoke and prevent institutional policies and practices that best serve students, especially students who lack the types of cultural and social capital that can impede their degree completion. Lastly, this model is an important contribution to the body of work in studying peer effects because it can account for important predictors that institutional practitioners can incorporate with ease and generate results, so they can be used to drive decision-making policies and practices.

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Appendix

Subject: Re: Data Access Request for Dissertation Study at Claremont Graduate University

Date: Wednesday, March 20, 2019 at 8:41:35 AM Pacific Daylight Time

From: Charlotte Johnson

To: Junelyn Peeples

CC: Junelyn Peeples, Junelyn Peeples

Hi Junelyn,

This looks great. Is it necessary to have IRB approval from Scripps? I am fine with this. Charlotte

Get [Outlook for iOS](#)

From: Junelyn Peeples <junelyn.peeples@cgu.edu>

Sent: Wednesday, March 20, 2019 7:52 AM

To: Charlotte Johnson

Cc: Junelyn Peeples; Junelyn Peeples

Subject: Data Access Request for Dissertation Study at Claremont Graduate University

Attention:

Charlotte Johnson

Vice President for Student Affairs and Dean of Students

Scripps College

Dear Ms. Johnson,

This is a formal request to obtain access to student information and survey data to conduct my dissertation study this summer. Although I currently serve as the Director of Assessment and Institutional Research and have access to student data in that role, for the purpose of this project I will need your approval to also have access to these data files as a doctoral student at CGU for the purpose of my study. Below is some relevant information about this research study, so you understand the scope of what I am proposing to my committee.

Background: College dropout is highest in a student's first-year because they did not connect academically or socially to their environment (Tinto, 1975; Astin, 1984; Kerby, 2015). The national average first-year college retention rate is 75%, while approximately only 22% of first-generation students persist (Bentz, Radford, Lew, Dunlop Velez, & Ifill, 2011). First-generation college students are at higher risk of dropping out due to their lack of academic and social preparedness to acclimate into a college environment (Factsheet: First Generation Students). Retaining students is paramount to institutions; the key is integrating them, so they commit and engage in their environment (Heiberger & Harper, 2008). The benefits of a peer or peer group can motivate learning, development, and achievement within the college environment (Vollet, Kindermann, & Skinner, 2017). Unfortunately, various research designs used to measure peer effects found it difficult to identify how peers influence each other and in what context. It's important to identify which peer interactions promote first-year

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college students' adjustment, especially first-generation students that promote their persistence and ultimately successful educational attainment.

Purpose: The purpose of this study is to measure if first-year first-generation peer-to-peer interactions has an effect on these students' first-year persistence and academic success (i.e., first college year gpa) based on the level of interaction in curricular and co-curricular activities. Specifically, the purpose is to 1) identify the amount of student-to-student interactions in curricular and co-curricular activities that impacts persistence and 2) isolate which curricular and co-curricular activities impacts students' persistence.

Significance: This study is important because understanding how students influence their peers, especially first-generation students, is relevant to educational institutions seeking to organize or structure their environment that promotes student interactions, which can lead to student persistence.

Data Collection:

> A. Population/Sample: First-year first-time students who entered in the fall semester following completion of their high school graduation that responded to the following surveys:
> > 1. BCSSE responses pre-matriculation fall 2015, 2016, and 2017
> > 2. NSSE responses end-of-first-year spring 2016, 2017, and 2018
>
> B. Procedures: Scripps College Office of Assessment and Institutional Research (A&IR) will provide both survey and institutional data for selected participants in this study to longitudinally track each first-year entering cohort at the end of their first college year.

Protection of Human Subjects: The BCSSE and NSSE survey data administration is exempt from IRB approval due to the institution's educational use for the data collected. As the administrator who oversaw the survey administration, there was no harm to participants in this study. Additionally, participant information is already protected that complies with FERPA and HEA to ensure their privacy. These files are securely stored in Scripps College network, and access to these files are password protected.

Timeline: I am requesting approval to access the above data files starting on April 1, 2019. I am submitting my dissertation proposal on March 31, 2019 and expect to defend my proposal at the end of April or beginning of May of this year. Upon approval, I will be able to start my dissertation study. I anticipate running the analysis over the summer and writing up my findings in the fall with intention to defend my completed dissertation in early 2020.

Outcome: I will share my findings with Scripps College to help inform future policy and practice on their first-generation students, and students overall on how student-to-student interactions in deliberate curricular and co-curricular activities may support student success.

Please let me know if you have any questions or concerns. I greatly appreciate your continued support

of my doctoral study.

Sincerely,
Junelyn

Junelyn Peeples
Doctoral Student
School of Educational Studies
Claremont Graduate University
junelyn.peeples@cgu.edu
951-295-1182 (mobile)

Life shrinks or expands in proportion with one's courage. ~ Anaïs Nin ~

cation: IRB #3501 JPeeples Dissertationion: IRB #3501 JPeeples DissertationPB
, September 30, 2019 at 8:42:15 AM Pacific Daylight Time**
Subject: Exemption Notification: IRB #3501 JPeeples Dissertation
Date: Tuesday, May 21, 2019 at 11:30:43 AM Pacific Daylight Time
From: CGU IRB
To: Junelyn Peeples
Category: Important Reference

Claremont Graduate University
Institutional Review Board

Dear Junelyn,

Thank you for submitting your research protocol to the IRB at Claremont Graduate University for review. On 05/21/2019, based on the information provided for Protocol #3501, we have certified it as *exempt from IRB supervision* under CGU policy and federal regulations at 45 CFR 46.101(b)(4).

Exempt status means that so long as the study does not vary significantly from the description you have given us, further review in the form of filing annual Renewal or project Closure forms is not necessary. You may specify in relevant study documents, such as consent forms, that CGU human subjects protection staff members have reviewed the study and determined it to be exempt from IRB supervision. The IRB does not "*approve*" (or disapprove) studies that are exempt, so kindly avoid use of this verb.

Please note carefully that maintaining exempt status requires that (a) the risks of the study *remain minimal*, that is, as described in the application; (b) that *anonymity or confidentiality* of participants, *or protection* of participants against any higher level of risk due to the internal knowledge or disclosure of identity by the researcher, is maintained as described in the application; (c) that *no deception* is introduced, such as reducing the accuracy or specificity of information about the research protocol that is given to prospective participants; (d) the research *purpose*, *sponsor*, and recruited *study population* remain as described; and (e) the principal investigator (PI) continues and is not replaced.

Changes in *any such features* of the study as described may affect one or more of the conditions of exemption and would very likely warrant a reclassification of the research protocol from exempt status and require additional IRB review. If any such changes are contemplated, please notify the IRB as soon as possible and before the study is begun or changes are implemented. If any events occur during the course of research, such as unexpected adverse consequences to participants, that call into question the features that permitted a determination of exempt status, you must notify the IRB as soon as possible.

Please note that a series of suggestions may also be attached to this email. These are suggestions to develop or improve your research protocol. These suggestions are highly recommended but not required. You do not need to send anything back to the IRB.

If Applicable: Most listservs, websites, and bulletin boards have policies regulating the types of advertisements or solicitations that may be posted, including from whom prior approval must be obtained. Many institutions and even classroom instructors have policies regarding who can solicit potential research participants from among their students, employees, etc., what information must be included in solicitations, and how recruitment notices are distributed or posted. You should familiarize yourself with the policies and approval procedures required of you to recruit for or conduct your study by listservs, websites, institutions, and/or instructors. Approval or exemption by the CGU IRB does not substitute for these approvals or release you from assuring that you have gained appropriate approvals before advertising or conducting your study in such venues.

The IRB may be reached at (909) 607-9406 or via email to irb@cgu.edu. KGI personnel with questions about their exempt status should contact KGI's Office of Research and Sponsored Projects at (909) 607-

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9313 or irb@kgi.edu. The IRB wishes you well in the conduct of your research project.

Sincerely,

Andrew Conway,   James Griffith,
IRB Chair   IRB Manager
andrew.conway@cgu.edu   james.griffith2@cgu.edu

Beginning College Survey of Student Engagement

We are interested in your high school experiences and how often you expect to participate in certain activities during your first year of college. The information that you provide will help your institution improve teaching, learning and the quality of the student experience. Thanks for your help. Write or mark your answers in the boxes. Examples: ☒ or ▧

Please print your student ID number in the box below. Do not print your Social Security number.

Please write in the 5-digit ZIP code of your home during your last year of high school.

☐☐☐☐☐ (U.S. residents only.)

When are you completing this survey? (Select only one.)
- ☐ Prior to the start of fall term classes
- ☐ During the first week of fall term classes
- ☐ After the first week of fall term classes

HIGH SCHOOL EXPERIENCES

1 **Please write in the year you graduated from high school (for example, 2014):**

☐☐☐☐

2 **From which type of high school did you graduate?** (Select only one.)
- ☐ Public
- ☐ Private, religiously-affiliated
- ☐ Private, not religiously-affiliated
- ☐ Home school
- ☐ Other (e.g., G.E.D.)

3 **What were most of your high school grades?** (Select only one.)
- ☐ A   ☐ B   ☐ C
- ☐ A- ☐ B- ☐ C- or lower
- ☐ B+ ☐ C+ ☐ Grades not used

4 **To date, in which of the following math classes have you earned a grade of "C" or better?** (Select all that apply.)
- ☐ Algebra II
- ☐ Pre-Calculus/Trigonometry
- ☐ Calculus
- ☐ Probability or Statistics

5 **Did you take the SAT and/or ACT?**
☐ Yes   ☐ No

If yes, please write your scores below (as best you remember):

SAT (possible range=200-800)

Critical Reading	☐☐☐
Mathematical Reasoning	☐☐☐
Writing	☐☐☐

ACT (possible range=1-36)

Composite	☐☐

6 **During high school, how many of the following types of classes did you complete?**

Classes:	0	1-2	3-4	5-6	7-8	9-10	11 or more
a. Advanced Placement (AP) classes	☐	☐	☐	☐	☐	☐	☐
b. College or university courses for credit	☐	☐	☐	☐	☐	☐	☐

7 **During your *last year* of high school, about how many papers, reports, or other writing tasks of the following length did you complete?**

a. Up to 5 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

b. Between 6 and 10 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

c. 11 pages or more

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

8 **During your *last year* of high school, about how many hours did you spend in a typical 7-day week doing each of the following?**

a. Preparing for class (studying, reading, doing homework, etc.)

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

Hours per week

b. Working for pay

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

Hours per week

c. Participating in co-curricular activities (organizations, school publications, student government, sports, etc.)

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

Hours per week

d. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)

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

Hours per week

9 **During your *last year* of high school, of the time you spent preparing for class in a typical 7-day week, about how much was on assigned reading?**

Very little	Some	About half	Most	Almost all
☐	☐	☐	☐	☐

10 **During your *last year* of high school, about how often did you do the following?**

	Very often	Often	Some-times	Never
a. Came to class without completing readings or assignments	☐	☐	☐	☐
b. Prepared two or more drafts of a paper or assignment before turning it in	☐	☐	☐	☐
c. Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	☐	☐	☐	☐
d. Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	☐	☐	☐	☐
e. Evaluated what others have concluded from numerical information	☐	☐	☐	☐
f. Identified key information from reading assignments	☐	☐	☐	☐
g. Reviewed your notes after class	☐	☐	☐	☐
h. Summarized what you learned in class or from course materials	☐	☐	☐	☐
i. Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	☐	☐	☐	☐
j. Examined the strengths and weaknesses of your own views on a topic or issue	☐	☐	☐	☐
k. Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	☐	☐	☐	☐

11 **During your high school years, how involved were you in the following activities at your school or elsewhere?**

	Very much	Quite a bit	Some	Very little	Not at all
a. Performing or visual arts programs (band, chorus, theater, art, etc.)	☐	☐	☐	☐	☐
b. Athletic teams (varsity, JV, club sport, etc.)	☐	☐	☐	☐	☐
c. Student government	☐	☐	☐	☐	☐
d. Publications (student newspaper, yearbook, etc.)	☐	☐	☐	☐	☐
e. Academic clubs or honor societies	☐	☐	☐	☐	☐
f. Vocational clubs (business, health, technology, etc.)	☐	☐	☐	☐	☐
g. Religious youth groups	☐	☐	☐	☐	☐
h. Community service or volunteer work	☐	☐	☐	☐	☐

12 **During your *last year* of high school, to what extent did your courses challenge you to do your best work?**

Not at all ▼   Very much ▼

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

EXPECTED FIRST YEAR EXPERIENCES

13 **During the coming school year, about how many hours do you expect to spend in a typical 7-day week doing each of the following?**

a. Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)

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

Hours per week

b. Working for pay on- or off-campus

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

Hours per week

c. Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)

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

Hours per week

d. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)

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

Hours per week

14 **During the coming school year, of the time you expect to spend preparing for class in a typical 7-day week, about how many hours will be on assigned reading?**

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

Hours per week

15 **During the coming school year, about how often do you expect to do each of the following?**

	Very often	Often	Some-times	Never
a. Ask another student to help you understand course material	☐	☐	☐	☐
b. Explain course material to one or more students	☐	☐	☐	☐
c. Prepare for exams by discussing or working through course material with other students	☐	☐	☐	☐
d. Work with other students on course projects or assignments	☐	☐	☐	☐
e. Talk about career plans with a faculty member	☐	☐	☐	☐
f. Work with a faculty member on activities other than coursework (committees, student groups, etc.)	☐	☐	☐	☐

15 During the coming school year, about how often do you expect to do each of the following? (Continued)

	Very often	Often	Some-times	Never
g. Discuss your academic performance with a faculty member	☐	☐	☐	☐
h. Discuss course topics, ideas, or concepts with a faculty member outside of class	☐	☐	☐	☐
i. Prepare two or more drafts of a paper or assignment before turning it in	☐	☐	☐	☐
j. Come to class without completing readings or assignments	☐	☐	☐	☐

16 During the coming school year, about how often do you expect to have discussions with people from the following groups?

