A DESCRIPTIVE STUDY OF STUDENT INVOLVEMENT IN FIRST-GENERATION-Z STUDENTS AT A PUBLIC MIDWESTERN UNIVERSITY

Ashleigh Goedereis, Washington University in St. Louis
Pietro A. Sasso, Southern Illinois University, Edwardsville

AMERICAN POSTSECONDARY INSTITUTIONS engage in what Frederick, Sasso, & Barrat (2015) described as the fundamental attribution error of higher education. Many in higher education institutions (HEIs) might assume that all students seamlessly matriculate through a P-16 pipeline in which all students begin college at equal levels. Pre-college inequalities, particularly among first-generation students, often leave HEI stymied for approaches to engage these students. The numbers of first-generation students continue to rise, while this population becomes increasingly diverse, particularly as a new student generation styled as Generation- Z has emerged on college campuses. This single-institution, exploratory, and descriptive survey study (n= 254) profiled first-generation, Generation-Z traditional undergraduate students using the Barratt & Frederick (2007) University Learning Outcomes Assessment (UNiLOA). Results indicate a self-reported gender differential in scores and that involvement opportunities may increase scores across the domains of the assessment. Implications for practice include intrusive and supportive policies to further intentionally engage first-generation, Generation-Z students.

First-generation students are the first in their family to attend college, and typically lack the support networks available to their peers, whose parents completed a four-year degree (Pascarella, Pierson, Wolniak, & Terenzini, 2004). The concerns and challenges of first-generation student success rates compared with their peers who are coming from families that are college-educated speaks to a very different narrative. Their representation has continued to rise as the number of first-generation students continues to increase on college campuses since the early 2000s (Choy, 2001). Ishitani (2006) demonstrated that first-generation students are less likely to graduate and persist when compared to their peers who come from college-educated families. Given their proliferation since the turn of the century, they are a new student generation. Moreover, little continues to be understood about first-generation college student success beyond their demographic and persistence risk factors (Pike & Kuh, 2005).

According to Howe and Strauss's generational theory (1991), generations come in cycles, and each carries its own unique traits and characteristics drawn from commonly shared societal level events. Each new student generation holds distinctive characteristics, attitudes, and beliefs (Howe & Straus, 1991). Beginning in 2013, a new generation of traditional undergraduate students started to emerge on college campuses, Generation-Z. This student generation refers to those born from 1995 to 2010 (Seemiller & Grace, 2016). At the time of the authorship of this study, Generation-Z made up the majority of traditional-age undergraduate students (18-24) on college campuses as defined by Seemiller and Grace (2016). Just as we lack a thorough understanding of first-generation students (Frederick, Sasso, & Maldonado, 2018), higher education fails to have a complete understanding of this generation as the new traditional undergraduate students (Seemiller & Grace, 2016).

A descriptive study of student involvement in first-generation-Z students at a public midwestern university. Goerdereis, A. & Sasso, P.A. (2020). *Journal of Campus Activities Practice and Scholarship, 2*(2), 24-38. **https://doi.org/10.52499/2020010**

The existing research mirrors this same lack of understanding, which fails to explore this new student generation in terms of the first-generation status. This study addressed the gaps in the literature about first-generation, Generation-Z traditional undergraduate students by using the Barratt and Frederick (2007) University Learning Outcomes Assessment to explore constructs of student involvement in a convenience sample of these students at a comprehensive Midwestern university. This study answers the following questions: (1) What are the differences in the UniLOA domains by gender in first generation-Z students?; (2) What are the differences in the UniLOA domains by living arrangements in first generation-Z students?; (3) What are the differences in the UniLOA domains by Fraternity/Sorority Affiliation in first generation-Z students?; (4) What are the differences in the UniLOA domains by volunteer experiences in first generation-Z students?; and (5) What are the differences in the UniLOA domains by leadership experiences in first generation-Z students?

LITERATURE REVIEW

First-Generation Identity

According to the U.S. Department of Education, first-generation students now make up over 50 percent of the student population at 4-year universities (2015). Davis (2010) defined first-generation as a student in which neither of their parents or guardians completed a four-year degree. There are many definitions in research that include multiple tiers of the parental degree attainment (Davis, 2010). These students have complex identities and challenges.

First-generation students are a student population that is increasingly diverse and often includes historically underrepresented social identity groups, including African American, Latin(x), First-Nation/Native American students (Frederick, Sasso, & Maldonado, 2018). These also may include multiracial, rural white students, or other working-class identities, which, along with the student groups mentioned above, are intersectional identities. Intersectionality is the concept that one person can belong to multiple identity groups, and each idea can offer its own set of privileges and obstacles. Intersectionality illuminated the idea that one person can belong to a group in which colocation creates privilege and another that creates oppression (Bowleg, 2008; Shields, 2008; Thornton Dill, McLaughlin, & Nieves, 2012). Intersectionality scholarship often critiques that first-generation is an economic construct (Alvarado & Hurtado, 2012; Crenshaw, 1989; Perez Huber, 2010) rooted within a P-16 pipeline achievement gap (Soria & Stebleton, 2012).

