

LEADIng an Educational Movement for First-Generation College Students: A Mixed Methods Investigation of a First-Generation College Student Scholars Program

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This retrospective mixed methods study examines the outcomes of a university program designed to support first-generation college students. Comparing program alumni (n = 88) with national benchmarks (N = 29,560), we found that program participation increased the likelihood of students engaging in nearly all Gallup-Purdue “Big Six” high-impact practices (e.g., having a supportive mentor, participating in extracurricular activities), which are positively linked to preparedness for life after college. Follow-up interviews with alumni (n = 5) identified key impactful experiences (e.g., awareness building, peer support, professor support) that facilitated student success and areas for program improvement (e.g., expanding career and emotional support).

Key words: Gallup-Purdue Big Six, high-impact experiences, first-generation college students, college adjustment, alumni

First-generation college students—those whose parents or guardians have not earned a 4-year degree in the United States (RTI International, 2019b)—may face distinct challenges in navigating higher education. Beyond the demands and rigor of coursework, they must also decode the implicit norms and expectations of the university cultural setting that often reward prior cultural knowledge and access to these resources (Bourdieu & Passeron, 1977; Jack, 2016; Laiduc & Covarrubias, 2022; Stephens et al., 2014). These hidden rules, in addition to the structural realities many first-generation students face, can make it especially challenging for them to access and/or engage in the types of opportunities and experiences strongly linked to persistence and postgraduate success, such as mentoring relationships, research experiences, and internships.

To address these inequities, universities have developed various strategies and programs (e.g., first-year experience courses, learning communities, summer bridge programs) to orient first-generation college students to the college environment and provide structured guidance and access to high-impact practices. The Santa Clara University Leadership, Excellence, and Academic Development (LEAD) Scholars Program is one such program designed to provide first-generation college students with tailored support and resources as they transition to and through college.

This study used mixed methods to evaluate how the LEAD Scholars Program supported first-generation college students in navigating college, including how it fell short. To this aim, we surveyed program alumni about key, high-impact experiences that helped them succeed in college and compared their responses with those from a national sample. Then the team conducted follow-up, semistructured interviews with a subset of respondents about their program experiences to gain more insight into the strengths and areas of weakness of the program.

A Snapshot of First-Generation College Students

First-generation college students comprise more than half of the country's general undergraduate population (56%; RTI International, 2019a). Compared with continuing-generation college students, first-generation students are more likely to be female (63% vs. 52%; RTI International, 2019a) and Black, Indigenous, and/or people of color (54% vs. 39%; Redford & Mulvaney Hoyer, 2018). First-generation students are also more likely to come from a lower socioeconomic background (Ardoin, 2018; Bui, 2002) and have dependents to care for (30% vs. 16%; National Center for Education Statistics, 2018). Although it is common for students to hold jobs during college, first-generation college students tend to work more hours than their continuing-generation counterparts (National Center for Education Statistics, 2018), to be financially independent from their families, and to work to support themselves,

their education, and/or their families (Covarrubias et al., 2019; Engle & Tinto, 2008). Without financial support from parents, first-generation students are often forced to take out loans to accommodate the increasingly high cost of higher education, resulting in more significant debt than their peers (Engle & Tinto, 2008).

Taken together, these demographic and life experiences may also influence how first-generation students navigate and experience the university environment. That is, the structural realities of first-generation students may interact with the cultural norms of higher education in ways that shape their opportunities for engagement and academic success. Although these demographic and lifestyle differences can contribute to first-generation students' lower enrollment, retention, and graduation rates relative to their continuing-generation peers (Capannola & Johnson, 2022; Cataldi et al., 2018; RTI International 2019b; Stebleton & Soria, 2012), a narrow focus solely on these challenges can promote deficit perspectives of these students. Therefore, examining the sociocultural context of higher education provides a more comprehensive understanding of first-generation college student experiences.