	Very often	Often	Some-times	Never
a. People of a race or ethnicity other than your own	☐	☐	☐	☐
b. People from an economic background other than your own	☐	☐	☐	☐
c. People with religious beliefs other than your own	☐	☐	☐	☐
d. People with political views other than your own	☐	☐	☐	☐

17 During the coming school year, how certain are you that you will do the following?

	Not at all certain 1	2	3	4	5	Very certain 6
a. Study when there are other interesting things to do	☐	☐	☐	☐	☐	☐
b. Find additional information for course assignments when you don't understand the material	☐	☐	☐	☐	☐	☐
c. Participate regularly in course discussions, even when you don't feel like it	☐	☐	☐	☐	☐	☐
d. Ask instructors for help when you struggle with course assignments	☐	☐	☐	☐	☐	☐
e. Finish something you have started when you encounter challenges	☐	☐	☐	☐	☐	☐
f. Stay positive, even when you do poorly on a test or assignment	☐	☐	☐	☐	☐	☐

18 During the coming school year, how difficult do you expect the following to be?

	Not at all difficult 1	2	3	4	5	Very difficult 6
a. Learning course material	☐	☐	☐	☐	☐	☐
b. Managing your time	☐	☐	☐	☐	☐	☐

18 During the coming school year, how difficult do you expect the following to be? (Continued)

	Not at all difficult 1	2	3	4	5	Very difficult 6
c. Paying college expenses	☐	☐	☐	☐	☐	☐
d. Getting help with school work	☐	☐	☐	☐	☐	☐
e. Making new friends	☐	☐	☐	☐	☐	☐
f. Interacting with faculty	☐	☐	☐	☐	☐	☐

19 During the coming school year, about how many papers, reports, or other writing tasks of the following length do you expect to complete?

a. Up to 5 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

b. Between 6 and 10 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

c. 11 pages or more

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

20 How prepared are you to do the following in your academic work at this institution?

	Not at all prepared 1	2	3	4	5	Very prepared 6
a. Write clearly and effectively	☐	☐	☐	☐	☐	☐
b. Speak clearly and effectively	☐	☐	☐	☐	☐	☐
c. Think critically and analytically	☐	☐	☐	☐	☐	☐
d. Analyze numerical and statistical information	☐	☐	☐	☐	☐	☐
e. Work effectively with others	☐	☐	☐	☐	☐	☐
f. Use computing and information technology	☐	☐	☐	☐	☐	☐
g. Learn effectively on your own	☐	☐	☐	☐	☐	☐

21 How many courses are you taking for credit this fall term?

0	1	2	3	4	5	6	7 or more	Uncertain
☐	☐	☐	☐	☐	☐	☐	☐	☐

Of these courses, how many are entirely online?

0	1	2	3	4	5	6	7 or more	Uncertain
☐	☐	☐	☐	☐	☐	☐	☐	☐

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22 How important is it to you that your institution provide each of the following?

	Not important 1	2	3	4	5	Very important 6
a. A challenging academic experience	☐	☐	☐	☐	☐	☐
b. Support to help students succeed academically	☐	☐	☐	☐	☐	☐
c. Opportunities to interact with students from different backgrounds (social, racial/ethnic, religious, etc.)	☐	☐	☐	☐	☐	☐
d. Help managing your non-academic responsibilities (work, family, etc.)	☐	☐	☐	☐	☐	☐
e. Opportunities to be involved socially	☐	☐	☐	☐	☐	☐
f. Opportunities to attend campus activities and events	☐	☐	☐	☐	☐	☐
g. Learning support services (tutoring services, writing center, etc.)	☐	☐	☐	☐	☐	☐

23 Which of the following sources are you using to pay your education expenses (tuition, fees, books, room & board, etc.)?

	Using	Not using	Not sure
a. Support from parents or relatives	☐	☐	☐
b. Loans	☐	☐	☐
c. Grants or scholarships	☐	☐	☐
d. Job or personal savings	☐	☐	☐
e. Other	☐	☐	☐

24 What do you expect most of your grades will be during the coming year? (Select only one.)

☐ A ☐ B ☐ C
☐ A- ☐ B- ☐ C- or lower
☐ B+ ☐ C+ ☐ Grades not used

25 Do you expect to graduate from this institution?

☐ Yes ☐ No ☐ Uncertain

26 Do you know what your major will be?

☐ No
☐ Yes, specify: _____

27 Are you (or will you be) a full-time student this fall term?

☐ Yes ☐ No

28 How many of your close friends will attend this institution during the coming year?

☐ None ☐ 1 ☐ 2 ☐ 3 ☐ 4 or more

29 This institution was your:

☐ 1st choice ☐ 2nd choice ☐ 3rd choice
☐ 4th choice ☐ 5th choice or lower

30 What is your gender identity?

☐ Man ☐ Woman ☐ I prefer not to respond
☐ Another gender identity, please specify:

_____

31 Are you an international student or foreign national?

☐ Yes ☐ No

32 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

33 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.)

34 In driving time, about how far is this institution from the home where you lived during your last year of high school?

☐ Less than 1 hour ☐ At least 4, less than 6 hours
☐ At least 1, less than 2 hours ☐ At least 6, less than 8 hours
☐ At least 2, less than 4 hours ☐ 8 hours or more

35 Which of the following best describes where you will be (or are) living during the coming school year?

☐ Dormitory or other campus housing
☐ Residence (house, apartment, etc.) within walking distance to campus
☐ Residence (house, apartment, etc.) farther than walking distance to campus
☐ None of the above

36 Enter your first two initials and last name:

F. I.	M. I.	Last Name

THANKS FOR SHARING YOUR RESPONSES!

Beginning College Survey of Student Engagement

We are interested in your high school experiences and how often you expect to participate in certain activities during your first year of college. The information that you provide will help your institution improve teaching, learning and the quality of the student experience. Thanks for your help. Write or mark your answers in the boxes. Examples: ☒ or ◩

Please print your student ID number in the box below. Do not print your Social Security number.

Please write in the 5-digit ZIP code of your home during your last year of high school.

☐☐☐☐☐ (U.S. residents only.)

When are you completing this survey? (Select only one.)
- ☐ Prior to the start of fall term classes
- ☐ During the first week of fall term classes
- ☐ After the first week of fall term classes

HIGH SCHOOL EXPERIENCES

1 Please write in the year you graduated from high school (for example, 2016):

☐☐☐☐

2 From which type of high school did you graduate?
(Select only one.)
- ☐ Public
- ☐ Private, religiously-affiliated
- ☐ Private, not religiously-affiliated
- ☐ Home school
- ☐ Other (e.g., G.E.D.)

3 What were most of your high school grades?
(Select only one.)
- ☐ A
- ☐ A-
- ☐ B+
- ☐ B
- ☐ B-
- ☐ C+
- ☐ C
- ☐ C- or lower
- ☐ Grades not used

4 To date, in which of the following math classes have you earned a grade of "C" or better?
(Select all that apply.)
- ☐ Algebra II
- ☐ Pre-Calculus/Trigonometry
- ☐ Calculus
- ☐ Probability or Statistics

5 Did you take the SAT and/or ACT?
- ☐ Yes
- ☐ No

If yes, please write your scores below (as best you remember):

SAT (possible range=200-800)

Critical Reading	☐☐☐	
Mathematical Reasoning	☐☐☐	
Writing	☐☐☐	

ACT (possible range=1-36)

Composite ☐☐

6 During high school, how many of the following types of classes did you complete?

Classes:	0	1-2	3-4	5-6	7-8	9-10	11 or more
a. Advanced Placement (AP) classes	☐	☐	☐	☐	☐	☐	☐
b. College or university courses for credit	☐	☐	☐	☐	☐	☐	☐

7 During your *last year* of high school, about how many papers, reports, or other writing tasks of the following length did you complete?

a. Up to 5 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

b. Between 6 and 10 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

c. 11 pages or more

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

8 During your *last year* of high school, about how many hours did you spend in a typical 7-day week doing each of the following?

a. Preparing for class (studying, reading, doing homework, etc.)

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

Hours per week

b. Working for pay

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

Hours per week

c. Participating in co-curricular activities (organizations, school publications, student government, sports, etc.)

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

Hours per week

d. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)

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

Hours per week

9 During your *last year* of high school, of the time you spent preparing for class in a typical 7-day week, about how much was on assigned reading?

Very little	Some	About half	Most	Almost all
☐	☐	☐	☐	☐

10 During your *last year* of high school, about how often did you do the following?

	Very often ▼	Often ▼	Some- times ▼	Never ▼
a. Came to class without completing readings or assignments	☐	☐	☐	☐
b. Prepared two or more drafts of a paper or assignment before turning it in	☐	☐	☐	☐
c. Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	☐	☐	☐	☐
d. Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	☐	☐	☐	☐
e. Evaluated what others have concluded from numerical information	☐	☐	☐	☐
f. Identified key information from reading assignments	☐	☐	☐	☐
g. Reviewed your notes after class	☐	☐	☐	☐
h. Summarized what you learned in class or from course materials	☐	☐	☐	☐
i. Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	☐	☐	☐	☐
j. Examined the strengths and weaknesses of your own views on a topic or issue	☐	☐	☐	☐
k. Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	☐	☐	☐	☐

11 During your high school years, how involved were you in the following activities at your school or elsewhere?

	Very much ▼	Quite a bit ▼	Some ▼	Very little ▼	Not at all ▼
a. Performing or visual arts programs (band, chorus, theater, art, etc.)	☐	☐	☐	☐	☐
b. Athletic teams (varsity, JV, club sport, etc.)	☐	☐	☐	☐	☐
c. Student government	☐	☐	☐	☐	☐
d. Publications (student newspaper, yearbook, etc.)	☐	☐	☐	☐	☐
e. Academic clubs or honor societies	☐	☐	☐	☐	☐
f. Vocational clubs (business, health, technology, etc.)	☐	☐	☐	☐	☐
g. Religious youth groups	☐	☐	☐	☐	☐
h. Community service or volunteer work	☐	☐	☐	☐	☐

12 During your *last year* of high school, to what extent did your courses challenge you to do your best work?

Not at all ▼   Very much ▼

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

EXPECTED FIRST YEAR EXPERIENCES

13 During the coming school year, about how many hours do you expect to spend in a typical 7-day week doing each of the following?

a. Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)

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

Hours per week

b. Working for pay on- or off-campus

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

Hours per week

c. Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)

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

Hours per week

d. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)

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

Hours per week

14 During the coming school year, of the time you expect to spend preparing for class in a typical 7-day week, about how many hours will be on assigned reading?

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

Hours per week

15 During the coming school year, about how often do you expect to do each of the following?

	Very often ▼	Often ▼	Some- times ▼	Never ▼
a. Ask another student to help you understand course material	☐	☐	☐	☐
b. Explain course material to one or more students	☐	☐	☐	☐
c. Prepare for exams by discussing or working through course material with other students	☐	☐	☐	☐
d. Work with other students on course projects or assignments	☐	☐	☐	☐
e. Talk about career plans with a faculty member	☐	☐	☐	☐
f. Work with a faculty member on activities other than coursework (committees, student groups, etc.)	☐	☐	☐	☐

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15 During the coming school year, about how often do you expect to do each of the following? (Continued)

	Very often	Often	Some-times	Never
g. Discuss your academic performance with a faculty member	☐	☐	☐	☐
h. Discuss course topics, ideas, or concepts with a faculty member outside of class	☐	☐	☐	☐
i. Prepare two or more drafts of a paper or assignment before turning it in	☐	☐	☐	☐
j. Come to class without completing readings or assignments	☐	☐	☐	☐

16 During the coming school year, about how often do you expect to have discussions with people from the following groups?

	Very often	Often	Some-times	Never
a. People of a race or ethnicity other than your own	☐	☐	☐	☐
b. People from an economic back-ground other than your own	☐	☐	☐	☐
c. People with religious beliefs other than your own	☐	☐	☐	☐
d. People with political views other than your own	☐	☐	☐	☐

17 During the coming school year, how certain are you that you will do the following?

	Not at all certain 1	2	3	4	5	Very certain 6
a. Study when there are other interesting things to do	☐	☐	☐	☐	☐	☐
b. Find additional information for course assignments when you don't understand the material	☐	☐	☐	☐	☐	☐
c. Participate regularly in course discussions, even when you don't feel like it	☐	☐	☐	☐	☐	☐
d. Ask instructors for help when you struggle with course assignments	☐	☐	☐	☐	☐	☐
e. Finish something you have started when you encounter challenges	☐	☐	☐	☐	☐	☐
f. Stay positive, even when you do poorly on a test or assignment	☐	☐	☐	☐	☐	☐

18 During the coming school year, how difficult do you expect the following to be?

	Not at all difficult 1	2	3	4	5	Very difficult 6
a. Learning course material	☐	☐	☐	☐	☐	☐
b. Managing your time	☐	☐	☐	☐	☐	☐

18 During the coming school year, how difficult do you expect the following to be? (Continued)

	Not at all difficult 1	2	3	4	5	Very difficult 6
c. Paying college expenses	☐	☐	☐	☐	☐	☐
d. Getting help with school work	☐	☐	☐	☐	☐	☐
e. Making new friends	☐	☐	☐	☐	☐	☐
f. Interacting with faculty	☐	☐	☐	☐	☐	☐

19 During the coming school year, about how many papers, reports, or other writing tasks of the following length do you expect to complete?

a. Up to 5 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

b. Between 6 and 10 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

c. 11 pages or more

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers, etc.
☐	☐	☐	☐	☐	☐	☐

20 How prepared are you to do the following in your academic work at this institution?

	Not at all prepared 1	2	3	4	5	Very prepared 6
a. Write clearly and effectively	☐	☐	☐	☐	☐	☐
b. Speak clearly and effectively	☐	☐	☐	☐	☐	☐
c. Think critically and analytically	☐	☐	☐	☐	☐	☐
d. Analyze numerical and statistical information	☐	☐	☐	☐	☐	☐
e. Work effectively with others	☐	☐	☐	☐	☐	☐
f. Use computing and information technology	☐	☐	☐	☐	☐	☐
g. Learn effectively on your own	☐	☐	☐	☐	☐	☐

21 How many courses are you taking for credit this fall term?

0	1	2	3	4	5	6	7 or more	Uncertain
☐	☐	☐	☐	☐	☐	☐	☐	☐

Of these courses, how many are entirely online?

0	1	2	3	4	5	6	7 or more	Uncertain
☐	☐	☐	☐	☐	☐	☐	☐	☐

22 How important is it to you that your institution provide each of the following?

	Not important 1	2	3	4	5	Very important 6
a. A challenging academic experience	☐	☐	☐	☐	☐	☐
b. Support to help students succeed academically	☐	☐	☐	☐	☐	☐
c. Opportunities to interact with students from different backgrounds (social, racial/ethnic, religious, etc.)	☐	☐	☐	☐	☐	☐
d. Help managing your non-academic responsibilities (work, family, etc.)	☐	☐	☐	☐	☐	☐
e. Opportunities to be involved socially	☐	☐	☐	☐	☐	☐
f. Opportunities to attend campus activities and events	☐	☐	☐	☐	☐	☐
g. Learning support services (tutoring services, writing center, etc.)	☐	☐	☐	☐	☐	☐

23 Which of the following sources are you using to pay your education expenses (tuition, fees, books, room & board, etc.)?

	Using	Not using	Not sure
a. Support from parents or relatives	☐	☐	☐
b. Loans	☐	☐	☐
c. Grants or scholarships	☐	☐	☐
d. Job or personal savings	☐	☐	☐
e. Other	☐	☐	☐

24 What do you expect most of your grades will be during the coming year? (Select only one.)

☐ A　　☐ B　　☐ C
☐ A-　　☐ B-　　☐ C- or lower
☐ B+　　☐ C+　　☐ Grades not used

25 Do you expect to graduate from this institution?

☐ Yes　　☐ No　　☐ Uncertain

26 Do you know what your major will be?

☐ No
☐ Yes, specify: _____

27 Are you (or will you be) a full-time student this fall term?

☐ Yes　　☐ No

28 How many of your close friends will attend this institution during the coming year?

☐ None　　☐ 1　　☐ 2　　☐ 3　　☐ 4 or more

29 This institution was your:

☐ 1st choice　　☐ 2nd choice　　☐ 3rd choice
☐ 4th choice　　☐ 5th choice or lower

30 What is your gender identity?

☐ Man　　☐ Woman　　☐ I prefer not to respond
☐ Another gender identity, please specify:

_____

31 Are you an international student or foreign national?

☐ Yes　　☐ No

32 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

33 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.)