Within the current socio-economic stratification structure in the United States, a large majority of first-generation students fall into the classification of lower-class, working-class, or lower-middle-class on the socio-economic scale (Davis, 2010). Those who find themselves in lower socio-economic status have a greater reliance on educational loans, increased need to work full or part-time, less likely to live on campus, participate in campus events or leadership experiences, and more likely to be a part-time student (Arnold & Barrat, 2014; Richardson & Skinner, 1992). First-generation students come to campuses with notable academic, social, and cultural pre-college characteristics that influence their persistence towards graduation. Arnold and Barrat (2014) suggested that to be successful, first-generation students must learn to navigate a campus system that is designed for second, third, and even fourth-generation students. These pose a number of challenges for students.

Banks-Santilli (2014), as well as other researchers (Frederick, Sasso, & Maldonado; 2018; Pulliam & Sasso, 2016), have suggested that these students have difficulty engaging with university involvement opportunities and navigating available academic supports such as first-year experience or academic advising. Therefore, research has shown that first-generation students have a difficult time adjusting to the university setting which results in lower academic performance and persistence rates in comparison to their non-first-generation peers (Covarrubias & Fryberg, 2015; Covarrubias, Romero, & Trivelli, 2015; Fiske & Markus, 2012; Jensen, 2004; Johnson et al., 2011; Markus & Conner, 2013; Stephens, Fryberg, et al., 2012; Walton & Cohen, 2007). These gains are consistent across all student generations and within the current student one, Generation-Z.

Generation-Z

Howe and Strauss (1991, 2000) provided a theory of generations, which provided a framework to better understand cycles of student generations on college campuses. Howe and Strauss (1991) suggested that student generations occur in cycles. With each new generation comes different beliefs, attitudes, and perceptions to college campuses. Howe and Strauss (1991) began with defining what a generation is; "a cohort-group whose length approximates the span of life and whose bound by peer personality" (p. 60). They stressed two essential parts of the generation definition; (1) the length of the cohort; and (2) peer personality. They emphasized that the length of time is important regarding when a new generation begins and ends (Howe & Strauss, 2000).

Generation-Z includes the current youth of American society; they were born in the years from 1995 to late 2010 (Seemiller & Grace, 2016). Generation-Z is also referred to as i-generation, net-gen, and other names. While this generation does not like labels, "Generation-Z" is the most commonly used to refer to this group of birth years. This is the generation of digital natives. No other generation has lived with technology that is so easily accessible their entire lives (Prensky, 2001). Generation-Z has grown up in a distinctive era (Seemiller & Grace, 2016). Generation-Z is a uniquely diverse generation. More of Generation-Z youth are being raised in urban areas, allowing for them to be exposed to a mixture of cultural perspectives, compared to the generations before them (Tacoli, 2012).

Stillman and Stillman (2017) identified seven key traits of Generation-Z. First is the concept of *Phigital* where they are born into a world where every physical aspect has a digital equivalent. For Generation-Z, the real world and the virtual world overlap naturally. Second is the concept of *Hyper-Custom* as Generation-Z wants to customize their own brand for the world to be known. They want to be able to customize job titles and career paths. Third is the concept of *Realistic* as they grew up in the aftermath of 9/11 and the knowledge of terrorism in everyday life, as well as living through the recession (Stillman & Stillman, 2017).

The fourth concept is *Weconomist,* as they have only known a world with a shared economy (Stillman & Stillman, 2017). With companies like Uber and Airbnb, they will continue to challenge the structure of the market. The fifth concept is FOMO, as Generation-Z will suffer from the fear of missing out. They have access to what their friends are doing at all times with social media. The sixth concept is DIY, as Generation-Z is the do-it-yourself generation. They have grown up with YouTube, being able to teach them how to do anything they desire. The seventh concept is Driven as they will be more-competitive and private than any of the generations before them, with 72 percent of gen-z stating they are competitive with people performing the same job as them (Stillman & Stillman 2017). These characteristics of Generation-Z have as student affairs professionals consider their student involvement.

Student Involvement

Astin's Theory of Involvement (1984) suggested that students learn more when they are involved in both the academic and social aspects of the college experience. For a student to be considered involved, they must devote a considerable amount of energy to academics, spend time on campus, actively participate in student organizations and activities, and often interact with faculty (Astin, 1984). Astin has five basic postulates about involvement; (1) Investment of psychosocial and physical energy; (2) Involvement is continuous, students invest varying energy; (3) Involvement has qualitative and quantitative features; (4) Development directly proportional to quality and quantity of involvement; and (5) Educational effectiveness is related to the level of student involvement (Astin, 1984).

Astin (1984) also suggested that the quality and quantity of the student's involvement will influence the level of student learning and development. Genuine involvement requires an investment of energy in relationships, academics, and activities related to the campus. The amount of energy invested will vary depending on the student's goals and interests, and the student's other commitments (Astin, 1984). Making time, the most critical institutional resource for a student. A student decides how and who they spend their time with; family, friends, academics, and other outside activities (Astin, 1984).

Participation in student involvement and co-curricular learning experiences for first-generation students are often low due to barriers related to academic success (Frederick, Sasso, & Maldonado, 2018). These barriers to student success often impede participation in service-learning or leadership programs (Pulliam & Sasso, 2016; Strayhorn, 2006). Overall levels of lower academic achievement in first-generation students have been discovered by many researchers (Engle, 2007; Majer, 2009; Martinez et al., 2009; Pascarella et al., 2003). DeFreitas and Rinn (2013) found differences in verbal and math scores for African Americans and Latinos. Asians and Latinos had higher math self-concept than African Americans (DeFreitas & Rinn, 2013). Academic self-concept was found as an essential factor in increasing academic performance in first-generation students (DeFreitas & Rinn, 2013). Such factors often influence student persistence towards graduation compared to their non-first-generation peers (Chen, 2005; Vuong, Brown-Welty, & Tracz, 2010).

