

Effects on Students' Holistic Development Through a Comprehensive Second-Year Program

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Though many institutions provide robust first-year experience programs to help students adjust to college life, similar programs designed for second-year students are generally limited or nonexistent. As a result, second-year students often face unique stressors and developmental milestones with diminished institutional support. This study describes how a comprehensive second-year program at one university contributes to second-year students' holistic development: namely, their sense of belonging, perseverance, and self-efficacy. From these results, we provide implications for practitioners.

Keywords: second-year students, second-year programs, second-year student development, sophomores

The second year of college can be a time of exhilarating change for undergraduate students. As students move beyond the structure and guidance provided by first-year experience programs, many begin to feel more autonomous and start to exhibit greater problem-solving abilities (Ennis-McMillan et al., 2011). Academic coursework often becomes more rigorous in the second year (Ruffalo Noel Levitz, 2015). In addition, students face questions related to their identity, purpose, and career interests; emotionally, they begin to feel as though the choices they make as second years play a key role in determining their future (Heier, 2012; Schaller, 2010; Stockenberg, 2007; Tetley et al., 2010). Theoretically, the second year marks a pivotal shift from a first-year experience defined largely by exploration to a life of more focused and purposeful choices that ultimately lead to commitments (Schaller, 2005). The second year is meant to bridge students' first-year introduction to university life and the milestones that occur later in college and then to post-graduation.

Such a theoretical view of second-year development often does not match reality. Some students' plans crystallize during their second year, but many describe this stage of their undergraduate journey as a period of confusion, frustration, and doubt (Schaller, 2010; Sterling, 2018; Tetley et al., 2010). Among the common challenges second-year students encounter, three themes emerge: questions about academic progress and career interests, a search for meaning related to identities and a sense of purpose, and a need to redefine social relationships and a sense of belonging within the campus community (Heier, 2012).

QUESTIONING ACADEMIC PROGRESS AND CAREER

At the start of their second year, many students have not declared their major field of study nor been accepted into their academic focus departments (Ennis-McMillan et al., 2011; Gahagan & Hunter, 2006; Schreiner & Young, 2017). Nevertheless, students begin to enroll in more challenging, upper-level coursework during their second year. Compared to their first year, second-year students are more likely to adopt a maladaptive learning mindset as they focus more on grades and less on comprehension (Lieberman & Remedios, 2007); measures of goal commitment, motivation, and hope all decline during the second year (Ennis-McMillan et al., 2011). Second-year students are less satisfied with multiple dimensions of their academic experience, including limited relationships with faculty, delayed feedback on their academic progress, and academic advising that is impersonal in nature (Sterling, 2018; Tetley et al., 2010).

The difficulties of navigating coursework and deciding one's major are directly connected to career choice. According to one national survey (Ruffalo Noel Levitz, 2015), more than two-thirds of second-year students have expressed a desire for

help from the institution regarding career exploration, specifically asking for more assistance defining goals relevant to their major and selecting coursework that aligns with their career interests; writing an academic plan that puts them on course for graduation and future employment; and identifying relevant internships.

SEARCHING FOR IDENTITY AND PURPOSE

Questions about declaring a major and pursuing a career path are examples of a broader search for meaning and identity that characterize the second-year experience (Stockenberg, 2007; Tetley et al., 2010). Kranzow and Foote (2018) noted that one of second-year students' greatest challenges is questioning their sense of purpose. The search for purpose manifests across several dimensions, including declaring an academic major, deciding on a future career, defining one's beliefs and values, and exploring social identities (Gahagan & Hunter, 2006; Stockenberg, 2007; Tetley et al., 2010).

REDEFINING SOCIAL ENGAGEMENT AND CONNECTIONS TO THE INSTITUTION

In addition to questioning academic progress, career options, identity, and purpose, second-year students are still defining their social relationships and sense of belonging at the institution (Schaller, 2010).

Second-year students are generally left to cultivate new relationships and navigate developmental hurdles on their own. A wealth of attention and institutional resources have historically focused on the first-year experience, helping students learn to navigate university life and develop a sense of belonging at the institution (Feldman, 2005; Greenfield et al., 2013; Padgett et al., 2013; Rendón et al., 2004; Tang et al., 2021; Vaccaro & Newman, 2017). Second-year student programming is often less resourced or nonexistent. As institutions direct much of their attention to first-year populations, the perceived message among second-year students is that they are no longer an important class within the campus community (Gahagan & Hunter, 2006; Schaller, 2007; Sterling, 2018). Certain forms of financial aid are only available to first-year students; thus, at a time when students are already encountering new stressors, they are also now responsible for covering a greater share of their cost of attendance (Heier, 2012). Are institutions of higher education recognizing the unique challenges of second-year students and providing them with additional support that meets their developmental needs?