34 In driving time, about how far is this institution from the home where you lived during your last year of high school?

☐ Less than 1 hour　　☐ At least 4, less than 6 hours
☐ At least 1, less than 2 hours　　☐ At least 6, less than 8 hours
☐ At least 2, less than 4 hours　　☐ 8 hours or more

35 Which of the following best describes where you will be (or are) living during the coming school year?

☐ Dormitory or other campus housing
☐ Residence (house, apartment, etc.) within walking distance to campus
☐ Residence (house, apartment, etc.) farther than walking distance to campus
☐ None of the above

36 Enter your first two initials and last name:

☐ ☐ _____
F. I.　M. I.　Last Name

THANKS FOR SHARING YOUR RESPONSES!

Beginning College Survey of Student Engagement

We are interested in your high school experiences and how often you expect to participate in certain activities during your first year of college. The information that you provide will help your institution improve teaching, learning and the quality of the student experience. Thanks for your help. Write or mark your answers in the boxes. Examples: ☒ or ◧

Please print your student ID number in the box below. Do _not_ print your Social Security number.

Please write in the 5-digit ZIP code of your home during your last year of high school.

(U.S. residents only.)

HIGH SCHOOL EXPERIENCES

1 Please write in the year you graduated from high school (for example, 2017):

2 From which type of high school did you graduate? (Select only one.)

- ☐ Public
- ☐ Private, religiously-affiliated
- ☐ Private, not religiously-affiliated
- ☐ Home school
- ☐ Other (GED, etc.)

3 What were most of your high school grades? (Select only one.)

- ☐ A+
- ☐ B+
- ☐ C+
- ☐ Grades not used
- ☐ A
- ☐ B
- ☐ C
- ☐ A-
- ☐ B-
- ☐ C- or lower

4 To date, in which of the following math classes have you earned a grade of "C" or better? (Select all that apply.)

- ☐ Algebra II
- ☐ Pre-Calculus/Trigonometry
- ☐ Calculus
- ☐ Probability or Statistics

5 If you completed the SAT and/or ACT, enter your scores below (as best you remember):

SAT (possible range=200-800)

Reading & Writing

Math

ACT (possible range=1-36)

Composite

➤ Are these SAT scores from March 2016 or later?

☐ Yes   ☐ No

6 During high school, how many of the following types of classes did you complete?

Classes:	0	1-2	3-4	5-6	7-8	9-10	11 or more
a. Advanced Placement (AP)	☐	☐	☐	☐	☐	☐	☐
b. College or university courses for credit	☐	☐	☐	☐	☐	☐	☐
c. International Baccalaureate (IB)	☐	☐	☐	☐	☐	☐	☐

7 During your _last year_ of high school, about how many papers, reports, or other writing tasks of the following lengths did you complete?

a. Up to 5 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20
☐	☐	☐	☐	☐	☐	☐

b. Between 6 and 10 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20
☐	☐	☐	☐	☐	☐	☐

c. 11 pages or more

None	1-2	3-5	6-10	11-15	16-20	More than 20
☐	☐	☐	☐	☐	☐	☐

8 During your _last year_ of high school, about how many hours did you spend in a typical 7-day week doing the following?

a. Preparing for class (studying, reading, doing homework, etc.)

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

Hours per week

b. Working for pay

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

Hours per week

c. Participating in co-curricular activities (organizations, school publications, student government, sports, etc.)

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

Hours per week

d. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)

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

Hours per week

9 During your _last year_ of high school, of the time you spent preparing for class in a typical 7-day week, about how much was on assigned reading?

Very little	Some	About half	Most	Almost all
☐	☐	☐	☐	☐

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10 During your *last year* of high school, about how often did you do the following?

	Very often	Often	Some-times	Never
a. Came to class without completing readings or assignments	☐	☐	☐	☐
b. Prepared two or more drafts of a paper or assignment before turning it in	☐	☐	☐	☐
c. Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	☐	☐	☐	☐
d. Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	☐	☐	☐	☐
e. Evaluated what others have concluded from numerical information	☐	☐	☐	☐
f. Identified key information from reading assignments	☐	☐	☐	☐
g. Reviewed your notes after class	☐	☐	☐	☐
h. Summarized what you learned in class or from course materials	☐	☐	☐	☐
i. Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	☐	☐	☐	☐
j. Examined the strengths and weaknesses of your own views on a topic or issue	☐	☐	☐	☐
k. Tried to better understand someone else's views by imagining how an issue looks from their perspective	☐	☐	☐	☐

11 During your high school years, how involved were you in the following activities at your school or elsewhere?

	Very much	Quite a bit	Some	Very little	Not at all
a. Performing or visual arts programs (band, chorus, theater, art, etc.)	☐	☐	☐	☐	☐
b. Athletic teams (varsity, JV, club sport, etc.)	☐	☐	☐	☐	☐
c. Student government	☐	☐	☐	☐	☐
d. Publications (student newspaper, yearbook, etc.)	☐	☐	☐	☐	☐
e. Academic clubs or honor societies	☐	☐	☐	☐	☐
f. Vocational clubs (business, health, technology, etc.)	☐	☐	☐	☐	☐
g. Religious youth groups	☐	☐	☐	☐	☐
h. Community service or volunteer work	☐	☐	☐	☐	☐

12 During your *last year* of high school, to what extent did your courses challenge you to do your best work?

Not at all ▼ ... Very much ▼

1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

EXPECTED FIRST YEAR EXPERIENCES

13 During the coming school year, about how many hours do you expect to spend in a typical 7-day week doing the following?

a. Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)

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

Hours per week

b. Working for pay on- or off-campus

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

Hours per week

c. Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)

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

Hours per week

d. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)

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

Hours per week

14 During the coming school year, of the time you expect to spend preparing for class in a typical 7-day week, about how much will be on assigned reading?

Very little	Some	About half	Most	Almost all
☐	☐	☐	☐	☐

15 During the coming school year, about how often do you expect to do the following?

	Very often	Often	Some-times	Never
a. Ask another student to help you understand course material	☐	☐	☐	☐
b. Explain course material to one or more students	☐	☐	☐	☐
c. Prepare for exams by discussing or working through course material with other students	☐	☐	☐	☐
d. Work with other students on course projects or assignments	☐	☐	☐	☐

166

15 During the coming school year, about how often do you expect to do each of the following? (Continued)

	Very often	Often	Some-times	Never
e. Talk about career plans with a faculty member	☐	☐	☐	☐
f. Work with a faculty member on activities other than coursework (committees, student groups, etc.)	☐	☐	☐	☐
g. Discuss your academic performance with a faculty member	☐	☐	☐	☐
h. Discuss course topics, ideas, or concepts with a faculty member outside of class	☐	☐	☐	☐
i. Prepare two or more drafts of a paper or assignment before turning it in	☐	☐	☐	☐
j. Come to class without completing readings or assignments	☐	☐	☐	☐

16 During the coming school year, about how often do you expect to have discussions with people from the following groups?

	Very often	Often	Some-times	Never
a. People of a race or ethnicity other than your own	☐	☐	☐	☐
b. People from an economic back-ground other than your own	☐	☐	☐	☐
c. People with religious beliefs other than your own	☐	☐	☐	☐
d. People with political views other than your own	☐	☐	☐	☐

17 During the coming school year, how certain are you that you will do the following?

	Not at all certain 1	2	3	4	5	Very certain 6
a. Study when there are other interesting things to do	☐	☐	☐	☐	☐	☐
b. Find additional information for course assignments when you don't understand the material	☐	☐	☐	☐	☐	☐
c. Participate regularly in course discussions, even when you don't feel like it	☐	☐	☐	☐	☐	☐
d. Ask instructors for help when you struggle with course assignments	☐	☐	☐	☐	☐	☐
e. Finish something you have started when you encounter challenges	☐	☐	☐	☐	☐	☐
f. Stay positive, even when you do poorly on a test or assignment	☐	☐	☐	☐	☐	☐

18 During the coming school year, how difficult do you expect the following to be?

	Not at all difficult 1	2	3	4	5	Very difficult 6
a. Learning course material	☐	☐	☐	☐	☐	☐
b. Managing your time	☐	☐	☐	☐	☐	☐
c. Paying college or university expenses	☐	☐	☐	☐	☐	☐
d. Getting help with school work	☐	☐	☐	☐	☐	☐
e. Making new friends	☐	☐	☐	☐	☐	☐
f. Interacting with faculty	☐	☐	☐	☐	☐	☐

19 During the coming school year, about how often do you expect to seek help with coursework from the following sources?

	Very often	Often	Some-times	Never
a. Faculty members	☐	☐	☐	☐
b. Academic advisors	☐	☐	☐	☐
c. Learning support services (tutoring, writing center, success coaching, etc.)	☐	☐	☐	☐
d. Friends or other students	☐	☐	☐	☐
e. Family members	☐	☐	☐	☐
f. Other persons or offices	☐	☐	☐	☐

20 How prepared are you to do the following in your academic work at this institution?

	Not at all prepared 1	2	3	4	5	Very prepared 6
a. Write clearly and effectively	☐	☐	☐	☐	☐	☐
b. Speak clearly and effectively	☐	☐	☐	☐	☐	☐
c. Think critically and analytically	☐	☐	☐	☐	☐	☐
d. Analyze numerical and statistical information	☐	☐	☐	☐	☐	☐
e. Work effectively with others	☐	☐	☐	☐	☐	☐
f. Use computing and information technology	☐	☐	☐	☐	☐	☐
g. Learn effectively on your own	☐	☐	☐	☐	☐	☐

21 How important is it to you that your institution provides the following?

	Not important 1	2	3	4	5	Very important 6
a. A challenging academic experience	☐	☐	☐	☐	☐	☐
b. Support to help students succeed academically	☐	☐	☐	☐	☐	☐
c. Opportunities to interact with students from different backgrounds (social, racial/ethnic, religious, etc.)	☐	☐	☐	☐	☐	☐
d. Help managing your non-academic responsibilities (work, family, etc.)	☐	☐	☐	☐	☐	☐
e. Opportunities to be involved socially	☐	☐	☐	☐	☐	☐
f. Opportunities to attend campus activities and events	☐	☐	☐	☐	☐	☐
g. Learning support services (tutoring, writing center, success coaching, etc.)	☐	☐	☐	☐	☐	☐

22 Which of the following sources are you using to pay for your education expenses (tuition, fees, books, room & board, etc.)? For each, tell us if you are using, not using, or not sure.

	Using	Not using	Not sure
a. Support from parents or relatives	☐	☐	☐
b. Loans	☐	☐	☐
c. Grants or scholarships	☐	☐	☐
d. Employment on or off campus	☐	☐	☐
e. Personal savings or other sources	☐	☐	☐

23 What do you expect most of your grades will be during the coming year? (Select only one.)

☐ A+   ☐ B+   ☐ C+   ☐ Grades not used
☐ A   ☐ B   ☐ C
☐ A-   ☐ B-   ☐ C- or lower

24 Do you expect to graduate from this institution?

☐ Yes   ☐ No   ☐ Uncertain

25 Do you know what your major will be?

☐ No
☐ Yes, specify: _____

26 Are you (or will you be) a full-time student this fall term?

☐ Yes   ☐ No

27 How many of your close friends will attend this institution during the coming year?

☐ None   ☐ 1   ☐ 2   ☐ 3   ☐ 4 or more

28 This institution was your:

☐ First choice   ☐ Second choice   ☐ Third choice or lower

29 What is your gender identity?

☐ Man   ☐ Woman   ☐ Another gender identity
☐ I prefer not to respond

30 Are you an international student or foreign national?

☐ Yes   ☐ No

31 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

32 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.)

33 Which of the following best describes where you will live (or are living) during the coming school year?

☐ Residence hall, dormitory or other campus housing
☐ Residence (house, apartment, etc.) within walking distance to campus
☐ Residence (house, apartment, etc.) farther than walking distance to campus
☐ None of the above

34 Enter your name below:

Given / First Name _____

Family / Last Name _____

THANKS FOR SHARING YOUR RESPONSES!

SERIAL #

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	◎	◎	◎	◎
Given a course presentation	◎	◎	◎	◎
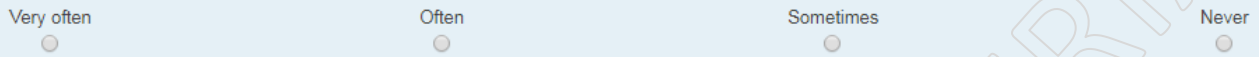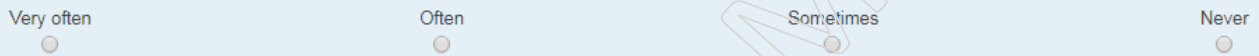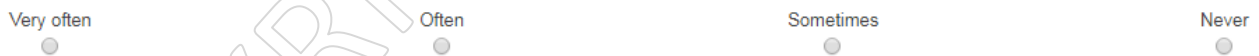
During the current school year, about how often have you done the following?
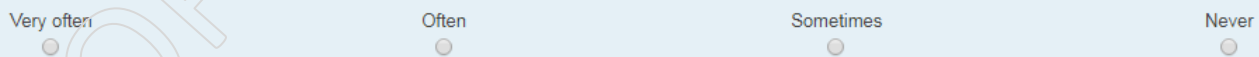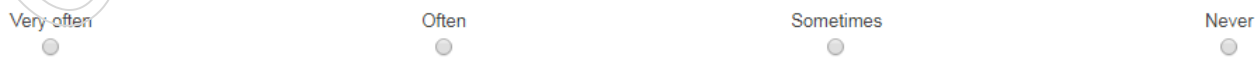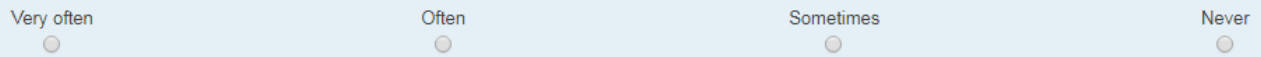
	Very often	Often	Sometimes	Never
Combined ideas from different courses when completing assignments	◎	◎	◎	◎
Connected your learning to societal problems or issues	◎	◎	◎	◎
Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	◎	◎	◎	◎
Examined 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	◎	◎	◎	◎
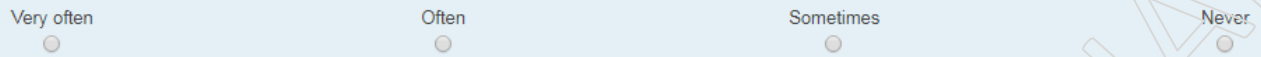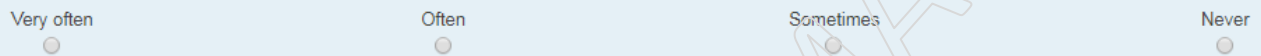
Screen 1 of 5

During the current school year, about how often have you done the following?
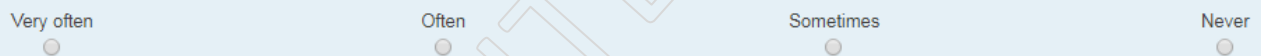
	Very often	Often	Sometimes	Never
Talked about career plans with a faculty member	○	○	○	○
Worked with a faculty member on activities other than coursework (committees, student groups, etc.)	○	○	○	○
Discussed course topics, ideas, or concepts with a faculty member outside of class	○	○	○	○
Discussed your academic performance with a faculty member	○	○	○	○
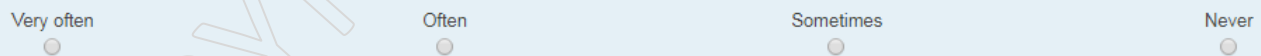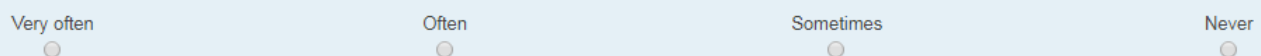
During the current school year, how much has your coursework emphasized the following?