METHODS

Research Design

This study profiled the student involvement behaviors of traditional undergraduate students who hold both first-generation and Generation-Z social identities. The study represented a singular institution within-groups, survey-design study using the Barratt and Frederick (2007) University Learning Outcomes Assessment (UniLOA) (Frederick, Sasso, & Maldonado, 2018). The use of a survey design allowed for a better understanding of how first-generation, Generation-Z students might be distinctive. This study examined descriptive demographic differences informed by Astin's Theory of Student Involvement (1984) among the subdomains of the UNiLOA. Thus, this study was guided by our primary research question: what are the descriptive differences in UNiLOA domains across binary gender, living arrangement, fraternity/sorority membership, volunteer hours, and leadership positions?

Sample

Ours was a singular institutional study in which the host institution was an American mid-sized public university in the Midwestern of the United States. A complete frame of more than 1200 participants was provided as the target population by the enrollment management division using the inclusion criteria: (1) first-generation, neither their parents nor guardians have obtained a four-year degree (Davis, 2010); (2) self-identify as first-generation based on information provided on the Free Application for Federal Student Aid (FAFSA); (3) Generation-Z, born from 1995 to 2010; and (4) matriculate as an undergraduate student the host institution, and (4). The convenience sample (n=254) was comprised of all traditional undergraduate students. A demographic questionnaire was used to generate snapshot data of the study participants. The demographic characteristics of the participants (see Table 1) indicates most participants were male, white, and had no reported major.

Table 1. *Participant Demographics.*

Identifier	%
Gender	
Female	25.2
Male	74.8
Ethnicity	
White	73.6
Black/ African American	10.6
Latin (X)	5.5
Other	10.2

Identifier	%
Age	
18-19	48.8
20-21	44.1
22 or older	7.1
Major	
Arts and Humanities	22.9
Business	13.0
Education	5.1
Engineering	4.3
No Declared Major	49.2
Pre-Medical/ Pre-Dental	5.5

Instrumentation

This study utilized the Barratt and Frederick (2007) University Learning Outcomes Assessment (UniLOA). The University Learning Outcomes Assessment (UniLOA) was developed by William Barratt and Mark Frederick in 2007. The UniLOA is a nationally-normed assessment that captures self-report data regarding student behaviors within seven domains deemed critical to co-curricular student learning. It is a self-report, 70-item instrument with 14 additional demographic questions designed to measure student behaviors across seven subscale domains: (1) critical thinking; (2) self-awareness, (3) communication; (4) diversity; (5) citizenship; (6) membership & leadership; and (7) relationships. Each of these subdomains is specific and to facilitate construct validity, which was established through qualitative focus groups with higher education leaders and focus groups.

Critical thinking was defined as in this process, students use skills of evaluation, assessing, analyzing, and questioning a problem or challenge. Self-awareness is a conscious awareness of internal and external perspectives. Self-awareness comes after lived experience and conscious self-reflection. Communication was defined as a process where one person is conveying a message through a medium (speaking, non-verbal cues, or writing). Diversity was defined to include things like different values, cultures, ethnicities, religions, gender, age, sexual orientations, as well as many others. Citizenship was defined as an understanding of one's membership in a variety of "groups" from a campus membership to a global level and active participation within groups. Membership and leadership were defined as an understanding of the types of relationships students' experiences as they identify with groups (informal or formal) in which participation can vary from holding a recognized office or contributing to support the development of the organization. Relationships were defined as interacting with others, which can be in a variety of ways, from professional, social, to intimate.

To complete the survey, participants answered each of the 70 items on a 10-point Likert-like scale and took approximately 20 minutes to complete. Every seventh question pertained to a specific domain. Domain scores were generated by computing the simple mean average of its ten individual item scores. The UniLOA's internal consistency was measured by Cronbach's Standardized Alpha. The instrument's overall Alpha was found to be 0.824 with the individual domain means. The mean of each category was multiplied by 10 to account for variance and provide an overall score for the category.

Procedure

The Enrollment Management division at the university provided the researcher with a list of enrolled traditional undergraduate students using the inclusion criteria described above. Potential student participants were contacted using a standardized recruitment statement containing a link to the UNiLOA survey. To proceed with the survey, the participant was asked to verify if they were first-generation (according to the FAFSA definition) and date of birth to verify affiliation with Generation-Z (born after 1995). Participants then continued to the UNiLOA instrument and finally completed a brief 14 item demographic questionnaire. A standardized debriefing statement concluded the survey.

Data Analysis

Raw data were exported from the online survey platform into SPSS, which was analyzed using descriptive statics. Mean, median, mode, and percentages were used to create an overall profile of first-generation, Generation-Z traditional undergraduate students. Results were also organized into low (0-30), medium (31-50), and high (51-75) using the aforementioned standard scoring procedure for the UNiLOA by total score, level, and domain score. A t-test was used to explore potential significant differences, and Cohen's d was calculated for effect size levels.

RESULTS

General Trends

Overall trend data is reported by the average total score across the UNiLOA subdomains. (see table 2). These data demonstrate participants' self-reported critical thinking and self-awareness as the highest-scoring domains.