THE SOCIOCULTURAL CONTEXT OF HIGHER EDUCATION

Ample research has illuminated how the college environment is its own cultural setting governed by particular norms, values, and expectations (Jack, 2016; Jenkins et al., 2013; Laiduc & Covarrubias, 2022; Stephens et al., 2012). Specifically, U.S. institutions of higher education are fundamentally based on Western ideals of individualism, which prioritize and reward independence, such as self-advocacy and direct pursuit of opportunities and resources by students (Fryberg & Markus, 2007; Patton, 2016; Phillips et al., 2020; Stephens et al., 2012). Prior knowledge and preparation for the college experience can assist students in how to navigate college successfully (Cataldi et al., 2018), but first-generation students may not have access to the same cultural guides (e.g., parents with prior knowledge about how the university works) to help them decode the new cultural landscape of college (Collier & Morgan, 2008; Jack, 2016; Lareau, 2015; Yee, 2016). Indeed, the transition to college for many first-generation college students, particularly those in selective 4-year institutions, has been described as “culture shock,” as they come to realize there are implicit expectations for students, such as pursuing internships or developing relationships with faculty, that not all students know (Jack, 2016).

The unique sociocultural challenges that first-generation college students face highlight the need for institutional support that makes explicit the hidden expectations in college. This support is particularly important given that success often depends not only on coursework but also on participation in key opportunities, such as mentoring relationships, research experiences, and internships, that can be less accessible to first-generation students. Scholars have described these kinds of opportunities

as high-impact practices, providing a framework for understanding which college experiences most strongly predict academic and long-term success.

HIGH-IMPACT PRACTICES

To enhance student engagement, learning, and retention, universities have implemented high-impact practices, such as first-year seminars, learning communities, undergraduate research opportunities, service learning, internships, and study abroad programs (Cataldi et al., 2018; Finley & McNair, 2013; Kuh, 2008; Kuh et al., 2017) designed to provide students with enriching educational experiences that promote deep learning, collaboration, and personal development (Finley & McNair, 2013). These practices may be particularly beneficial for first-generation students, as they offer structured support, mentorship, and opportunities for meaningful engagement within the academic community, helping to bridge the barriers to access or gaps in experience they may encounter (Conefrey, 2021; Doane et al., 2024; Finley & McNair, 2013; Jehangir, 2010; Jehangir et al., 2012; Kuh, 2008). For example, interviews with high-achieving first-generation college students demonstrated how engaging in high-impact practices (e.g., participating in faculty-mentored research, developing strong relationships with mentors) allowed them to develop a stronger appreciation of academic research and its value in the university (Demetriou et al., 2017). Moreover, these practices offer practical skills and real-world experiences that can strengthen the connection between academic knowledge and career readiness, leading to opportunities for hands-on experiences applicable to future careers (Demetriou et al., 2017).

The Gallup-Purdue “Big Six” Experiences

Whereas high-impact practices encompass a wide range of opportunities, researchers have identified the “Big Six” college experiences that are mostly strongly associated with positive student success outcomes, such as a shorter length of time to degree and greater feelings of preparedness for life after college (Seymour & Lopez, 2015). These experiences fall under two overarching categories: support (e.g., having a mentor who encourages the student to work toward their goals and dreams; a professor who truly cares for the student; at least one professor who excites the student about learning) and experiential learning (e.g., having an internship or job that promotes the application of classroom learning; being active in extracurricular activities and organizations; working on a long-term project that spans more than one academic term; Gallup, 2014).

With a nationally representative sample of nearly 30,000 U.S. college graduates, researchers demonstrated the power of participating in these experiences. The majority (82%) of all respondents who strongly agreed that they experienced all Big Six experiences felt that college prepared them well for life after college, compared

with 5% who did not (Seymour & Lopez, 2015). Additionally, graduates who engaged in each of the Big Six experiences were about twice as likely to be engaged in their jobs (Gallup, 2014). Thus, the Big Six offers concrete indicators of high-impact experiences that can facilitate first-generation college students' time to degree, college retention, and success (Finley & McNair, 2013).

Despite their benefits, only 3% of all college graduates felt they had all of the Big Six experiences (Gallup, 2014). This number may be especially low for first-generation college students, who are less likely to engage in high-impact practices (see Finley & McNair, 2013; Kuh, 2008; cf. Shi et al., 2023). Given the academic and long-term benefits of the Big Six experiences, it is important to investigate how first-generation college students gain access to the Big Six and whether institutional programs support these opportunities.

STUDY CONTEXT

Santa Clara University, a private 4-year university on the West Coast, established the LEAD Scholars Program in 2003 to provide first-generation college students with support and resources to ease their college transition and succeed academically. For example, as part of this program, LEAD Week, an intensive 1-week period, aimed to orient students to the university environment by allowing them to start classes early, attend useful seminars and workshops, and help them begin building relationships with their peers.