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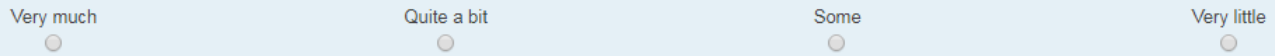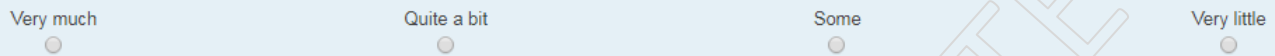
During the current school year, to what extent have your instructors done the following?

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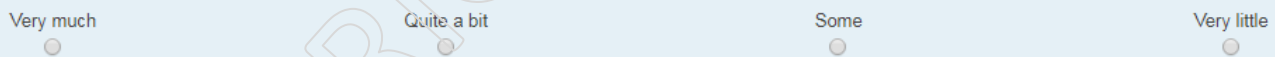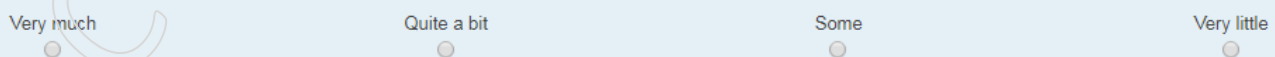
During the current school year, about how often have you done the following?

	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

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Screen 1 of 5 (continued)

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THE COLLEGE STUDENT REPORT

26% Complete

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

	None	1-2	3-5	6-10	11-15	16-20	More than 20 papers
Up to 5 pages	○	○	○	○	○	○	○
Between 6 and 10 pages	○	○	○	○	○	○	○
11 pages or more	○	○	○	○	○	○	○
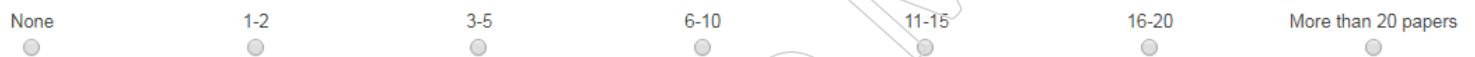
During the current school year, about how often have you had discussions with people from the following groups?

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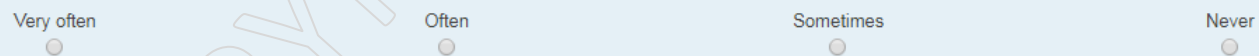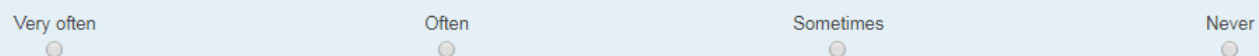
During the current school year, about how often have you done the following?

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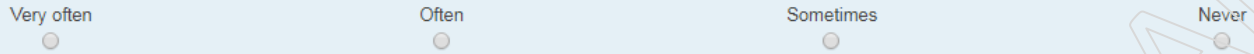
During the current school year, to what extent have your courses challenged you to do your best work?

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

Screen 2 of 5

Which of the following have you done or do you plan to do before you graduate?
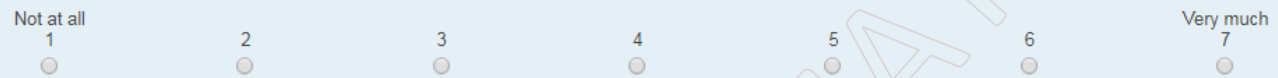
	Done or in progress	Plan to do	Do not plan to do	Have not decided
Participate in an internship, co-op, field experience, student teaching, or clinical placement	○	○	○	○
Hold a formal leadership role in a student organization or group	○	○	○	○
Participate in a learning community or some other formal program 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.)	○	○	○	○
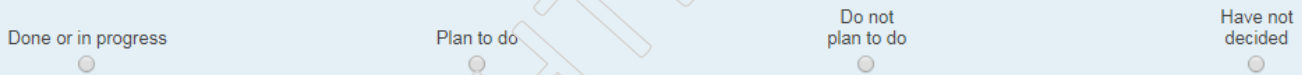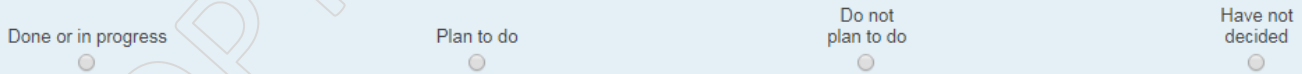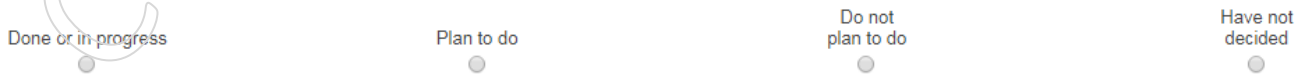
About how many of your courses at this institution have included a community-based project (service-learning)?

○ All
○ Most
○ Some
○ None
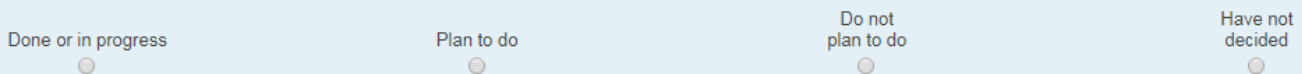
Indicate the quality of your interactions with the following people at your institution.
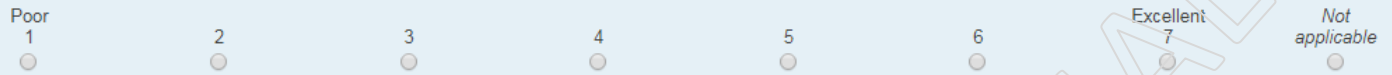
	Poor 1	2	3	4	5	6	Excellent 7	Not applicable
Students	○	○	○	○	○	○	○	○
Academic advisors	○	○	○	○	○	○	○	○
Faculty	○	○	○	○	○	○	○	○
Student services staff (career services, student activities, housing, etc.)	○	○	○	○	○	○	○	○
Other administrative staff and offices (registrar, financial aid, etc.)	○	○	○	○	○	○	○	○
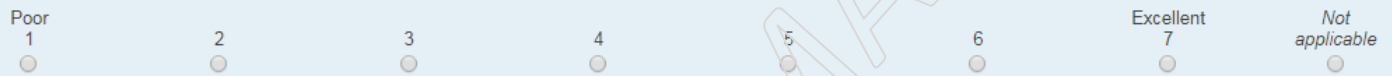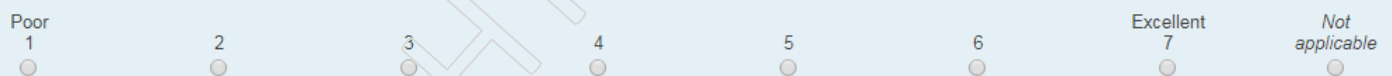
Continue

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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	○	○	○	○
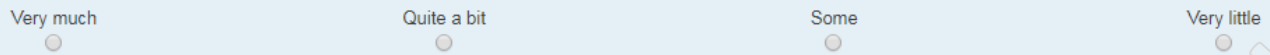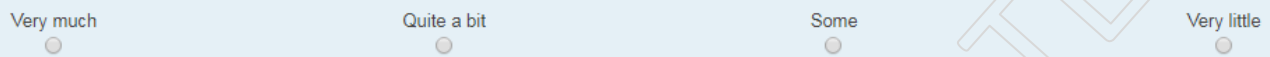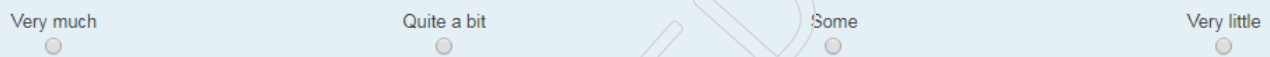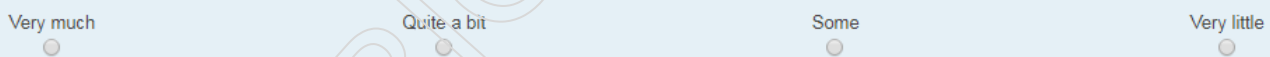
About how many hours do you spend in a typical 7-day week doing the following?
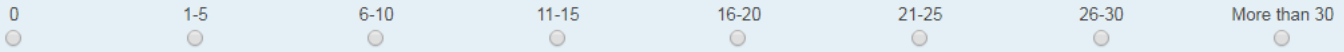
	Hours per week							
	0	1-5	6-10	11-15	16-20	21-25	26-30	More than 30
Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)	○	○	○	○	○	○	○	○
Participating in co-curricular activities (organizations, campus publications, 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.)	○	○	○	○	○	○	○	○
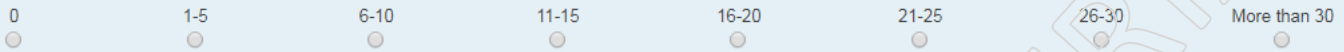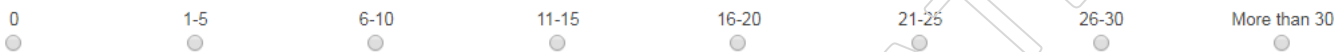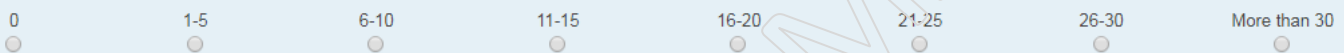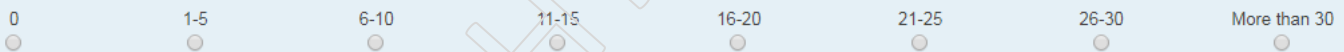
Of the time you spend preparing for class in a typical 7-day week, about how much is on *assigned reading*?

○ Very little
○ Some
○ About half
○ Most
○ Almost all

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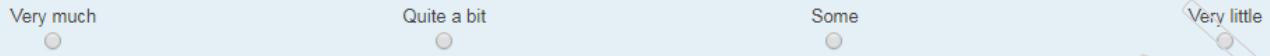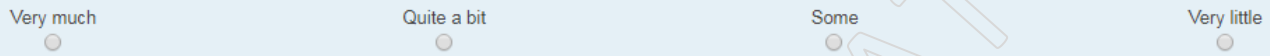
How would you evaluate your entire educational experience at this institution?

○ 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

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

○ One
○ More than one

Continue

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Screen 3 of 5 (continued)

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THE COLLEGE STUDENT REPORT

70% Complete

<u>Why do we ask about your personal background?</u>

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

Screen 4 of 5

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/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 identity?

- ○ Man
- ○ Woman
- ○ Another gender identity, please specify: [   ]
- ○ I prefer not to respond

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

[   ]

Are you an international student?

- ◉ Yes
- ○ No

What is your country of citizenship? [--- ▾]

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 has 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?   [Question administered per institution request.]

○ Heterosexual

○ Gay

○ Lesbian

○ Bisexual

○ Another sexual orientation, please specify: [   ]

○ Questioning or unsure

○ I prefer not to respond

[**Continue**]

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NSSE national survey of student engagement
THE COLLEGE STUDENT REPORT

If you have any additional comments or feedback that you'd like to share on the quality of your educational experience, please type them below. (5,000 character limit)

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Contact Us   Frequently Asked Questions

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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

0% Complete

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

Asked questions or contributed to course discussions in other ways

Very often	Often	Sometimes	Never
○	○	○	○

Prepared two or more drafts of a paper or assignment before turning it in

Very often	Often	Sometimes	Never
○	○	○	○

Come to class without completing readings or assignments

Very often	Often	Sometimes	Never
○	○	○	○

Attended an art exhibit, play, or other arts performance (dance, music, etc.)

Very often	Often	Sometimes	Never
○	○	○	○

Asked another student to help you understand course material

Very often	Often	Sometimes	Never
○	○	○	○

Explained course material to one or more students

Very often	Often	Sometimes	Never
○	○	○	○

Prepared for exams by discussing or working through course material with other students

Very often	Often	Sometimes	Never
○	○	○	○

Worked with other students on course projects or assignments

Very often	Often	Sometimes	Never
○	○	○	○

Given a course presentation

Very often	Often	Sometimes	Never
○	○	○	○

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Combined ideas from different courses when completing assignments

Very often　　　　　　　Often　　　　　　　　Sometimes　　　　　　　Never
〇　　　　　　　　　　〇　　　　　　　　　　〇　　　　　　　　　　〇

Connected your learning to societal problems or issues

Very often　　　　　　　Often　　　　　　　　Sometimes　　　　　　　Never
〇　　　　　　　　　　〇　　　　　　　　　　〇　　　　　　　　　　〇

Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments

Very often　　　　　　　Often　　　　　　　　Sometimes　　　　　　　Never
〇　　　　　　　　　　〇　　　　　　　　　　〇　　　　　　　　　　〇

Examined the strengths and weaknesses of your own views on a topic or issue

Very often　　　　　　　Often　　　　　　　　Sometimes　　　　　　　Never
〇　　　　　　　　　　〇　　　　　　　　　　〇　　　　　　　　　　〇

Tried to better understand someone else's views by imagining how an issue looks from their perspective

Very often　　　　　　　Often　　　　　　　　Sometimes　　　　　　　Never
〇　　　　　　　　　　〇　　　　　　　　　　〇　　　　　　　　　　〇

Learned something that changed the way you understand an issue or concept

Very often　　　　　　　Often　　　　　　　　Sometimes　　　　　　　Never
〇　　　　　　　　　　〇　　　　　　　　　　〇　　　　　　　　　　〇

Connected ideas from your courses to your prior experiences and knowledge

Very often　　　　　　　Often　　　　　　　　Sometimes　　　　　　　Never
〇　　　　　　　　　　〇　　　　　　　　　　〇　　　　　　　　　　〇

Talked about career plans with a faculty member

Very often　　　　　　　Often　　　　　　　　Sometimes　　　　　　　Never
〇　　　　　　　　　　〇　　　　　　　　　　〇　　　　　　　　　　〇

Worked with a faculty member on activities other than coursework (committees, student groups, etc.)