Diversity was the lowest scoring domain, whereas citizenship, membership/leadership, and relationships were all moderately comparable.

Table 2. *Mean scores of the seven UniLOA domains.*

Domain	Mean
Critical Thinking	72.8182
Self-Awareness	72.8182
Communication	67.7362
Diversity	58.5062
Citizenship	61.1713
Membership/Leadership	61.1575
Relationships	63.7402

A low score was determined as those under a 4.5 average. Diversity featured a majority of the lowest scoring questions. The lowest scoring individual item was from the self-awareness domain. This question asked students about creating personal goals, although self-awareness was one of the highest-scoring domains. Both the membership and relationship domains also included several low scoring questions (see Table 3). The common theme throughout the lowest scoring questions was a lack of interest in having new experiences with other college students who differ from themselves. A majority of the low scoring questions were also related to an understanding of their own values or identity and how these identifiers impact others or ways in which they form connections with others different from themselves.

Table 3. *Lowest scoring individual UNiLOA questions.*

Question	Score	Domain
I list my personal goals for a class or activity. For example, I list my learning goals for a class beyond the learning outcomes listed in the syllabus, as well as my goal for a grade.	2.58	Self-Awareness
I use effective networking skills. For example, I go out of my comfort zone to introduce myself to and establish and maintain an appropriate relationship with others, such as my professors and supervisors.	3.88	Membership/ Leadership
I act on the values of diversity and social justice. For example, I work with an organization or with my church to help others.	4.20	Diversity
I go beyond simple diversity to act and think more complexly. For example, I work hard to include many types of differences such as gender, ethnicity, social class, morals, and personality when I form opinions or work with other people in class or hang out with my friends.	4.04	Diversity
I value differences between people as part of the overall human experience. For example, I know that we are a melting pot where people who are different can come to be seen as 'all the same.' I know that people are different and that these differences are important.	2.70	Diversity
I know how my gender, ethnicity, social class, and personality affect my relationships. For example, when my relationships have problems, I think through how my gender, ethnicity, social class, or personality might be affecting the relationship.	2.95	Relationships

A high score was determined as those with an average of 7.5 or higher. The highest-scoring individual UniLOA questions represented critical thinking, self-awareness, communication, membership, and relationships. A majority of the highest-scoring individual items were from the communication domain. Table 2 shows that

the communication domain scored moderately higher in comparison to all other domains. The highest-scoring individual UniLOA question was from the self-awareness domain (see table 4). Thematically, these highest scoring questions may suggest that these students perceive themselves as good communicators with others, as leaders who understand their strengths and weaknesses and engage in critical thinking. It could be that participants answered these questions from a within-group reference point, given that this is a primarily white sample. These highest scoring questions are in contrast with the lowest scoring questions, which suggest a lack of these highly self-reported communication skills and awareness of other differences across diverse relationships.

Table 4. *Highest scoring individual UNiLOA questions.*

Question	Score	Domain
I know when and where skills and talents can most benefit the larger group. For example, I look for and actively participate in groups or work teams based on my skills and abilities.	7.51	Membership/ Leadership
I balance keeping personal, social, and professional relationships healthy with the rest of my life. For example, I spend time on relationships and still get my schoolwork done.	7.64	Relationships
I use my best active listening skills. For example, at parties and in class, I use active listening and check with others to make sure I have heard them appropriately.	7.76	Communication
I adjust my communication skills to whatever setting I am in. For example, I use different kinds of skills in class than I do during informal situations.	8.44	Communication
I use technical terms and jargon as appropriate. For example, I adjust the level of my communication to my audience. I don't communicate the same with professors as I do with first-year students on campus.	8.08	Communication
I talk freely about my strengths and weaknesses. For example, I have admitted to others when I can't do something and have taken action to improve the skills that I found lacking.	7.95	Self-Awareness
I foster cooperation rather than competition. For example, I am not always trying to "win" at relationships.	7.60	Relationships
I identify valid and invalid arguments and can spot fallacies of deductive and inductive arguments. For example, I see when someone has a problem with the logic and structure of their argument, or is confusing cause and effect, or is missing key pieces that are needed.	7.99	Critical Thinking
I use correct grammar when appropriate in speaking with others. For example, when speaking in class or to professors, I use correct 'standard English' even though I may use dialect and slang with my friends.	8.66	Communication
I understand basic statistics that I read or see in the media. For example, when I see or read statistics, I know what they mean and how they are being used to represent information appropriately or inappropriately.	8.05	Critical Thinking
I am aware of the real results of decisions and the effectiveness of their implementation. For example, my decisions usually involve thinking about the consequences of my actions for myself and others around me.	8.69	Self-Awareness
I use supporting material for my presentations and papers. For example, I rely on reliable sources and references to help me make my points.	8.55	Communication
I actively seek leadership opportunities in areas that are important to me or in which I have expertise. For example, I seek to be a leader in the groups I belong to.	7.60	Membership/ Leadership

Research Questions

What are the differences in the UniLOA domains by gender in first generation-Z students? There were significant differences between gender among first generation-z students. In particular, there were significant dif-

ferences between men and women across the domains of: critical thinking t(251) = -3.36, d= 0.30 , p = 0.01; self-awareness t(251) = -3.36, d = 0.49 , p = 0.01; diversity t(239) = -2.71, d = 0.92, p = 0.01; citizenship t(249) = -4.39, d = 0.64, p = 0.01; membership t(252) = -4.38, d = 0.64, p = 0.00; and relationships t(252) = -3.42, d = 0.52, p = 0.00. There were no significant differences for communication. These data are consistent with descriptive data which provides more insight.