Study Overview

Using a mixed methods design, this retrospective study examined the experiences of alumni who completed the LEAD Scholars Program, particularly as they considered key facets of the program that they found most critical for their academic and long-term success. We focused on alumni perspectives, given their ability to reflect more holistically on how the program influenced their postgraduation success, offering a more complete view for evaluation.

Specifically, this study combined quantitative data from the Gallup-Purdue Big Six Index with qualitative insights from alumni interviews to examine the following: Were LEAD scholars more likely to participate in “Big Six” high-impact experiences than the national average? How did the LEAD Scholars Program support students' academic experiences (and where did it fall short)?

Using standardized measures of key educational experiences and outcomes allowed for comparisons with national benchmarks, whereas interviews contextualized these findings by offering insight into the key features and processes underlying program

effectiveness. This combined approach provides complementary forms of evidence and offers a foundation for evaluating the LEAD program's long-term impact and informing future program development initiatives.

Methods

RESEARCHERS

The research team consisted of five researchers: a first-generation Latina faculty member, two recent Asian American female graduate program alumnae, one recent Indian American male alumnus, and a White male first-generation graduate student. Congruent with qualitative research standards, members identified their biases and expectations before conducting the study (Denzin & Lincoln, 2011) to decrease potential research bias and to be mindful of any biases that may occur. A preliminary discussion among the research team exploring expectations and biases considered how the transition to college could be especially challenging for first-generation students. The team agreed that with support structures, these challenges could be overcome and students could have meaningful and successful college experiences and careers.

PROCEDURES

At the time of this study, 416 students had completed the LEAD program since its inception in 2003. However, given how the program has evolved over time, this study focused on recent alumni, given that their perspectives would be most relevant and helpful in evaluating the program. A total of 120 alumni from the past 10 years were invited to complete a survey via email, with a response rate of more than 73% ($n = 88$). The online survey contained both closed-ended and open-ended questions regarding their LEAD and general undergraduate experiences. All 88 participants completed the survey assessing LEAD experiences, engagement in college activities, and general wellness, and thus they were included in the sample for analyses.

At the end of the survey, participants were invited to take part in a follow-up interview. Interested participants were placed on a randomized list. The research team began scheduling and conducting interviews from this randomized order. After conducting five interviews, the team determined that data saturation had been reached. Given concurrent resource constraints (e.g., expiring grant funds, graduating research team members), the research team concluded data collection at this point. Each interview lasted approximately 1 hour and was audio-recorded with the participant's permission. Interviews were then transcribed and uploaded to NVivo, a qualitative analysis software, for analysis. The university's institutional review board approved all procedures.

Instrument

Demographic questionnaire. For this study, the research team created a quantitative self-report questionnaire to gather participants' background information, including age, gender, education, and employment status.

Gallup-Purdue Big Six Index. The Gallup-Purdue Big 6 Index identifies six college experiences strongly related to long-term life outcomes, such as employee engagement and well-being (Gallup, 2014). The items are categorized into two areas: support and experiential learning. The support items examine the role of professors in engaging students in learning, caring for students, and encouraging students' pursuit of goals. The experiential learning items focus on activities, including internship engagement, extracurricular activities, and long-term projects. Items are rated on a 5-point scale from 1 (*strongly agree*) to 5 (*strongly disagree*).

LEAD experiences. Four open-ended survey items assessed the aspects of the program that alumni found most helpful to their academic success and areas of potential growth or expansion. Survey responses were complemented by a semistructured interview, consisting of open-ended questions related to (a) student experiences with the LEAD program, (b) how the program influenced them, (c) reflections on LEAD post-graduation, (d) perceptions of key elements of the program, and (e) potential areas of growth or expansion.

PARTICIPANTS

Survey participants' ages ranged from 22 to 34 years ($M = 25.77$, $SD = 2.96$) with 71.6% ($n = 63$) of the participants identifying as female, 23.9% ($n = 21$) identifying as male, and 4.5% ($n = 4$) identifying as nonbinary/other. Participants identified as Latinx (59%, $n = 52$), African American/Black (15%, $n = 13$), Asian/Pacific Islander (7%, $n = 6$), Mixed Race (8%, $n = 7$), and White (6%, $n = 5$); a small subset did not respond to questions about their race/ethnicity (6%, $n = 5$). All participants received their bachelor's degree, with 18.1% receiving a postgraduate degree or a master's or higher. Most participants (80.7%) were working full time at the time of the study. Interview participants' ages ranged from 22 to 30 (two female participants, three male participants). Four identified as Mexican/Mexican American, and one identified as Asian American and White.