Very often　　　　　　　Often　　　　　　　　Sometimes　　　　　　　Never
〇　　　　　　　　　　〇　　　　　　　　　　〇　　　　　　　　　　〇

Discussed course topics, ideas, or concepts with a faculty member outside of class

Very often　　　　　　　Often　　　　　　　　Sometimes　　　　　　　Never
〇　　　　　　　　　　〇　　　　　　　　　　〇　　　　　　　　　　〇

Discussed your academic performance with a faculty member

Very often　　　　　　　Often　　　　　　　　Sometimes　　　　　　　Never
〇　　　　　　　　　　〇　　　　　　　　　　〇　　　　　　　　　　〇

Screen 1 of 5 (continued)

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

Memorizing course material

Very much	Quite a bit	Some	Very little
○	○	○	○

Applying facts, theories, or methods to practical problems or new situations

Very much	Quite a bit	Some	Very little
○	○	○	○

Analyzing an idea, experience, or line of reasoning in depth by examining its parts

Very much	Quite a bit	Some	Very little
○	○	○	○

Evaluating a point of view, decision, or information source

Very much	Quite a bit	Some	Very little
○	○	○	○

Forming a new idea or understanding from various pieces of information

Very much	Quite a bit	Some	Very little
○	○	○	○

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

Clearly explained course goals and requirements

Very much	Quite a bit	Some	Very little
○	○	○	○

Taught course sessions in an organized way

Very much	Quite a bit	Some	Very little
○	○	○	○

Used examples or illustrations to explain difficult points

Very much	Quite a bit	Some	Very little
○	○	○	○

Provided feedback on a draft or work in progress

Very much	Quite a bit	Some	Very little
○	○	○	○

Provided prompt and detailed feedback on tests or completed assignments

Very much	Quite a bit	Some	Very little
○	○	○	○

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

Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)

Very often	Often	Sometimes	Never
○	○	○	○

Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)

Very often	Often	Sometimes	Never
○	○	○	○

Evaluated what others have concluded from numerical information

Very often	Often	Sometimes	Never
○	○	○	○

Continue

26% Complete

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

Up to 5 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers
○	○	○	○	○	○	○

Between 6 and 10 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers
○	○	○	○	○	○	○

11 pages or more

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers
○	○	○	○	○	○	○

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

People of a race or ethnicity other than your own

Very often	Often	Sometimes	Never
○	○	○	○

People from an economic background other than your own

Very often	Often	Sometimes	Never
○	○	○	○

People with religious beliefs other than your own

Very often	Often	Sometimes	Never
○	○	○	○

People with political views other than your own

Very often	Often	Sometimes	Never
○	○	○	○

184

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

Identified key information from reading assignments

Very often   Often   Sometimes   Never

Reviewed your notes after class

Very often   Often   Sometimes   Never

Summarized what you learned in class or from course materials

Very often   Often   Sometimes   Never

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

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

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

Participate in an internship, co-op, field experience, student teaching, or clinical placement

Done or in progress   Plan to do   Do not plan to do   Have not decided

Hold a formal leadership role in a student organization or group

Done or in progress   Plan to do   Do not plan to do   Have not decided

Participate in a learning community or some other formal program where groups of students take two or more classes together

Done or in progress   Plan to do   Do not plan to do   Have not decided

Participate in a study abroad program

Done or in progress   Plan to do   Do not plan to do   Have not decided

Work with a faculty member on a research project

Done or in progress   Plan to do   Do not plan to do   Have not decided

Complete a culminating senior experience (capstone course, senior project or thesis, comprehensive exam, portfolio, etc.)

Done or in progress   Plan to do   Do not plan to do   Have not decided

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

- All
- Most
- Some
- None

185

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

Students

Poor 1	2	3	4	5	6	Excellent 7	Not applicable
○	○	○	○	○	○	○	○

Academic advisors

Poor 1	2	3	4	5	6	Excellent 7	Not applicable
○	○	○	○	○	○	○	○

Faculty

Poor 1	2	3	4	5	6	Excellent 7	Not applicable
○	○	○	○	○	○	○	○

Student services staff (career services, student activities, housing, etc.)

Poor 1	2	3	4	5	6	Excellent 7	Not applicable
○	○	○	○	○	○	○	○

Other administrative staff and offices (registrar, financial aid, etc.)

Poor 1	2	3	4	5	6	Excellent 7	Not applicable
○	○	○	○	○	○	○	○

Continue

46% Complete

How much does your institution emphasize the following?

Spending significant amounts of time studying and on academic work

Very much	Quite a bit	Some	Very little
○	○	○	○

Providing support to help students succeed academically

Very much	Quite a bit	Some	Very little
○	○	○	○

Using learning support services (tutoring services, writing center, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Encouraging contact among students from different backgrounds (social, racial/ethnic, religious, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Providing opportunities to be involved socially

Very much	Quite a bit	Some	Very little
○	○	○	○

Providing support for your overall well-being (recreation, health care, counseling, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Helping you manage your non-academic responsibilities (work, family, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Attending campus activities and events (performing arts, athletic events, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Attending events that address important social, economic, or political issues

Very much	Quite a bit	Some	Very little
○	○	○	○

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

Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)

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

Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)

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

Working for pay *on campus*

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

Working for pay *off campus*

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

Doing community service or volunteer work

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

Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)

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

Providing care for dependents (children, parents, etc.)

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

Commuting to campus (driving, walking, etc.)

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

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

○ Very little
○ Some
○ About half
○ Most
○ Almost all

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

Writing clearly and effectively

Very much	Quite a bit	Some	Very little
○	○	○	○

Speaking clearly and effectively

Very much	Quite a bit	Some	Very little
○	○	○	○

Thinking critically and analytically

Very much	Quite a bit	Some	Very little
○	○	○	○

Analyzing numerical and statistical information

Very much	Quite a bit	Some	Very little
○	○	○	○

Acquiring job- or work-related knowledge and skills

Very much	Quite a bit	Some	Very little
○	○	○	○

Working effectively with others

Very much	Quite a bit	Some	Very little
○	○	○	○

Developing or clarifying a personal code of values and ethics

Very much	Quite a bit	Some	Very little
○	○	○	○

Screen 3 of 5 (continued)

Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Solving complex real-world problems

Very much	Quite a bit	Some	Very little
○	○	○	○

Being an informed and active citizen

Very much	Quite a bit	Some	Very little
○	○	○	○

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

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

○ One
○ More than one

[   ]

Continue

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

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

191

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 identity?

- ○ Man
- ○ Woman
- ○ Another gender identity, please specify:
- ○ I prefer not to respond

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

Are you an international student?

- ⦿ Yes
- ○ No

What is your country of citizenship? [--- ▾]

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?

○ Residence hall, 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 has 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?

○ Straight (heterosexual)
○ Bisexual
○ Gay
○ Lesbian
○ Queer
○ Questioning or unsure
○ Another sexual orientation, please specify:

○ I prefer not to respond

Continue

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Prompt for Additional Comments (Institutions select one of four questions for the end of the NSSE questionnaire.)

If you have any additional comments or feedback that you'd like to share on the quality of your educational experience, please enter them below. (5,000 character limit)

Continue

194

What has been most satisfying about your experience so far at this institution, and what has been most disappointing? (5,000 character limit)

[text area]

Continue

Please describe the most significant learning experience you have had so far at this institution. (5,000 character limit)

Continue

196

What one change would you most like to see implemented that would improve the educational experience at this institution, and what one thing should not be changed? (5,000 character limit)

[text box]

Continue

197

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

Asked questions or contributed to course discussions in other ways

Very often	Often	Sometimes	Never
○	○	○	○

Prepared two or more drafts of a paper or assignment before turning it in

Very often	Often	Sometimes	Never
○	○	○	○

Come to class without completing readings or assignments

Very often	Often	Sometimes	Never
○	○	○	○

Attended an art exhibit, play, or other arts performance (dance, music, etc.)

Very often	Often	Sometimes	Never
○	○	○	○

Asked another student to help you understand course material

Very often	Often	Sometimes	Never
○	○	○	○

Explained course material to one or more students

Very often	Often	Sometimes	Never
○	○	○	○

Prepared for exams by discussing or working through course material with other students

Very often	Often	Sometimes	Never
○	○	○	○

Worked with other students on course projects or assignments

Very often	Often	Sometimes	Never
○	○	○	○

Given a course presentation

Very often	Often	Sometimes	Never
○	○	○	○

198

Combined ideas from different courses when completing assignments

Very often	Often	Sometimes	Never
○	○	○	○

Connected your learning to societal problems or issues

Very often	Often	Sometimes	Never
○	○	○	○

Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments

Very often	Often	Sometimes	Never
○	○	○	○

Examined the strengths and weaknesses of your own views on a topic or issue

Very often	Often	Sometimes	Never
○	○	○	○

Tried to better understand someone else's views by imagining how an issue looks from their perspective

Very often	Often	Sometimes	Never
○	○	○	○

Learned something that changed the way you understand an issue or concept

Very often	Often	Sometimes	Never
○	○	○	○

Connected ideas from your courses to your prior experiences and knowledge

Very often	Often	Sometimes	Never
○	○	○	○

Talked about career plans with a faculty member

Very often	Often	Sometimes	Never
○	○	○	○

Worked with a faculty member on activities other than coursework (committees, student groups, etc.)

Very often	Often	Sometimes	Never
○	○	○	○

Discussed course topics, ideas, or concepts with a faculty member outside of class

Very often	Often	Sometimes	Never
○	○	○	○

Discussed your academic performance with a faculty member

Very often	Often	Sometimes	Never
○	○	○	○

Screen 1 of 3 (continued)

199

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

Memorizing course material

Very much	Quite a bit	Some	Very little
○	○	○	○

Applying facts, theories, or methods to practical problems or new situations

Very much	Quite a bit	Some	Very little
○	○	○	○

Analyzing an idea, experience, or line of reasoning in depth by examining its parts

Very much	Quite a bit	Some	Very little
○	○	○	○

Evaluating a point of view, decision, or information source

Very much	Quite a bit	Some	Very little
○	○	○	○

Forming a new idea or understanding from various pieces of information

Very much	Quite a bit	Some	Very little
○	○	○	○

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

Clearly explained course goals and requirements

Very much	Quite a bit	Some	Very little
○	○	○	○

Taught course sessions in an organized way

Very much	Quite a bit	Some	Very little
○	○	○	○

Used examples or illustrations to explain difficult points

Very much	Quite a bit	Some	Very little
○	○	○	○

Provided feedback on a draft or work in progress

Very much	Quite a bit	Some	Very little
○	○	○	○

Provided prompt and detailed feedback on tests or completed assignments

Very much	Quite a bit	Some	Very little
○	○	○	○

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

Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)

Very often	Often	Sometimes	Never
○	○	○	○

Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)

Very often	Often	Sometimes	Never
○	○	○	○

Evaluated what others have concluded from numerical information

Very often	Often	Sometimes	Never
○	○	○	○

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

Up to 5 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers
○	○	○	○	○	○	○

Between 6 and 10 pages

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers
○	○	○	○	○	○	○

11 pages or more

None	1-2	3-5	6-10	11-15	16-20	More than 20 papers
○	○	○	○	○	○	○

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

People of a race or ethnicity other than your own

Very often	Often	Sometimes	Never
○	○	○	○

People from an economic background other than your own

Very often	Often	Sometimes	Never
○	○	○	○

People with religious beliefs other than your own

Very often	Often	Sometimes	Never
○	○	○	○

People with political views other than your own

Very often	Often	Sometimes	Never
○	○	○	○

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

Identified key information from reading assignments

Very often	Often	Sometimes	Never
○	○	○	○

Reviewed your notes after class

Very often	Often	Sometimes	Never
○	○	○	○

Summarized what you learned in class or from course materials

Very often	Often	Sometimes	Never
○	○	○	○

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

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

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

Participate in an internship, co-op, field experience, student teaching, or clinical placement

Done or in progress	Plan to do	Do not plan to do	Have not decided
○	○	○	○

Hold a formal leadership role in a student organization or group

Done or in progress	Plan to do	Do not plan to do	Have not decided
○	○	○	○

Participate in a learning community or some other formal program where groups of students take two or more classes together

Done or in progress	Plan to do	Do not plan to do	Have not decided
○	○	○	○

Participate in a study abroad program

Done or in progress	Plan to do	Do not plan to do	Have not decided
○	○	○	○

Work with a faculty member on a research project

Done or in progress	Plan to do	Do not plan to do	Have not decided
○	○	○	○

Complete a culminating senior experience (capstone course, senior project or thesis, comprehensive exam, portfolio, etc.)

Done or in progress	Plan to do	Do not plan to do	Have not decided
○	○	○	○

Screen 1 of 3 (continued)

202

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.

Students

Poor 1	2	3	4	5	6	Excellent 7	Not applicable
○	○	○	○	○	○	○	○

Academic advisors

Poor 1	2	3	4	5	6	Excellent 7	Not applicable
○	○	○	○	○	○	○	○

Faculty

Poor 1	2	3	4	5	6	Excellent 7	Not applicable
○	○	○	○	○	○	○	○

Student services staff (career services, student activities, housing, etc.)

Poor 1	2	3	4	5	6	Excellent 7	Not applicable
○	○	○	○	○	○	○	○

Other administrative staff and offices (registrar, financial aid, etc.)

Poor 1	2	3	4	5	6	Excellent 7	Not applicable
○	○	○	○	○	○	○	○

Screen 1 of 3 (continued)

203

How much does your institution emphasize the following?

Spending significant amounts of time studying and on academic work

Very much	Quite a bit	Some	Very little
○	○	○	○

Providing support to help students succeed academically

Very much	Quite a bit	Some	Very little
○	○	○	○

Using learning support services (tutoring services, writing center, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Encouraging contact among students from different backgrounds (social, racial/ethnic, religious, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Providing opportunities to be involved socially

Very much	Quite a bit	Some	Very little
○	○	○	○

Providing support for your overall well-being (recreation, health care, counseling, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Helping you manage your non-academic responsibilities (work, family, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Attending campus activities and events (performing arts, athletic events, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Attending events that address important social, economic, or political issues

Very much	Quite a bit	Some	Very little
○	○	○	○

Screen 1 of 3 (continued)

204

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

Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)

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

Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)

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

Working for pay *on campus*

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

Working for pay *off campus*

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

Doing community service or volunteer work

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

Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)

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

Providing care for dependents (children, parents, etc.)

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

Commuting to campus (driving, walking, etc.)