Table 5 suggests that both genders scored at least medium or high on all domains. Males were high in critical thinking, self-awareness, communication, citizenship, membership, and relationships where women were in critical thinking and self-awareness. Males reported moderate in diversity, whereas women were in communication, diversity, citizenship, membership, and relationships. In comparison, there are several trends. Males scored higher in all domains, except diversity. Women scored higher in diversity; however, a majority scored a medium on the diversity domain. Women tended to score moderate in a majority of the domains where men tended to score high.

Table 5. *UniLOA domains by gender.*

Domain	Demographic	Low	Medium	High
Critical Thinking	Male	0	32.6	67.4
	Female	0	44.4	55.6
Self-Awareness	Male	0	32.6	67.4
	Female	0	44.4	55.6
Communication	Male	0	44.2	55.8
	Female	0	54.7	45.3
Diversity	Male	9	57.3	20.6
	Female	4.8	74.6	33.7
Citizenship	Male	2.1	42.8	55.1
	Female	0	75	25
Membership	Male	2.6	45.8	51.6
	Female	14.1	64.1	21.9
Relationships	Male	7.4	38.9	53.7
	Female	6.3	59.4	34.4

What are the differences in the UniLOA domains by living arrangements in first generation-Z students? There were only significant differences between on- and off-campus living arrangements among the communication and diversity domains. Communication was t(252) = -5.402, d = 0.72, p = 0.00 and diversity was t(239) = -2.907, d = 0.41, p = 0.04. The other domains featured no significant differences. Additional descriptive data support these data.

Table 6 suggests that both living arrangements scored medium to high in all seven domains, but with nuanced differences between the domains. In comparison, there are several trends. Both students who lived on and off-campus scored high in critical thinking and self-awareness. Both students who lived on and off-campus scored medium in the diversity domain. Students who lived on campus were higher in every single domain across all three levels, except for diversity. Overall, these trends suggest that living on campus may result in higher scores, as reflected by the UNiLOA data. Students who lived on campus reported at least moderate levels in diversity, citizenship, membership, and relationship and significant proportionality at the high level compared to students who lived off-campus.

Table 6. *UniLOA domains by living arrangements.*

Domain	Demographic	Low	Medium	High
Critical Thinking	On-Campus	0	22.4	77.6
	Off-Campus	0	41.2	58.5
Self-Awareness	On-Campus	0	22.4	77.6
	Off-Campus	0	41.2	58.8
Communication	On-Campus	0	24.7	75.3
	Off-Campus	0	56.5	43.5
Diversity	On-Campus	2.6	61.0	36.4
	Off-Campus	10.4	62.2	27.4
Citizenship	On-Campus	2.7	56.8	40.5
	Off-Campus	1.1	48.6	50.3
Membership	On-Campus	2.6	72.7	24.7
	Off-Campus	6.8	40.7	52.5
Relationships	On-Campus	1.3	57.1	41.6
	Off-Campus	9.6	38.4	52.0

What are the differences in the UniLOA domains by Fraternity/Sorority Affiliation in first generation-Z students? There were no significant differences across the majority of the domains except for communication and diversity with regard to fraternity/sorority affiliation. Diversity was $t(239) = -2.576$, $d = 0.33$, $p = 0.1$ and communication was $t(252) = 4.105$, $d = 0.51$, $p = 0.0$. Additional descriptive data support suggests some trends.

Table 7 indicates that both those who are fraternity/sorority affiliated and those who are non- affiliated scored medium to high in all seven domains. However, non-affiliated students were higher in critical thinking, self-awareness, and communication across the moderate level. Affiliated members reported higher scores in citizenship, membership, and relationships. Higher levels of diversity were reported for affiliated members, but non-affiliated members reported a more substantial proportionality at the moderate level. These data may suggest an organizational impact in which involvement in fraternities and sororities promotes connectedness to others and the organization, as demonstrated by these higher proportional scores.

Table 7. *UniLOA domains by Fraternity/Sorority Affiliation.*

Domain	Demographic	Low	Medium	High
Critical Thinking	Affiliated	0	21.2	78.8
	Non-Affiliated	0	44.8	55.2
Self-Awareness	Affiliated	0	21.2	55.2
	Non-Affiliated	0	44.8	78.8
Communication	Affiliated	0	61.0	39
	Non-Affiliated	0	37.7	62.3
Diversity	Affiliated	16	34	50
	Non-Affiliated	2.1	81.6	16.3
Citizenship	Affiliated	2.0	40.8	57.1
	Non-Affiliated	1.3	57.5	41.2
Membership	Affiliated	2.0	44.0	54.0
	Non-Affiliated	7.8	54.5	37.7
Relationships	Affiliated	15.0	27.0	58.0
	Non-Affiliated	1.9	55.2	42.9

What are the differences in the UniLOA domains by volunteer experiences in first generation-Z students? Many of the domains did not demonstrate significant differences as only diversity, citizenship, and membership suggest differences among volunteer experiences. Diversity was t(189) = -4.046, d = 0.99, p = 0.00, citizenship was t(199) = -3.902, d = 0.55, p = 0.00, and membership was t(202)= -2.604, d = 0.37, p = 0.10. Some trends can also be gleaned from the descriptive data.