Results

SURVEY RESULTS

This study examined how LEAD students compared with a norming sample representative of the general college population on measures of high-impact college experiences ("Big Six"). We organized all analyses according to the two Big

Six categories: support and experiential learning. An odds ratio was calculated by comparing LEAD alumni survey data with data from the Gallup-Purdue Index (Gallup, 2014), which surveyed 29,560 recent graduates nationally. Percentages were based on students “strongly agreeing” to participate in the experience. LEAD students were 3 times more likely to participate in Big Six high-impact experiences as compared with the national average, $OR = 3.0, p < .05, 95\% \text{ confidence interval (CI) [1.5, 6.6]}$.

Within the support category, LEAD students were close to 1.5 times more likely to have a professor who cared about them, $OR = 1.48, p < .05, 95\% \text{ CI [.04, .22]}$. Students were 1.25 times more likely to have at least one professor who made them excited about learning, $OR = 1.25, p < .05, 95\% \text{ CI [.06, .26]}$. LEAD students were almost 2.5 times more likely to have a mentor who encouraged them to pursue their goals and dreams, $OR = 2.45, p < .05, 95\% \text{ CI [1.7, 4.2]}$. Overall, LEAD students were 2 times more likely to receive all three of the high-impact support experiences, $OR = 2.14, p < .05, 95\% \text{ CI [.09, .23]}$, suggesting that LEAD participation notably increased students’ access to meaningful faculty support.

Within the experiential learning category, LEAD students were 2 times more likely to be involved in extracurricular activities, $OR = 2.00, p < .05, 95\% \text{ CI [.12, .28]}$, and 1.5 times more likely to have worked on a long-term project, $OR = 1.53, p < .05, 95\% \text{ CI [.07, .27]}$. Students were not statistically significantly more likely to have had a job or internship that applied classroom learning, $OR = 1.10, p > .05, 95\% \text{ CI [-.07, .13]}$, indicating a potential area for program growth. However, overall, LEAD students were more than 2.5 times more likely to have engaged in all three experiential learning activities compared with national averages, $OR = 2.67, p < .05, 95\% \text{ CI [.05, .15]}$. For summary of quantitative findings, see Table 1.

Table 1

Percentage and Odds Ratio Comparison of Students Participating in “Big Six” High-Impact Experiences

Variable	LEAD ^a	GPI ^b	Odds Ratio (95% CI)
Support			
My professors cared about me as a person	40%	27%	1.48 [.04, .22]*
I have had at least one professor who made me excited about learning	79%	63%	1.25 [.06, .26]*
I had a mentor at SCU who encouraged me to pursue my goals and dreams	54%	22%	2.45 [.23, .41]*
Support total	30%	14%	2.14 [.09, .23]*
Experiential learning			
I had an internship or job that allowed me to apply what I was learning in the classroom	32%	29%	1.10 [-.07, .13]
I was extremely active in extracurricular activities and organizations while I attended SCU	40%	20%	2.00 [.12, .28]*
I worked on a project that took a quarter or more to complete	49%	32%	1.53 [.07, .27]*
Experiential learning total	16%	6%	2.67 [.05, .15]*
Big Six total	9%	3%	3.00 [.02, .10]*

Note. GPI = Gallup-Purdue Index sample; LEAD = Leadership, Excellence, and Academic Development; SCU = Santa Clara University.

^a*n* = 88. ^b*N* = 29,560.

**p* < .05.

INTERVIEW FINDINGS

Researchers followed the consensual qualitative research methodology to create a coding scheme that categorized all responses (see Hill et al., 1997, 2005). They identified three primary domains: impactful experiences, areas of growth, and limitations, each with multiple subcategories described below.