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

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

○ Very little
○ Some
○ About half
○ Most
○ Almost all

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

Writing clearly and effectively

Very much	Quite a bit	Some	Very little
○	○	○	○

Speaking clearly and effectively

Very much	Quite a bit	Some	Very little
○	○	○	○

Thinking critically and analytically

Very much	Quite a bit	Some	Very little
○	○	○	○

Analyzing numerical and statistical information

Very much	Quite a bit	Some	Very little
○	○	○	○

Acquiring job- or work-related knowledge and skills

Very much	Quite a bit	Some	Very little
○	○	○	○

Working effectively with others

Very much	Quite a bit	Some	Very little
○	○	○	○

Developing or clarifying a personal code of values and ethics

Very much	Quite a bit	Some	Very little
○	○	○	○

Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)

Very much	Quite a bit	Some	Very little
○	○	○	○

Solving complex real-world problems

Very much	Quite a bit	Some	Very little
○	○	○	○

Being an informed and active citizen

Very much	Quite a bit	Some	Very little
○	○	○	○

Screen 1 of 3 (continued)

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

Do you intend to return to this institution next year? [This question is only asked of non-senior respondents.]

- ○ Yes
- ○ No
- ○ Not sure

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

- ○ One
- ○ More than one

Please enter your major or expected major:

Major

[   ]

Second Major

[   ]

Continue

Progress: 69%

Screen 1 of 3 (continued)

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

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 identity?

- ○ Man
- ○ Woman
- ○ Another gender identity, please specify:
- ○ I prefer not to respond

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

Are you an international student?

- ● Yes
- ○ No

What is your country of citizenship? [--- ▼]

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

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How would you describe yourself? (Select all that apply.)

- ☐ American Indian, Alaska Native, First Nations, or Indigenous
- ☐ Asian or Asian American
- ☐ Black or African American
- ☐ Hispanic or Latino/a
- ☐ Middle Eastern or North African
- ☐ 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?

- ○ Campus housing (other than a fraternity or sorority house)
- ○ Fraternity or sorority house
- ○ House, apartment, or other residence *within walking distance* to campus
- ○ House, apartment, or other residence *farther than walking distance* to campus
- ○ Not applicable: No campus, entirely online program, etc.
- ○ Not applicable: Homeless or in transition

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

- ○ Yes
- ○ No

On what team(s) sponsored by your institution's athletics department are you an athlete? (Select all that apply.)

- ☐ Baseball
- ☐ Basketball
- ☐ Bowling
- ☐ Cheerleading or Dance/Pom Squad
- ☐ Cross Country
- ☐ Fencing
- ☐ Field Hockey
- ☐ Football
- ☐ Golf
- ☐ Gymnastics
- ☐ Ice Hockey
- ☐ Lacrosse
- ☐ Rifle
- ☐ Rowing
- ☐ Skiing
- ☐ Soccer
- ☐ Softball
- ☐ Swimming & Diving
- ☐ Tennis
- ☐ Track & Field
- ☐ Volleyball/Beach Volleyball
- ☐ Water Polo
- ☐ Wrestling
- ☐ Other, please specify:

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 has 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?

○ Straight (heterosexual)
○ Bisexual
○ Gay
○ Lesbian
○ Queer
○ Questioning or unsure
○ Another sexual orientation, please specify:

[   ]

○ I prefer not to respond

Continue

Contact Us   Frequently Asked Questions

Progress: 100%

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Prompt for Additional Comments (Institutions select one of four questions for the end of the NSSE questionnaire.)

If you have any additional comments or feedback that you'd like to share on the quality of your educational experience, please enter them below. (5,000 character limit)

Continue

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What has been most satisfying about your experience so far at this institution, and what has been most disappointing? (5,000 character limit)

Continue

213

Please describe the most significant learning experience you have had so far at this institution. (5,000 character limit)

Continue

214

What one change would you most like to see implemented that would improve the educational experience at this institution, and what one thing should not be changed? (5,000 character limit)

Continue

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BCSSE/NSSE First-Generation Lived Experience Follow-Up Survey

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Q1 Dear Scripps First-Generation Student:

 We are asking you to take part in a research study about your first-year experiences. You are asked to be in this study because during your first year at Scripps you provided feedback about your level of engagement. This survey is a follow-up to obtain more detailed feedback in your own words about what your first college year experience was like. The reason we are conducting this study is because we are interested in your input about your lived experiences in your first college year as a first-generation student. This study may or may not help you, but we hope information from this study will help future first-generation students who enroll at Scripps College.

You can decide whether or not to take part in this study. Even if you join the study, you may stop at any time. If you decide to take part in this study, we will ask you to answer some questions about how prepared you were for college, how you adjusted to being a college student, and who supported you in your first-year. Answering these questions will take about 15 minutes.

Your answers will be linked to your student I.D., but your information will not be shared with anyone outside the study staff. Collection of data and survey responses using the internet involves the same risks that a person would encounter in everyday use of the internet, such as information being unintentionally seen by others. Your name or any other identifying information will not be used in any articles or talks.

If you have any questions about this study, feel free to contact Junelyn Peeples at jpeeples@scrippscollege.edu.

Sincerely,
Junelyn Peeples
Principle Investigator
Director of Assessment and Institutional Research
Scripps College

- -

Q2 Thank you for considering taking part in this important study. Please click the **<u>Yes</u>** button below to begin answering the questions. If you change your mind and decide not to participate, you can just close your web browser.

○ **Yes**

○ **No**

Q3 Student ID (please enter your 8-digit Scripps College ID starting with "2"):

_____

Q4 How much did your parent(s) or guardian(s) help prepare you to be a college student?

○ Very much

○ Quite a bit

○ Somewhat

○ Very little

○ Not at all

- -

Q5 Please explain.

_____

_____

- -

Q6 How much did your sibling(s) help prepare you to be a college student?

○ Very much

○ Quite a bit

○ Somewhat

○ Very little

○ Not at all

○ Not applicable

Q7 Please explain.

_____

_____

Q8 How much did your high school counselors help prepare you to be a college student?

○ Very much

○ Quite a bit

○ Somewhat

○ Very little

○ Not at all

Q9 Please explain.

_____

_____

Q10 How much did your high school teachers help prepare you to be a college student?

○ Very much

○ Quite a bit

○ Somewhat

○ Very little

○ Not at all

Q11 Please explain.

_____

_____

Q12 How much did your peers (e.g., roommates, classmates, friends) help prepare you to be a college student?

○ Very much

○ Quite a bit

○ Somewhat

○ Very little

○ Not at all

Q13 Please explain.

_____

_____

Q14 How much did other people (e.g., extended family members, friends' parents, pastor/minister, neighbor, etc.) help prepare you to be a college student?

○ Very much

○ Quite a bit

○ Somewhat

○ Very little

○ Not at all

Q15 Please explain.

_____

_____

Q16 What did you do to prepare yourself for college?

_____

_____

Q17 Reflecting on your first year at Scripps, what **obstacles** did you face during your first year in college?

_____

_____

Q18 Reflecting on your first year at Scripps, how did **Scripps help you adjust** into your first college year?

_____

_____

Q19 Reflecting on your first year at Scripps, how did **Scripps <u>not</u> help** you adjust into your first college year?

_____

_____

Q20 During your first year at Scripps, about how often did you do each of the following?

	Very often	Often	Sometimes	Never
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	○	○	○	○

Q21 Reflecting on your first year at Scripps, how did your college peers (e.g., roommates, classmates, friends) **<u>support</u>** your **<u>academic</u>** involvement in course projects or assignments?

_____

_____

Q22 Reflecting on your first year at Scripps, how did your college peers (e.g., roommates, classmates, friends) **<u>not support</u>** your **<u>academic</u>** involvement in course projects or assignments?

_____

_____

Q23 During your first year at Scripps, about how many **hours** did you spend in a typical 7-day week doing the following?

	0	1-5	6-10	11-15	16-20	21-25	26-30	More than 30
Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)	○	○	○	○	○	○	○	○
Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)	○	○	○	○	○	○	○	○

Q24 Reflecting on your first year at Scripps, how did your college peers (e.g., roommates, classmates, friends) **support** your **social** involvement in campus clubs/organizations, joining a sport, making time to relax, or socialize with friends?

_____

_____

Q25 Reflecting on your first year at Scripps, how did your college peers (e.g., roommates, classmates, friends) **not support** your **social** involvement in campus clubs/organizations, joining a sport, making time to relax, or socialize with friends?

_____

_____

End of Block: Default Question Block

BCSSE Participants (Group 1)

First-Year Persistence

Naïve Regression

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	-.005	0.026	-.175	.861

Notes: The p-value ≤ .05 level.

Model 1

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.098	0.770	.127	.899
Asian/Pacific Islander	.141	0.097	1.460	.149
African American/Black	.287	0.166	1.728	.089
Latinx	.103	0.102	1.012	.316
Unknown Race/Ethnicity	.002	0.097	.024	.981
Low-Income Status	-.025	0.128	-.195	.846
California Residency	.025	0.069	.370	.713
SAT Math	-.001	0.001	-1.841	.070
SAT Writing	.000	0.001	-.320	.750
ACT	.051	0.020	2.573	.012
High School GPA	-.024	0.091	-.261	.795
High School Type	-.017	0.072	-.231	.818
Expected to ask another student to help understand course material	-.104	0.055	-1.894	.063
FGCS*Expected to ask another student to help understand course material	-.028	0.201	-.140	.889

Note: The p-value ≤ .05 level.

Model 2

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	-.082	0.442	-.186	.853
Asian/Pacific Islander	.128	0.100	1.286	.203
African American/Black	.246	0.172	1.429	.158
Latinx	.103	0.107	.961	.340
Unknown Race/Ethnicity	-.008	0.100	-.076	.940
Low-Income Status	-.027	0.130	-.211	.833
California Residency	.024	0.071	.334	.739
SAT Math	-.001	0.001	-1.728	.089
SAT Writing	.000	0.001	-.548	.586
ACT	.055	0.021	2.669	.010
High School GPA	-.019	0.096	-.199	.843
High School Type	-.009	0.075	-.117	.907
Expected they would explain course material to one or more students	-.019	0.048	-.400	.690
FGCS*Expected they would explain course material to one or more students	.011	0.148	.074	.941

Note: The p-value ≤ .05 level.

Model 3

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.172	0.744	.232	.818
Asian/Pacific Islander	.134	0.099	1.346	.183
African American/Black	.265	0.174	1.530	.131
Latinx	.134	0.111	1.209	.231
Unknown Race/Ethnicity	-.010	0.101	-.100	.921
Low-Income Status	-.057	0.132	-.434	.666
California Residency	.015	0.073	.202	.840
SAT Math	-.001	0.001	-1.694	.095
SAT Writing	.000	0.001	-.518	.606
ACT	.056	0.021	2.649	.010
High School GPA	-.022	0.094	-.232	.817
High School Type	.006	0.077	.077	.939
Expected to prepare for exams by discussing or working through course material with other students	.024	0.055	.443	.659
FGCS*Expected to prepare for exams by discussing or working through course material with other students	-.059	0.201	-.296	.768

Note: The p-value ≤ .05 level.

Model 4

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.119	0.517	.229	.819
Asian/Pacific Islander	.129	0.099	1.296	.200
African American/Black	.252	0.171	1.479	.144
Latinx	.115	0.103	1.111	.271
Unknown Race/Ethnicity	-.005	0.100	-.048	.962
Low-Income Status	-.044	0.127	-.343	.733
California Residency	.024	0.072	.340	.735
SAT Math	-.001	0.001	-1.734	.088
SAT Writing	.000	0.001	-.504	.616
ACT	.055	0.021	2.645	.010
High School GPA	-.020	0.094	-.216	.830
High School Type	-.005	0.074	-.061	.951
Expected to work with other students on course projects or assignments	.003	0.044	.075	.940
FGCS*Expected to work with other students on course projects or assignments	-.045	0.141	-.322	.748

Note: The p-value ≤ .05 level.

Model 5

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.128	0.238	.539	.592
Asian/Pacific Islander	.179	0.102	1.754	.084
African American/Black	.278	0.168	1.657	.102
Latinx	.142	0.103	1.376	.174
Unknown Race/Ethnicity	.028	0.100	.278	.782
Low-Income Status	-.068	0.129	-.530	.598
California Residency	.016	0.072	.220	.826
SAT Math	-.001	0.001	-2.011	.049
SAT Writing	.000	0.001	-.264	.792
ACT	.058	0.020	2.885	.005
High School GPA	-.026	0.095	-.268	.789
High School Type	-.008	0.074	-.107	.915
Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)	.042	0.029	1.474	.145
FGCS*Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)	-.045	0.060	-.758	.451

Note: The p-value ≤ .05 level.

Model 6

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	*SE*	*t*	*Sig.*
First-Generation College Student	.152	0.269	.565	.574
Asian/Pacific Islander	.125	0.103	1.214	.229
African American/Black	.280	0.174	1.610	.113
Latinx	.114	0.108	1.061	.293
Unknown Race/Ethnicity	-.006	0.106	-.056	.956
Low-Income Status	-.038	0.129	-.294	.770
California Residency	.029	0.075	.387	.700
SAT Math	-.001	0.001	-1.844	.070
SAT Writing	.000	0.001	-.564	.575
ACT	.060	0.021	2.806	.007
High School GPA	-.037	0.097	-.387	.700
High School Type	-.002	0.079	-.024	.981
Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)	.015	0.033	.466	.643
FGCS*Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)	-.050	0.060	-.823	.414

Note: The p-value ≤ .05 level.

First-Year College GPA

Naïve Regression

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.193	0.049	-3.940	.000

Notes: The p-value ≤ .05 level.

Model 1

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.184	1.355	-.136	.892
Asian/Pacific Islander	.106	0.170	.622	.536
African American/Black	-.343	0.293	-1.172	.246
Latinx	.090	0.180	.498	.620
Unknown Race/Ethnicity	.073	0.171	.427	.671
Low-Income Status	.367	0.226	1.626	.109
California Residency	.047	0.121	.387	.700
SAT Math	-.002	0.001	-1.415	.162
SAT Writing	.001	0.001	1.152	.254
ACT	.004	0.035	.105	.917
High School GPA	.010	0.160	.063	.950
High School Type	.295	0.126	2.338	.023
Expected to ask another student to help understand course material	-.105	0.097	-1.081	.284
FGCS*Expected to ask another student to help understand course material	-.166	0.354	-.470	.640

Note: The p-value ≤ .05 level.

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Model 2

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-1.416	0.759	-1.866	.067
Asian/Pacific Islander	.101	0.171	.593	.556
African American/Black	-.455	0.296	-1.536	.129
Latinx	.047	0.184	.257	.798
Unknown Race/Ethnicity	.054	0.172	.314	.755
Low-Income Status	.442	0.223	1.985	.051
California Residency	.048	0.122	.392	.696
SAT Math	-.002	0.001	-1.346	.183
SAT Writing	.001	0.001	1.031	.306
ACT	.007	0.036	.189	.850
High School GPA	.000	0.165	.000	1.000
High School Type	.283	0.129	2.200	.031
Expected they would explain course material to one or more students	-.086	0.083	-1.031	.307
FGCS*Expected they would explain course material to one or more students	.187	0.254	.737	.464

Note: The p-value ≤ .05 level.