Table 8 suggests most students scored medium to high in all seven domains despite average hours spent per week volunteering. However, increases typically facilitated higher scores across all domains. Students who had any amount of volunteer experience usually scored high in self-awareness. Even students who volunteered a low number of hours per week (0-4) scored high in critical thinking, self-awareness, and communication or medium in diversity, citizenship, membership, and relationship.

Students who volunteer a moderate number of hours per week (5-9) scored high in critical thinking, self-awareness, communication, and citizenship. Students who volunteer a large number of hours per week (> 9) scored higher in critical thinking, self-awareness, citizenship, and relationships or medium in communication and diversity.

Table 8. *Differences in the UniLOA domains by experiences.*

Domain	Demographic	Low	Medium	High
Critical Thinking	0-4	0	43.8	56.2
	5-9	0	21.4	78.6
	> 9	0	46.0	54.0
Self-Awareness	0-4	0	43.8	56.2
	5-9	0	21.4	78.6
	> 9	0	46.0	54.0
Communication	0-4	0	45.3	54.3
	5-9	0	36.7	63.3
	> 9	35.0	70.0	30.0
Diversity	0-4	4.3	78.5	17.2
	5-9	14.3	41.8	43.9
	> 9	2.0	70.0	28.0
Citizenship	0-4	3.9	65.0	31.1
	5-9	0.0	48.0	52.0
	> 9	0.0	28.0	72.0
Membership	0-4	12.3	55.7	32.1
	5-9	0.0	64.3	35.7
	> 9	2.0	12.0	86.0
Relationships	0-4	1.9	58.5	39.6
	5-9	15.3	45.9	38.8
	> 9	2.0	10.0	88.0

What are the differences in the UniLOA domains by leadership experiences in first generation-Z students? Significant differences existed across all the domains related to leadership experiences. Critical thinking t(171) = -3.544, d = 0.68, p = 0.0; Self-awareness t(171) = -3.544, d = 0.68, p = 0.0; Communication t(171) = -2.433, d = 0.45, p = 0.01; Diversity t(158) = -8.187, d = 1.53, p = 0.0; Citizenship t(170) = -7.155, d = 1.36, p = 0.0; Membership t(171) = -4.381, d = 0.79, p = 0.0; Relationships t(171) = -2.858, d = 0.53, p = 0.01.

Table 9 suggests that no matter the number of leadership experiences, most students scored medium to high

in all seven domains. In particular, these data suggest that students who are at least moderately involved in two leadership experiences have higher scores than with one. However, students who are involved in three or more leadership experiences report even higher gains, particularly related to citizenship, membership, and relationships. Those who did not hold any leadership experiences reported a larger share at higher levels across most domains except for citizenship, membership, and relationships. This response pattern is similar to non-fraternity/sorority members. However, it should be noted that leadership experiences generally self-reported higher levels than those with no leadership experiences.

Table 9. *Differences in the UniLOA domains by leadership positions held.*

Domain	Demographic	Low	Medium	High
Critical Thinking	None	0	27.0	73.0
	1	0	69.9	30.1
	2	0	1.5	98.5
	3 or more	0	0	100
Self-Awareness	None	0	27.0	73.0
	1	0	69.9	30.1
	2	0	1.5	98.5
	3 or more	0	0	100
Communication	None	0	36.8	63.2
	1	0	69.9	30.1
	2	0	3.0	97.0
	3 or more	0	64.9	35.1
Diversity	None	2.6	76.3	21.1
	1	17	70	13
	2	1.5	75.8	22.7
	3 or more	0	0	100
Citizenship	None	5.3	44.7	50
	1	0.9	57.3	41.8
	2	1.5	72.7	25.8
	3 or more	0	0	100
Membership	None	2.6	47.4	50.0
	1	10.6	61.1	28.3
	2	1.5	62.1	36.4
	3 or more	0	0	100
Relationships	None	0	39.5	60.5
	1	15	49.6	35.4
	2	1.5	50	48.5
	3 or more	0	21.6	78.4

DISCUSSION

Despite extensive research on first-generation college students and millennial college students, little research examines Generation-Z as first-generation college students. Practitioner knowledge and research about Generation-Z are scant despite this generation being on college campuses for over five years. Using the Barratt & Frederick (2015) University Learning Outcomes Assessment, this study provides for a better understanding of

this emerging student population. The results from this offer some general insights into the student involvement behaviors of first-generation, Generation-Z traditional undergraduate students, which can be used to influence student success efforts of universities as they shift from supporting Millennial to Generation-Z traditional undergraduate students.

Of the constructs and demographic identifiers explored, diversity was the lowest scoring and had the lowest scoring individual questions. Critical thinking and self-awareness were the top-scoring domains. However, self-awareness had the lowest scoring question of any domain. Gender, living arrangement, and fraternity/sorority affiliation demonstrated significant trends across the domains. These data suggest that increased student involvement through leadership experiences and group affiliations as a fraternity/sorority member, and the residential experience facilitates self-reported increases across the domains. Across all three identifiers, most students scored higher in all seven domains if they were a residential student and were affiliated with a fraternity/sorority or held a leadership position. However, students also scored medium to high regardless of the number of leadership positions. Fraternity/sorority members scored higher on citizenship, membership/leadership, and relationships than their non-affiliated peers. Residential students generally scored higher and particularly in diversity, citizenship, membership, and relationships. Generally, domains or identifiers that relate to relationships and involvement were higher for first-generation, Generation-Z students. However, a deeper context reveals another trend.