Impactful Experiences

Researchers coded impactful experiences when a participant described a program experience or service as providing support or guidance. More specifically, the team noted five distinct categories describing the type of impactful experience: awareness building, connection, peer support, professor support, and university adjustment. Awareness building was defined as opportunities to foster growth and develop a greater understanding of cultural differences and social justice. Exemplary quotes

for awareness building included “It encourages you to think outside of the box and to think very critically”; “Throughout my college years I did a lot of outreach with MECHA [Movimiento Estudiantil Chicano Aztlán] and the MCC [Multicultural Center]”; and “I think LEAD addresses a lot of those issues [diversity and social justice], either in the classroom or just by the diversity of the people that are involved in the program.”

Connection was coded when participants described the LEAD program as creating opportunities for LEAD students to build and maintain close connections and relationships. Exemplary quotes describing the connections made through the program included “Because we all shared a similar experience, we all came from a similar, we all had in common a similar human condition” and “A lot of LEAD scholars ... I was still talking with them [senior year], and I was still like interacting with them, still going to lunch. ... I made a few a few friends like outside of LEAD scholars program but not at that degree ... or closeness.”

Peer support was defined as LEAD peers providing academic and social encouragement and assistance. All participants described how developing strong relationships with peers through LEAD resulted in lasting friendships outside of the LEAD context. The following quotes are illustrative: “It also helped make sure that I have a very welcoming community of friends. ... You know like right before even school started and I—I was surprised by how much we bonded” and “Building those relationships and friendships I think was just way easier because we had all these team bonding like ... you couldn’t not feel attached to everyone in the program.”

One student reflected on the tight-knit bond that carried into the school year: I think that I’ve still remembered that first week; it was a lot of fun, and I think was really close—I remember it was such a huge transition because when we started the first week of school, we would still meet up and we would push all the tables together and there would be like fifty of us at a table. We would take up like half of [the student center] because we just like, wouldn’t let go of each other. And we just had spent so much time together that you know, it was—we were already comfortable with each other.

Professor support was defined as a professor from LEAD providing encouragement and guidance to students. Illustrative quotes included “The initial connections that we have had with the professors who we were working with, I think, was also great and they were a source that we could go to as the year progressed”; “For me that was like the big highlight because he [the professor] kind of gave me so much support”; and “A lot of professors were just so amazing like they were just so approachable, down to earth, like really like big role models.”

University adjustment was defined as LEAD orienting students to the university setting and academic climate. Exemplary quotes included “It helped me to get a better understanding of [the university] as a whole”; “It helped me to familiarize myself with ... campus like even where my classes will probably be at”; and “I would be interacting with some of the professors ... because during LEAD week we were enrolled with [and got to meet] different professors from different departments.”

Areas of Growth

The next domain—areas of growth—captured when participants suggested program improvements to strengthen the LEAD program. The domain comprised three categories: career support, emotional support, and program expansion.

Career support was coded when participants expressed a desire for increased support from alumni and professors in vocational areas. Several participants expressed a desire for more assistance in career planning. One participant shared the following:

One piece of advice I'd give is [make sure students] ... in the LEAD program are exposed to very different types of careers knowing that there are different routes you can take and many different career choices out there for you.

Another participant, recognizing the importance of skills such as networking for professional success, identified a new area where LEAD could expand:

That's something that I wish I could've been taught, like how to better network early on during my college career ... because I saw that in a lot of other like ... in other students. Like the way they were networking, they were very efficient.

Emotional support was defined as participants' desire for greater individualized attention and guidance for students dealing with personal hardships and/or academic issues. This sentiment became reflected in participants' suggestions for “more communication and mentorship ... or like maybe monthly [check-ins].” Another participant echoed the recommendation for more check-ins, between the program and students, as well as among students:

Check in [with] us to kind of check in with each other to see how we're each doing and then you know to lend that hand 'cause you know you're not always going to. ... Proactively checking in on everyone. ... Even if it's like a just a one-hour social session, I think that would be helpful just to see how everyone's doing.

Program expansion was defined as participants' expression of hope for extending the scope of LEAD, including increasing program duration and integrating it more fully with the university. Notably, all participants described the benefits of an extended program. For example, participants shared, "I think that that's probably going to be a better use of your resources, honestly, stretching it out over the four years" and "getting students back together [after the first year]."

Limitations

The limitations domain was defined as restrictions limiting program effectiveness. The domain comprised two categories: academic adjustment and social transition.