Model 3

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.648	1.250	-.518	.606
Asian/Pacific Islander	.063	0.167	.377	.707
African American/Black	-.516	0.291	-1.770	.081
Latinx	-.018	0.186	-.095	.925
Unknown Race/Ethnicity	.110	0.169	.651	.517
Low-Income Status	.474	0.222	2.128	.037
California Residency	.103	0.122	.839	.405
SAT Math	-.002	0.001	-1.568	.122
SAT Writing	.001	0.001	1.208	.232
ACT	-.002	0.036	-.055	.956
High School GPA	.017	0.157	.106	.916
High School Type	.233	0.128	1.810	.075
Expected to prepare for exams by discussing or working through course material with other students	-.175	0.093	-1.883	.064
FGCS*Expected to prepare for exams by discussing or working through course material with other students	-.052	0.337	-.155	.877

Note: The p-value ≤ .05 level.

Model 4

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.953	0.886	-1.075	.286
Asian/Pacific Islander	.106	0.170	.625	.534
African American/Black	-.413	0.292	-1.413	.162
Latinx	.071	0.177	.399	.691
Unknown Race/Ethnicity	.071	0.171	.417	.678
Low-Income Status	.404	0.218	1.852	.069
California Residency	.057	0.123	.461	.646
SAT Math	-.002	0.001	-1.503	.138
SAT Writing	.001	0.001	1.176	.244
ACT	.005	0.036	.148	.883
High School GPA	.011	0.161	.069	.945
High School Type	.288	0.127	2.263	.027
Expected to work with other students on course projects or assignments	-.090	0.076	-1.185	.240
FGCS*Expected to work with other students on course projects or assignments	.035	0.241	.144	.886

Note: The p-value ≤ .05 level.

Model 5

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-1.358	0.410	-3.314	.002
Asian/Pacific Islander	.027	0.176	.155	.877
African American/Black	-.396	0.289	-1.368	.176
Latinx	.056	0.178	.316	.753
Unknown Race/Ethnicity	.018	0.173	.104	.918
Low-Income Status	.418	0.222	1.884	.064
California Residency	.051	0.125	.406	.686
SAT Math	-.001	0.001	-1.134	.261
SAT Writing	.001	0.001	.809	.422
ACT	.010	0.035	.273	.786
High School GPA	.033	0.164	.201	.841
High School Type	.312	0.127	2.458	.017
Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)	-.078	0.049	-1.577	.120
FGCS*Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)	.141	0.103	1.367	.176

Note: The p-value ≤ .05 level.

Model 6

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.940	0.467	-2.013	.049
Asian/Pacific Islander	.096	0.178	.539	.592
African American/Black	-.397	0.302	-1.313	.194
Latinx	.101	0.187	.540	.591
Unknown Race/Ethnicity	.065	0.183	.357	.722
Low-Income Status	.365	0.224	1.633	.107
California Residency	.040	0.131	.305	.761
SAT Math	-.002	0.001	-1.258	.213
SAT Writing	.001	0.001	1.028	.308
ACT	.010	0.037	.269	.789
High School GPA	.013	0.168	.079	.937
High School Type	.324	0.137	2.368	.021
Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)	.007	0.058	.129	.898
FGCS*Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)	.023	0.105	.223	.824

Note: The p-value $\leq$ .05 level.

First-Year Persistence Variance and Prediction Outcomes

Supplemental Variance and Prediction Outcomes of Peer Effects on First-Generation First-Year Persistence

BCSSE	R Square	F(df)	B	t(F)	p-value
FGCS*Expected to ask another student to help understand course material	.197	F(14,64)=1.122	-.028	t(78)= -.140	> .05
FGCS*Expected they would explain course material to one or more students	.146	F(14,64)=.783	.011	t(78)=.074	> .05
FGCS*Expected to prepare for exams by discussing or working through course material with other students	.147	F(14,64)=.788	-.059	t(78)= -.296	> .05
FGCS*Expected to work with other students on course projects or assignments	.145	F(14,64)=.778	-.045	t(78)= -.322	> .05
FGCS*Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)	.181	F(14,63)=.992	-.045	t(77)= -.758	> .05
FGCS*Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)	.152	F(14,62)=.796	-.050	t(76)= -.823	> .05

Note: Significant at the p-value ≤ .05 level.

First-Year College GPA Variance and Prediction Outcomes

Supplemental Variance and Prediction Outcomes of Peer Effects on First-Generation College GPA

BCSSE	R Square	F(df)	B	t(F)	p-value
FGCS*Expected to ask another student to help understand course material	.349	F(14,64)=2.453	-.166	t(78)= -.470	> .05
FGCS*Expected they would explain course material to one or more students	.342	F(14,64)=2.380	.187	t(78)= .737	> .05
FGCS*Expected to prepare for exams by discussing or working through course material with other students	.371	F(14,64)=2.697	-.052	t(78)= -.155	> .05
FGCS*Expected to work with other students on course projects or assignments	.344	F(14,64)=2.402	.035	t(78)= .144	> .05
FGCS*Expected to participate in co-curricular activities (organizations/clubs, student government, athletics, etc.)	.361	F(14,63)=2.541	.141	t(77)= 1.367	> .05
FGCS*Expected to relax and socialize (time with friends, video games/tv, keeping up with friends, etc.)	.331	F(14,62)=2.192	.023	t(76)= .223	> .05

Note: Significant at the p-value ≤ .05 level.

NSSE Participants (Group 2)

First-Year Persistence

Naïve Regression

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.041	0.030	1.382	.167

Notes: The p-value ≤ .05 level.

Model 1

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.864	0.679	1.271	.211
Asian/Pacific Islander	.150	0.138	1.091	.282
African American/Black	.575	0.208	2.762	.009
Latinx	.217	0.117	1.853	.072
Unknown Race/Ethnicity	-.107	0.116	-.926	.360
Low-Income Status	-.399	0.139	-2.874	.007
California Residency	-.109	0.082	-1.324	.193
SAT Math	-.001	0.001	-1.650	.107
SAT Writing	.000	0.001	-.060	.952
ACT	.065	0.024	2.735	.009
High School GPA	.203	0.114	1.780	.083
High School Type	-.024	0.092	-.263	.794
Asked another student to help understand course material	.023	0.051	.445	.659
FGCS*Asked another student to help understand course material	-.206	0.250	-.824	.415

Note: The p-value ≤ .05 level.

Model 2

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.340	0.680	.500	.620
Asian/Pacific Islander	.167	0.137	1.222	.229
African American/Black	.554	0.200	2.761	.009
Latinx	.245	0.112	2.181	.035
Unknown Race/Ethnicity	-.102	0.117	-.871	.389
Low-Income Status	-.371	0.137	-2.710	.010
California Residency	-.107	0.084	-1.280	.208
SAT Math	-.001	0.001	-1.762	.086
SAT Writing	.000	0.001	.148	.883
ACT	.060	0.024	2.549	.015
High School GPA	.204	0.122	1.670	.103
High School Type	-.017	0.092	-.187	.853
Explained course material to one or more students	.012	0.055	.226	.823
FGCS*Explained course material to one or more students	-.011	0.251	-.042	.967

Note: The p-value ≤ .05 level.

Model 3

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.064	0.607	.106	.916
Asian/Pacific Islander	.178	0.135	1.318	.195
African American/Black	.547	0.200	2.734	.009
Latinx	.245	0.117	2.088	.044
Unknown Race/Ethnicity	-.101	0.117	-.858	.396
Low-Income Status	-.382	0.141	-2.705	.010
California Residency	-.114	0.091	-1.250	.219
SAT Math	-.001	0.001	-1.710	.095
SAT Writing	.000	0.001	.177	.861
ACT	.059	0.023	2.531	.016
High School GPA	.221	0.122	1.803	.079
High School Type	-.014	0.093	-.149	.882
Prepared for exams by discussing or working through course material with other students	-.001	0.049	-.030	.977
FGCS*Prepared for exams by discussing or working through course material with other students	.112	0.263	.425	.673

Note: The p-value ≤ .05 level.

Model 4

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.045	0.613	.073	.942
Asian/Pacific Islander	.178	0.134	1.325	.193
African American/Black	.544	0.201	2.713	.010
Latinx	.240	0.115	2.092	.043
Unknown Race/Ethnicity	-.098	0.117	-.842	.405
Low-Income Status	-.379	0.138	-2.741	.009
California Residency	-.112	0.088	-1.276	.210
SAT Math	-.001	0.001	-1.717	.094
SAT Writing	.000	0.001	.220	.827
ACT	.060	0.023	2.550	.015
High School GPA	.220	0.122	1.804	.079
High School Type	-.015	0.093	-.167	.869
Worked with other students on course projects or assignments	-.011	0.051	-.207	.837
FGCS*Worked with other students on course projects or assignments	.119	0.265	.449	.656

Note: The p-value ≤ .05 level.

Model 5

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.669	0.254	2.634	.012
Asian/Pacific Islander	.294	0.147	1.997	.054
African American/Black	.497	0.243	2.044	.049
Latinx	.308	0.114	2.709	.010
Unknown Race/Ethnicity	-.050	0.118	-.427	.672
Low-Income Status	-.436	0.145	-3.013	.005
California Residency	-.093	0.081	-1.143	.261
SAT Math	-.002	0.001	-2.197	.035
SAT Writing	.000	0.001	-.240	.812
ACT	.069	0.023	2.959	.006
High School GPA	.215	0.114	1.889	.067
High School Type	-.015	0.093	-.155	.878
Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	.069	0.041	1.697	.099
FGCS*Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	-.115	0.077	-1.489	.145

Note: The p-value ≤ .05 level.

Model 6

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.233	0.877	.266	.792
Asian/Pacific Islander	.145	0.140	1.040	.306
African American/Black	.397	0.259	1.530	.135
Latinx	.210	0.119	1.773	.085
Unknown Race/Ethnicity	-.098	0.118	-.824	.416
Low-Income Status	-.436	0.150	-2.911	.006
California Residency	-.063	0.092	-.681	.500
SAT Math	-.002	0.001	-2.042	.049
SAT Writing	.000	0.001	.408	.686
ACT	.064	0.025	2.524	.016
High School GPA	.180	0.127	1.421	.164
High School Type	-.004	0.094	-.044	.965
Relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	-.032	0.039	-.819	.418
FGCS*Relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	.043	0.200	.213	.832

Note: The p-value ≤ .05 level.

First-Year College GPA

Naïve Regression

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.199	0.048	-4.169	.000

Notes: The p-value ≤ .05 level.

Model 1

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.874	0.792	-1.103	.277
Asian/Pacific Islander	.139	0.161	.863	.394
African American/Black	-.507	0.242	-2.090	.043
Latinx	-.096	0.137	-.701	.488
Unknown Race/Ethnicity	.086	0.135	.639	.527
Low-Income Status	.004	0.162	.022	.983
California Residency	.027	0.096	.284	.778
SAT Math	-.002	0.001	-1.672	.103
SAT Writing	.000	0.001	.382	.705
ACT	-.004	0.028	-.158	.875
High School GPA	.092	0.133	.692	.493
High School Type	.275	0.107	2.577	.014
Asked another student to help understand course material	.000	0.059	.008	.994
FGCS*Asked another student to help understand course material	.182	0.292	.626	.535

Note: The p-value ≤ .05 level.

Model 2

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	.034	0.775	.044	.965
Asian/Pacific Islander	.102	0.156	.652	.518
African American/Black	-.484	0.229	-2.117	.041
Latinx	-.102	0.128	-.794	.432
Unknown Race/Ethnicity	.073	0.134	.546	.588
Low-Income Status	-.011	0.156	-.070	.945
California Residency	.007	0.096	.070	.944
SAT Math	-.001	0.001	-1.610	.116
SAT Writing	.000	0.001	.001	.999
ACT	.000	0.027	.018	.985
High School GPA	.073	0.139	.521	.605
High School Type	.267	0.105	2.539	.015
Explained course material to one or more students	.069	0.062	1.116	.271
FGCS*Explained course material to one or more students	-.166	0.286	-.581	.565

Note: The p-value ≤ .05 level.

Model 3

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-1.415	0.672	-2.104	.042
Asian/Pacific Islander	.139	0.150	.929	.359
African American/Black	-.513	0.222	-2.311	.026
Latinx	-.060	0.130	-.464	.645
Unknown Race/Ethnicity	.093	0.130	.719	.477
Low-Income Status	-.097	0.156	-.621	.538
California Residency	-.056	0.101	-.551	.585
SAT Math	-.001	0.001	-1.458	.153
SAT Writing	.000	0.001	-.021	.984
ACT	-.008	0.026	-.304	.763
High School GPA	.178	0.136	1.309	.198
High School Type	.300	0.103	2.900	.006
Prepared for exams by discussing or working through course material with other students	.058	0.055	1.052	.299
FGCS*Prepared for exams by discussing or working through course material with other students	.476	0.292	1.634	.111

Note: The p-value ≤ .05 level.

Model 4

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-1.438	0.690	-2.084	.044
Asian/Pacific Islander	.152	0.151	1.004	.322
African American/Black	-.510	0.226	-2.259	.030
Latinx	-.100	0.129	-.773	.444
Unknown Race/Ethnicity	.079	0.132	.602	.551
Low-Income Status	-.061	0.156	-.393	.697
California Residency	-.023	0.099	-.232	.818
SAT Math	-.001	0.001	-1.500	.142
SAT Writing	.000	0.001	.172	.864
ACT	-.005	0.026	-.206	.838
High School GPA	.163	0.137	1.190	.242
High School Type	.285	0.104	2.734	.009
Worked with other students on course projects or assignments	.007	0.057	.124	.902
FGCS*Worked with other students on course projects or assignments	.470	0.298	1.576	.123

Note: The p-value ≤ .05 level.

Model 5

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.351	0.301	-1.166	.251
Asian/Pacific Islander	.157	0.174	.899	.375
African American/Black	-.232	0.288	-.805	.426
Latinx	-.110	0.135	-.821	.417
Unknown Race/Ethnicity	.106	0.139	.758	.454
Low-Income Status	.080	0.171	.467	.643
California Residency	.028	0.096	.290	.774
SAT Math	-.001	0.001	-1.332	.192
SAT Writing	.000	0.001	-.066	.948
ACT	-.002	0.028	-.084	.934
High School GPA	.114	0.135	.845	.404
High School Type	.253	0.111	2.287	.028
Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	.002	0.048	.037	.971
FGCS*Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	-.051	0.091	-.561	.578

Note: The p-value ≤ .05 level.

Model 6

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.597	0.992	-.601	.552
Asian/Pacific Islander	.098	0.158	.621	.538
African American/Black	-.386	0.293	-1.317	.196
Latinx	-.177	0.134	-1.316	.197
Unknown Race/Ethnicity	.102	0.134	.763	.450
Low-Income Status	.077	0.170	.456	.651
California Residency	.070	0.104	.678	.502
SAT Math	-.001	0.001	-1.315	.197
SAT Writing	.000	0.001	.357	.723
ACT	-.010	0.029	-.360	.721
High School GPA	.106	0.143	.738	.466
High School Type	.244	0.107	2.287	.028
Relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	-.048	0.044	-1.111	.274
FGCS*Relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	.038	0.227	.167	.868

Note: The p-value ≤ .05 level.