For this primarily white sample, relationships and diversity were among the lowest-scoring domains and had one of the lowest ranking individual questions. These data may suggest a superficiality of human connection and a lack of diverse connections with their college peers. There is an overall lack of depth amongst these relationships. Further, these results confound previous research, which supports the notion that Gen-Z students are increasingly diverse and more diverse peer relationships (Seemiller & Grace, 2016). Increases in leadership or volunteer experiences beyond moderate levels did not demonstrate any significant increases in relationships and diversity. However, these results may also reflect a low level of social capital, given the sample is comprised of first-generation students (McClenaghan, 2000; Soria & Stebleton, 2012). Student affairs professionals should consider how to engage these students through student involvement opportunities. Practices such as diversity leadership retreats or specific minority leadership programs have demonstrated to support diversity exposure, connection, and deepen relationship building across the student experience (Frederick, Sasso, & Maldonado, 2018; McCallen & Johnson, 2019).

Participants also self-reported high levels of communication, critical thinking, and self-awareness, which confounds the results of Frederick, Sasso, and Maldonado (2018), which found the opposite using the UNiLOA in a sample of traditional undergraduate students. Our findings support previous results, which suggested that Generation-Z prefers face-to-face communication (Stillman & Stillman, 2017). Generation-Z is the first generation who was born into a world where every aspect, objects, people, and places have a digital equivalent in which their physical world and digital world overlap naturally (Stillman & Stillman, 2017). Since communication is essential to these students, a more intrusive process through advising and to make involvement opportunities more prominent should be intentionally designed (Schneider, Sasso, & Puchner, 2017).

Intrusive advising should be used to connect first-generation to student involvement experiences as this study suggests there are self-reported significant gains across the domains in students shifting from low to moderate involvement levels. Connecting with equal opportunity programs (Pulliam & Sasso, 2016), or other student engagement functional areas within student affairs such as leadership programs and service-learning (Kuh, Kinzie, Schuh, & Whitt, 2010) should be intentionally designed to connect students to these involvement opportunities. Student activities professionals should also consider these implications, as student success and retention are significant concerns among university administrators regarding first-generation students (Frederick, Sasso, & Maldonado, 2018; Pulliam & Sasso, 2016; Tinto, 1999).

Limitations

There are specific internal validity constraints within this study. The UniLOA is a self-reported instrument,

and certain inherent errors can exist as a result of attribution error. Such ambiguity suggests participants may over-report desirable qualities and under-report undesirable qualities (Frederick, Sasso, & Maldonado 2018). This was apparent as men tended to overreport and women underreport in this study. The high response burden of the UniLOA may have discouraged participants from completing or even starting the survey. After answering some questions, many participants exited the survey prior to completion. The UniLOA is not a widely cited survey, and the study participants may not have been familiar with many of the constructs.

This study has limited external validity in its generalizability. This was a singular institutional study with a convenience sample from a public, Midwestern university. This study only examined first-generation, Generation-Z traditional undergraduate students, and specific demographic variables. This study sample was not diverse and did not account for multiracial, trans*spectrum, and other multiple identities. The limitations of the study should be addressed in which future studies should consider a larger, diverse, and geographically dispersed sample stratified by institutional typology.

CONCLUSION

Howe and Strauss's generational theory (1991) posits that student generations come in cycles, and each carries its own unique traits and are characterized by common life events. As a new generation has cycled into higher education, as well as college access, allowing more first-generation students to enroll, more information is needed on these students. This information can be used by higher education institutions and student activities professionals to best serve this emerging cohort of first-generation students on college campuses today. While this research can be applied, it is merely foundational and exploratory, as additional research should be conducted to better understand student supports for this population through a wider framed study of multiple institutional types.

REFERENCES

Arnold, W., & Barratt, W. (2014). First-generation students. In P. A. Sasso & J. L. DeVitis (2015). *Today's College Students: A Reader.* New York, NY: Peter Lang Publishing.

Astin, A.W. (1984). *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education.* Lanham: Rowman & Littlefield Publishers.

Barratt, W. & Frederick, M. A. (2007). *University outcomes learning assessment* [Measurement instrument].

Bowleg, L. (2008). When Black + lesbian + woman does not equal Black lesbian woman: The methodological challenges of qualitative and quantitative intersectionality research. *Sex Roles, 59*(5), 312-325.

Chen, X. (2005). *First generation students in postsecondary education: A look at their college transcripts* (NCES 2005–171). Washington, D.C.: U.S. Department of Education, National Center for Education Statistics.

Choy, S. (2001). Students whose parents did not go to college: Postsecondary access, persistence, and attainment. Washington, DC: National Center for Education Statistics.

Covarrubias, R., & Fryberg, S. A. (2015). Movin' on up (to college): First-generation college students' experiences with family achievement guilt. *Cultural Diversity and Ethnic Minority Psychology, 21,* 420–429.

Covarrubias, R., Romero, A., & Trivelli, M. (2015). Family achievement guilt and mental well-being of college students. *Journal of Child and Family Studies, 24,* 2031–2037.

Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A Black feminist critique f antidiscrimination doctrine, feminist theory and antiracist politics. *The University of Chicago Legal Forum, 140,* 139–167.