Academic adjustment was coded when participants described feeling unprepared for the rigor of mainstream courses, particularly after transitioning out of the courses specifically designed for LEAD students and taught by designated faculty. For example, a student shared, "I felt that [LEAD] didn't prepare me academically for other future [classes] ... classes in general that were extremely demanding." Part of this could be attributed to students' perceived differences in support from faculty teaching in the LEAD program compared with those outside the program. Noting this contrast, one student shared, "LEAD Scholar professors were strict but they were still very considerate because they knew you were first-generation ... they understood that it's a huge transition ... but had they just taught or prepared us for how it's taught here [at the university]." In the interviews, participants also noted that adjusting to courses felt difficult because of mainstream faculty's negative judgments of LEAD scholars. One participant stated,

I felt like from some professors, like when they talked to them about the LEAD program, they weren't very happy about it or like they had some type of ... I don't want to say resentment but they just like, "Why do you people get special treatment?"

Social transition was defined as the overall lack of preparedness for the social adjustment to college. One student described the experience after the LEAD program ended: "The bubble kind of popped and we all kind of, like you interacted with the whole university ... kind of got that shock of the whole university." Similarly, "If I wasn't interacting with my fellow peers, my LEAD peers—I didn't really have a network outside of that—or I didn't actually have much interaction." Table 2 summarizes the three main qualitative domains, along with their subcategories and descriptions.

Table 2*Qualitative Results Summary*

Domain/Category	Description
Impactful experiences	Program experiences and services providing support and guidance
Awareness building	Opportunities to foster growth and develop greater understanding of cultural differences and social justice
Connection	Opportunities for students to build and maintain close peer relationships
Peer support	Program peers provide academic and social encouragement and assistance
Professor support	Professor provides encouragement and guidance to students
University adjustment	Program orients students to university setting and academic climate
Areas of growth	Suggested improvements to strengthen program
Career support	Increase alumni and professors' vocational support and guidance
Emotional support	Provide greater individualized attention and guidance for students dealing with personal hardships and/or academic issues
Program expansion	Extend the scope of the program, including longer program duration and greater university integration
Limitations	Restrictions limiting program effectiveness
Academic adjustment	Lack of preparedness for rigor of mainstream courses
Social transition	Lack of preparedness for the social adjustment to college

Discussion

Although first-generation college students are less likely to participate in high-impact experiences, which are linked to positive academic and postgraduation outcomes (Finley & McNair, 2013; Kuh, 2008), our quantitative results demonstrate the powerful impact of the LEAD program compared with a nationally representative sample, which includes both first-generation and continuing-generation college students.

This comparison is not direct, but it underscores the program's strength: LEAD students are more likely to participate in almost all high-impact experiences, even when compared with a national sample that includes continuing-generation students; students who presumably are already more likely to engage in high-impact practices (Finley & McNair, 2013). These findings emphasize the importance of targeted support programs in promoting first-generation college students' academic and personal development.

Our findings indicate that the LEAD program successfully addresses the support domain of the Big Six. Quantitative findings illustrated that LEAD students were more likely to feel that they had (a) a professor who cared about them as a person, (b) a professor who made them excited to learn, and (c) a mentor who encouraged them to pursue their goals and dreams. Interview responses echoed this sentiment, wherein students emphasized the value of professor engagement and guidance through the program. Outside the Big Six support domain, our interviews also highlighted the important role of peer support, which aligns with research illustrating how peer connections can improve academic adjustment and success (Otieno, 2023).

Regarding the experiential learning domain, quantitative results suggest that compared with national sample, LEAD students were more likely to engage in extracurricular activities and long-term academic projects. Although alumni did not explicitly touch on these experiences in the interviews, their discussion of how LEAD oriented students to the university climate, characterized by the university adjustment category, may help offer a pathway for these processes. They noted how LEAD's intentional efforts to help students have more experiences beyond coursework (e.g., including programming, clubs, organizations), as well as encouraging them to become involved, supported students' ability to become more engaged on campus. This improved adjustment and engagement may be related to LEAD's commitment to awareness building, in which the program encouraged students to gain a deeper understanding of their cultural context and issues related to social justice. This more critical understanding of the social forces within the university served as a springboard for their engagement, inspiring many to join cultural clubs or volunteer in university programs geared toward serving the community. Unexpectedly, LEAD students were not more likely to have an internship or job that allowed them to apply their learning outside the classroom (32% of LEAD students compared with 29% nationally). This finding mirrors the participants' interview responses, identifying how the program could improve career support for its students. Participants noted that they needed more vocational guidance, which aligns with the theme of program expansion (e.g., broadening its scope and increasing program length). Despite the many benefits of LEAD documented in the Big Six, students continued to note the need for greater emotional support, particularly regarding the social

adjustment and navigating the expectations of a rigorous university environment. Interviews highlighted the ongoing challenges in both academic and social adjustment, consistent with work demonstrating the importance of providing transitional support for first-generation students across academic, social, and emotional domains (López et al., 2023; Schuyler et al., 2021).