First-Year Persistence Variance and Prediction Outcomes

Supplemental Variance and Prediction Outcomes of Peer Effects on First-Generation First-Year Persistence

NSSE	R Square	F(df)	B	t(F)	p-value
FGCS*Asked another student to help understand course material	.377	F(14,38)=1.645	-.206	t(52)= -.824	> .05
FGCS*Explained course material to one or more students	.365	F(14,38)=1.562	-.011	t(52)= -.042	> .05
FGCS*Prepared for exams by discussing or working through course material with other students	.606	F(14,38)=1.577	.112	t(52)=.425	> .05
FGCS*Worked with other students on course projects or assignments	.368	F(14,38)=1.582	.119	t(52)=.449	> .05
FGCS*Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	.444	F(14,35)=1.994	-.115	t(49)= -1.489	> .05
FGCS*Relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	.404	F(14,35)=1.692	.043	t(49)=.213	> .05

Note: Significant at the p-value ≤ .05 level.

First-Year College GPA Variance and Prediction Outcomes

Supplemental Variance and Prediction Outcomes of Peer Effects on First-Generation College GPA

NSSE	R Square	F(df)	B	t(F)	p-value
FGCS*Asked another student to help understand course material	.562	F(14,38)=3.490	.182	t(52)= .626	> .05
FGCS*Explained course material to one or more students	.573	F(14,38)=3.642	-.166	t(52)= -.581	> .05
FGCS*Prepared for exams by discussing or working through course material with other students	.598	F(14,38)=4.033	.476	t(52)=1.634	> .05
FGCS*Worked with other students on course projects or assignments	.586	F(14,38)=3.845	.470	t(52)= 1.576	> .05
FGCS*Participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	.514	F(14,35)=2.649	-.051	t(49)= -.561	> .05
FGCS*Relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	.525	F(14,35)=2.764	.038	t(49)= .167	> .05

Note: Significant at the p-value ≤ .05 level.

Longitudinally Tracked BCSSE and NSSE Participants (Group 3)

First-Year Persistence

Naïve Regression

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.010	0.030	.331	.741

Notes: The p-value ≤ .05 level.

Model 1

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.257	0.182	1.415	.166
Asian/Pacific Islander	.153	0.130	1.174	.248
African American/Black	.516	0.190	2.717	.010
Latinx	.235	0.112	2.098	.043
Unknown Race/Ethnicity	-.170	0.120	-1.417	.165
Low-Income Status	-.350	0.130	-2.689	.011
California Residency	-.146	0.080	-1.816	.077
SAT Math	-.001	0.001	-1.679	.102
SAT Writing	.000	0.001	-.277	.783
ACT	.069	0.022	3.073	.004
High School GPA	.180	0.109	1.649	.108
High School Type	-.042	0.090	-.467	.644
Change between expectation and actually asking another student to help understand course material	.082	0.046	1.762	.086
FGCS*Change between expectation and actually asking another student to help understand course material	-.097	0.145	-.665	.510

Note: The p-value ≤ .05 level.

Model 2

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.314	0.154	2.043	.048
Asian/Pacific Islander	.171	0.136	1.260	.216
African American/Black	.560	0.195	2.875	.007
Latinx	.228	0.113	2.012	.052
Unknown Race/Ethnicity	-.176	0.123	-1.425	.163
Low-Income Status	-.373	0.139	-2.681	.011
California Residency	-.138	0.083	-1.661	.105
SAT Math	-.002	0.001	-1.899	.065
SAT Writing	.000	0.001	.030	.976
ACT	.068	0.023	2.938	.006
High School GPA	.207	0.114	1.820	.077
High School Type	-.032	0.091	-.356	.724
Change between expectation and actually explaining course material to one or more students	.027	0.043	.611	.545
FGCS*Change between expectation and actually explaining course material to one or more students	.041	0.142	.286	.777

Note: The p-value ≤ .05 level.

Model 3

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.192	0.254	.758	.453
Asian/Pacific Islander	.192	0.133	1.446	.157
African American/Black	.601	0.207	2.911	.006
Latinx	.246	0.109	2.262	.030
Unknown Race/Ethnicity	-.178	0.126	-1.409	.167
Low-Income Status	-.370	0.133	-2.776	.009
California Residency	-.123	0.086	-1.431	.161
SAT Math	-.002	0.001	-2.108	.042
SAT Writing	.000	0.001	.256	.799
ACT	.072	0.024	2.992	.005
High School GPA	.181	0.115	1.578	.123
High School Type	-.021	0.090	-.229	.820
Change between expectation and actually preparing for exams by discussing or working through course material with other students	-.009	0.041	-.209	.835
FGCS*Change between expectation and actually preparing for exams by discussing or working through course material with other students	-.094	0.172	-.545	.589

Note: The p-value ≤ .05 level.

Model 4

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.216	0.200	1.079	.288
Asian/Pacific Islander	.191	0.132	1.448	.156
African American/Black	.603	0.205	2.944	.006
Latinx	.247	0.110	2.244	.031
Unknown Race/Ethnicity	-.171	0.122	-1.399	.170
Low-Income Status	-.385	0.132	-2.907	.006
California Residency	-.133	0.086	-1.545	.131
SAT Math	-.002	0.001	-2.043	.048
SAT Writing	.000	0.001	.202	.841
ACT	.074	0.024	3.028	.004
High School GPA	.179	0.115	1.552	.129
High School Type	-.020	0.090	-.220	.827
Change between expectation and actually worked with other students on course projects or assignments	-.016	0.038	-.426	.673
FGCS*Change between expectation and actually worked with other students on course projects or assignments	-.120	0.169	-.708	.483

Note: The p-value ≤ .05 level.

Model 5

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.309	0.177	1.744	.090
Asian/Pacific Islander	.211	0.134	1.574	.125
African American/Black	.510	0.237	2.148	.039
Latinx	.283	0.114	2.495	.018
Unknown Race/Ethnicity	-.177	0.125	-1.411	.167
Low-Income Status	-.437	0.146	-2.988	.005
California Residency	-.130	0.085	-1.539	.133
SAT Math	-.002	0.001	-2.362	.024
SAT Writing	.000	0.001	.063	.950
ACT	.080	0.025	3.230	.003
High School GPA	.212	0.119	1.783	.084
High School Type	.000	0.095	-.002	.999
Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics. etc.)	.020	0.037	.528	.601
FGCS*Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	-.049	0.052	-.937	.355

Note: The p-value ≤ .05 level.

Model 6

Regression Analysis of Peer Effects on First-Generation First-Year Persistence

Variable	B	SE	t	Sig.
First-Generation College Student	.376	0.165	2.280	.029
Asian/Pacific Islander	.225	0.141	1.598	.120
African American/Black	.394	0.258	1.525	.137
Latinx	.263	0.115	2.283	.029
Unknown Race/Ethnicity	-.254	0.143	-1.775	.085
Low-Income Status	-.444	0.150	-2.951	.006
California Residency	-.143	0.094	-1.524	.137
SAT Math	-.002	0.001	-2.310	.028
SAT Writing	.000	0.001	.247	.806
ACT	.071	0.026	2.687	.011
High School GPA	.214	0.127	1.679	.103
High School Type	-.024	0.098	-.246	.807
Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	-.006	0.042	-.142	.888
FGCS*Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	-.011	0.063	-.182	.857

Note: The p-value ≤ .05 level.

First-Year College GPA

Naïve Regression

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.197	0.048	-4.124	.000

Notes: The p-value ≤ .05 level.

Model 1

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.335	0.221	-1.517	.138
Asian/Pacific Islander	.107	0.158	.673	.505
African American/Black	-.495	0.231	-2.144	.039
Latinx	-.108	0.136	-.792	.433
Unknown Race/Ethnicity	.133	0.146	.912	.368
Low-Income Status	.011	0.158	.068	.946
California Residency	.032	0.098	.332	.742
SAT Math	-.001	0.001	-1.385	.174
SAT Writing	.000	0.001	.061	.952
ACT	-.004	0.027	-.163	.872
High School GPA	.089	0.132	.671	.506
High School Type	.277	0.109	2.548	.015
Change between expectation and actually asking another student to help understand course material	.050	0.056	.883	.383
FGCS*Change between expectation and actually asking another student to help understand course material	.053	0.177	.300	.766

Note: The p-value ≤ .05 level.

Model 2

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.441	0.175	-2.517	.016
Asian/Pacific Islander	.047	0.155	.304	.763
African American/Black	-.489	0.222	-2.203	.034
Latinx	-.148	0.129	-1.144	.260
Unknown Race/Ethnicity	.126	0.141	.896	.376
Low-Income Status	.053	0.158	.332	.742
California Residency	.021	0.095	.220	.827
SAT Math	-.001	0.001	-1.231	.226
SAT Writing	.000	0.001	.026	.980
ACT	-.007	0.026	-.247	.806
High School GPA	.110	0.130	.847	.402
High School Type	.255	0.103	2.472	.018
Change between expectation and actually explaining course material to one or more students	.096	0.049	1.942	.060
FGCS*Change between expectation and actually explaining course material to one or more students	-.112	0.162	-.689	.495

Note: The p-value ≤ .05 level.

Model 3

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.156	0.285	-.547	.588
Asian/Pacific Islander	.108	0.149	.729	.471
African American/Black	-.564	0.232	-2.430	.020
Latinx	-.109	0.122	-.895	.377
Unknown Race/Ethnicity	.176	0.142	1.242	.222
Low-Income Status	-.035	0.150	-.236	.815
California Residency	-.013	0.096	-.136	.893
SAT Math	-.001	0.001	-1.523	.136
SAT Writing	.000	0.001	.004	.996
ACT	-.014	0.027	-.504	.618
High School GPA	.121	0.129	.943	.352
High School Type	.263	0.101	2.597	.013
Change between expectation and actually preparing for exams by discussing or working through course material with other students	.084	0.046	1.826	.076
FGCS*Change between expectation and actually preparing for exams by discussing or working through course material with other students	.155	0.193	.802	.428

Note: The p-value ≤ .05 level.

Model 4

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.451	0.237	-1.907	.064
Asian/Pacific Islander	.137	0.156	.879	.385
African American/Black	-.433	0.243	-1.782	.083
Latinx	-.102	0.131	-.778	.441
Unknown Race/Ethnicity	.127	0.145	.875	.387
Low-Income Status	-.024	0.157	-.154	.879
California Residency	.010	0.102	.102	.920
SAT Math	-.001	0.001	-1.577	.123
SAT Writing	.000	0.001	.077	.939
ACT	.000	0.029	.000	1.000
High School GPA	.074	0.136	.543	.590
High School Type	.281	0.107	2.635	.012
Change between expectation and actually worked with other students on course projects or assignments	.047	0.045	1.053	.299
FGCS*Change between expectation and actually worked with other students on course projects or assignments	-.079	0.200	-.393	.696

Note: The p-value ≤ .05 level.

Model 5

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.566	0.207	-2.727	.010
Asian/Pacific Islander	.146	0.157	.935	.357
African American/Black	-.231	0.278	-.831	.412
Latinx	-.096	0.133	-.725	.473
Unknown Race/Ethnicity	.139	0.147	.948	.350
Low-Income Status	.083	0.171	.482	.633
California Residency	.028	0.099	.281	.780
SAT Math	-.001	0.001	-1.176	.248
SAT Writing	.000	0.001	-.059	.954
ACT	-.005	0.029	-.161	.873
High School GPA	.160	0.139	1.151	.258
High School Type	.259	0.111	2.327	.026
Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics. etc.)	.023	0.043	.528	.601
FGCS*Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	-.057	0.061	-.932	.358

Note: The p-value ≤ .05 level.

Model 6

Regression Analysis of Peer Effects on First-Generation First-Year GPA

Variable	B	SE	t	Sig.
First-Generation College Student	-.470	0.182	-2.589	.014
Asian/Pacific Islander	.146	0.155	.945	.352
African American/Black	-.591	0.284	-2.077	.046
Latinx	-.162	0.127	-1.276	.211
Unknown Race/Ethnicity	.245	0.157	1.557	.129
Low-Income Status	.083	0.166	.501	.620
California Residency	.116	0.103	1.122	.270
SAT Math	-.001	0.001	-1.149	.259
SAT Writing	.000	0.001	-.091	.928
ACT	-.030	0.029	-1.034	.309
High School GPA	.167	0.140	1.189	.243
High School Type	.319	0.108	2.962	.006
Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	-.098	0.046	-2.120	.042
FGCS*Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	.031	0.069	.452	.654

Note: The p-value ≤ .05 level.

First-Year Persistence Variance and Prediction Outcomes

Supplemental Variance and Prediction Outcomes of Peer Effects on First-Generation First-Year Persistence

Longitudinal BCSSE-NSSE	R Square	F(df)	B	t(F)	p-value
FGCS*Change between expectation and actually asking another student to help understand course material	.448	F(14,37)=2.145	-.097	t(51)= -.665	> .05
FGCS*Change between expectation and actually explaining course material to one or more students	.411	F(14,37)=1.844	.041	t(51)=.286	> .05
FGCS*Change between expectation and actually preparing for exams by discussing or working through course material with other students	.408	F(14,37)=1.823	-.094	t(51)= -.545	> .05
FGCS*Change between expectation and actually worked with other students on course projects or assignments	.417	F(14,37)=1.891	-.120	t(51)= -.708	> .05
FGCS*Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	.447	F(14,34)=1.964	-.049	t(48)= -.937	> .05
FGCS*Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	.463	F(14,32)=1.973	-.011	t(46)= -.182	> .05

Note: Significant at the p-value ≤ .05 level.

First-Year College GPA Variance and Prediction Outcomes

Supplemental Variance and Prediction Outcomes of Peer Effects on First-Generation College GPA

Longitudinal BCSSE-NSSE	R Square	F(df)	B	t(F)	p-value
FGCS*Change between expectation and actually asking another student to help understand course material	.578	F(14,37)=3.624	.053	t(51)= .300	> .05
FGCS*Change between expectation and actually explaining course material to one or more students	.605	F(14,37)=4.042	-.112	t(51)= -.689	> .05
FGCS*Change between expectation and actually preparing for exams by discussing or working through course material with other students	.614	F(14,37)=4.209	.155	t(51)= .802	> .05
FGCS*Change between expectation and actually worked with other students on course projects or assignments	.577	F(14,37)=3.601	-.079	t(51)= -.393	> .05
FGCS*Change between expectation and actually participated in co-curricular activities (organizations/clubs, student government, athletics, etc.)	.530	F(14,34)=2.743	-.057	t(48)= -.932	> .05
FGCS*Change between expectation and actually relaxing and socializing (time with friends, video games/tv, keeping up with friends, etc.)	.594	F(14,32)=3.347	.031	t(46)= .452	> .05

Note: Significant at the p-value ≤ .05 level.