Davis, J. (2010). The first-generation student experience: implications for campus practice, and strategies for improving persistence and success. Sterling, VA: Stylus.

DeFreitas, S. C., & Rinn, A. (2013). Academic achievement in first generation college students: The role of academic self-concept. *Journal of The Scholarship of Teaching & Learning, 13*(1), 57-67.

Engle, J. (2007). Postsecondary access and success for first-generation college students. *American Academic, 3*, 25–48.

Fiske, S. T., & Markus, H. R. (2012). *Facing social class: How societal rank influences interaction.* New York, NY: Russell Sage Foundation.

Frederick, M., Sasso, P. A., & Maldonado, J. (2018). *The dynamic student development meta- theory: A new model for student success.* New York, NY: Peter Lang Publishing.

Frederick, M. A., Sasso, P., & Barratt, W. R. (2015). Towards a relationship-centered approach in higher education: The dynamic student development metatheodel (DSDM). *New York Journal of Student Affairs, 15*(2), 2–27.

Howe, N., & Strauss, W. (2000). *Millennials rising: The next great generation.* New York, NY: Vintage Books.

Ishitani, T. T. (2006). Studying attrition and degree completion behavior among first-generation college students in the United States. *The Journal of Higher Education, 77*(5), 861–885.4

Jensen, B. (2004). Across the great divide: Crossing classes and clashing cultures. In M. Zweig (Ed.), *What's class got to do with it? American society in the twenty-first century* (pp. 168–183). Ithaca, NY: Cornell University Press.

Johnson, S. E., Richeson, J. A., & Finkel, E. J. (2011). Middle class and marginal? Socio-economic status, stigma, and self-regulation at an elite university. *Journal of Personality and Social Psychology, 100,* 838–852.

Majer, J. M. (2009). Self-efficacy and academic success among ethnically diverse first- generation community college students. *Journal of Diversity in Higher Education, 2*(4), 243- 250.

Markus, H. R., & Conner, A. (2013). *Clash! 8 cultural conflicts that make us who we are.* New York, NY: Hudson Street Press.

Martinez, J. A., Sher, K. J., Krull, J. L., & Wood, P. K. (2009). Blue-collar scholars? Mediators and moderators of university attrition in first-generation college students. *Journal of College Student Development, 50,* 87-103.

McCallen, L. S., & Johnson, H. L. (2019). The role of institutional agents in promoting higher education success among first-generation college students at a public urban university. J*ournal of Diversity in Higher Education.* Advance online publication.

McClenaghan, P. (2000). Social capital: Exploring the theoretical foundations of community development education. *British Educational Research Journal, 26*(5), 565- 582.

Pascarella, E., Pierson, C., Wolniak, G., & Terenzini, P. (2004). First-generation college students: Additional evidence on college experiences and outcomes. *The Journal of Higher Education, 75*(3), 249–284.

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

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon, 9*(5), 1-6.

Pulliam, N., & Sasso, P. A. (2016). Building institutional capacity for college access and success: Implications for enrollment management. *Academic Perspectives in Higher Education, 2*(7). Retrieved from http://digitalcommons.odu.edu/aphe/vol2/iss1/7/.

Richardson, R. C., and Skinner, E. F. (1992). Helping first-generation minority students achieve degrees. *New Directions for Community Colleges, 20*(4), 29-43.

Seemiller, C., & Grace, M. (2016). *Generation-Z goes to college.* San Francisco: Jossey-Bass.

Shields, S.A. (2008). Gender: An intersectionality perspective. *Sex Roles, 59*(5), 301-311.

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

Stephens, N. M., Fryberg, S. A., Markus, H. R., Johnson, C. S., & Covarrubias, R. (2012). Unseen disadvantage: How American universities' focus on independence undermines the academic performance of first-generation college students. *Journal of Personality and Social Psychology, 102,* 1178–1197.

Strauss, W. & Howe, N. (1991). *Generations.* New York: William Morrow and Company, Inc.

Stillman, D., & Stillman, J. (2017). *Generation-Z @ Work.* New York, NY: HarperCollins Publishers.

Tacoli, C. (2012). *Urbanization, gender and urban poverty: paid work and unpaid care work in the city.* Retrieved from http://www.unfpa.org/webdav/site/global/shared/documents/publications/2012/UEPI%207%20acoli%20Mar%202012.pdf.

Thornton Dill, B., McLaughlin, A. E., & Nieves, A. D. (2012). Future directions of feminist research: Intersectionality. In S. N. Hesse-Biber (Ed.). *Handbook of feminist research: Theory and praxis.* Thousand Oaks, CA: Sage Publications.

Tinto, V. (1999). Taking retention seriously: Rethinking the first year of college. *NACADA Journal, 19*(2), 5-9.

U.S. Department of Education. (2015). *Web tables: Profile of undergraduate students 2011–2012.* Washington, DC: National Center for Education Statistics. Retrieved from https://nces.ed.gov/pubs2015/2015167.pdf.

Walton, G. M., & Cohen, G. L. (2007). A question of belonging: Race, social fit, and achievement. *Journal of Personality and Social Psychology, 92,* 82–96.

Vuong, M., Brown-Welty, S., & Tracz, S. (2010). The effects of self-efficacy on academic success of first-generation college sophomore students. *Journal of College Student Development, 51*(1), 50-64.