LIMITATIONS AND FUTURE DIRECTIONS

Although this research identifies important factors that promote the success of first-generation students, this study has several limitations. First, the sample consisted predominantly of female-identified participants, which may have skewed responses. Second, all data for this retrospective were self-reported by alumni, some of whom participated in LEAD up to 10 years prior, introducing potential recall bias. Although no differences were found between graduation year and responses, there may have been additional aspects of the program that they did not recall or accurately capture in their responses. However, asking program alumni to reflect on key experiences outlined in the Big Six and in the interview created space for participants to name the most personally impactful and meaningful aspects of the program, even if some details may have been forgotten. Third, the relatively small sample size and the comparison of LEAD alumni to a national benchmark that included both first-generation and continuing-generation students, rather than a matched sample, could limit the precision of the comparison.

Future research could address these limitations by recruiting a larger and more diverse sample of program participants, including more male-identified students. A multiyear study following students throughout the program and beyond would reduce the reliance on retrospective recall and allow for a more nuanced understanding of program impacts and effectiveness of supports. For example, identifying when students need the most career support could help inform tailored opportunities that target particularly challenging issues at given points in their college career. Additionally, using a matched sample of first-generation students could provide a better comparison to more accurately assess the program's impact.

IMPLICATIONS FOR PRACTICE AND PROGRAM ENHANCEMENTS

This research highlights the impact that targeted support programs can have on the success of first-generation college students. This study was completed with LEAD alumni when the program had limited funds, and the program duration and scope primarily focused on the transition to college during the first year. Notably, this research work was conducted to evaluate the program, centering program participants' expertise by drawing on their experiences to inform institutional support. Since completing this research, the LEAD program has expanded into a multiphase program that targets three levels spanning the time before students enter the

university and continues after graduation. In the first level, the program seeks to ease the transition to college by helping students acclimate to campus, build relationships, prepare for the academic expectations of a university, and learn about university resources. Specific practices include offering students the opportunity to move to campus housing a week before school starts, to participate in a weeklong orientation consisting of seminars with dedicated mentoring, and to interact with faculty who teach 5-day “preview” courses in various subjects. In the second level, the program aims to help students thrive in college with ongoing advising, leadership opportunities, and funding opportunities to support engagement with university programs and opportunities. The final level aims to assist students and alumni in their transition to a career. For students, this includes opportunities for career exploration via courses and site visits and networking opportunities with program alumni. For alumni, practices include opportunities for professional development, social events, and continued networking and relationship building.

The LEAD expansion reflects the powerful role of collaborations and efforts involving student affairs practitioners, researchers, and students. In addition to the multiphased approach to supporting first-generation college students, the university hired additional staff focused on mental health and emergency funding for students in need. This added support was a response to LEAD students’ requests for greater emotional support.

Conclusion

The LEAD Scholars Program is a model for how targeted support for first-generation college students can increase engagement in high-impact experiences and enhance students’ academic and social adjustment during the transition to college. Alumni reflected that faculty mentoring, peer relationships, and opportunities for orienting to the college environment were key to their success, reinforcing the importance of support-oriented experiences in the Gallup-Purdue “Big Six” framework. The program also increased the likelihood of students engaging in experiential learning aspects, such as working on long-term projects and participating in extracurricular activities, suggesting that intentional programming can meaningfully improve access to key experiences associated with college and long-term success.

DATA AVAILABILITY STATEMENT

1. The participants of this study did not provide written consent for their data to be shared publicly. Because of the sensitive nature of the research, supporting data are not available.
2. The Gallup-Purdue data that support the findings of this study are available at <https://news.gallup.com/poll/182306/big-six-college-experiences-linked-life-preparedness.aspx>.

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