PROBLEM STATEMENT

Across higher education, the dearth of second-year programs leaves students navigating a crucial period of transition without adequate guidance, resources, or support from their institution (Gansemer-Topf et al., 2007; Kranzow & Foote, 2018; Schaller, 2018). However, second-year programs have enormous potential to help

students navigate the challenges they encounter during the second year. As second-year students continue to grapple with questions about who they are, where they belong, and what career options they have, intentionally designed programming can provide dedicated time to explore these areas on a deeper level. Examples include strengths and values assessments, goal-setting activities, structured mentoring relationships, and experiential learning opportunities. A variety of approaches can be utilized to develop meaningful programming for second-year students, but it is important to incorporate planned opportunities for student reflection to enhance their decision-making abilities (Schaller, 2018). Few institutions are taking a comprehensive view of second-year development, which includes fostering relationships, building meaningful connections to the institution, and supporting students' academic, professional, and personal growth. Therefore, the time is right for university leaders to recognize and respond holistically to the unique needs of second-year students as they persist to graduation. This paper examines the effects of a holistic approach on second-year students' development.

THE SECOND-YEAR PROGRAM

During the 2013-2014 academic year, leaders at The Ohio State University launched the Second-year Transformational Experience Program (STEP). STEP is a holistic, multi-semester program designed to support second-year students in their persistence to their third year, encourage personal and professional growth, and strengthen students' engagement with the university. Knowing that measuring student growth across time would lend credence to the effectiveness of the program, we compared STEP students to peers who chose not to participate in STEP but could have participated. The purpose of the current study was to describe student differences by comparing measures of growth and development between students who participated in STEP and those who did not. The population of this study is second-year students during the 2017-2018 academic year.

Methods

PROGRAM OVERVIEW

STEP is available to all second-year students, defined as those in their second year of college and who are within two years of their high school graduation year as identified in their transcript. Throughout the autumn semester of their second year, students meet weekly with a cohort of approximately 16 peers led by a faculty mentor. During their time together, faculty mentors encourage a sense of community by fostering relationships among the cohort and creating meaningful connections to the university. Faculty mentors engage their cohort in activities that support self-discovery and the development of personal and professional goals. In addition to weekly cohort meetings, students can participate in co-curricular programs covering a wide array

of content areas (e.g., financial wellness, career preparation, academic success, and global citizenship). STEP students have the opportunity to develop a capstone project in the spring semester.

POPULATION SAMPLE

Study participants included undergraduate students at The Ohio State University Columbus campus who were completing their second year of college during the 2017-2018 academic year. All rising second-year students were automatically enrolled in STEP but had the choice to opt out of the program if they did not wish to participate. Out of the 5,453 students who were included in the study, 2,953 elected to participate in STEP. The remaining 2,500 students served as a comparison group and were randomly selected from the population of second-year students at the university who were not participating in STEP. Students were considered second years if they graduated from high school between October 2015 and September 2016 and completed their first year of college during the 2016-2017 academic year. Students in STEP and comparison group were invited to complete a questionnaire at the beginning and end of their second year. We present response rates for each group in Table 1.

Table 1

Response Rates at Each Time Point

Term	Semester 1		Semester 2		Both time points	
	STEP	Comparison	STEP	Comparison	STEP	Comparison
Invited (<i>n</i>)	2,953	2,500	2,712	2,489	2,712	2,489
Responded (<i>n</i>)	1,168	551	741	338	533	198
Response rate (%)	39.6%	22.0%	27.3%	13.6%	19.7%	8.0%

Survey data were connected to demographic information provided by the university. The STEP group consisted of 393 (76.9%) females and 116 (22.7%) males. There were four students whose sex was undisclosed. Of these students, 397 (77.7%) identified as White or European American; 45 (8.8%) identified as Asian or Asian American; 20 (3.9%) identified as African American, Black, or African; two (0.4%) identified as Hispanic and/or Latinx; 38 (7.4%) were multiracial; and nine (1.8%) chose not to disclose their race or ethnicity. Demographic information for 22 STEP students was unavailable.

The comparison group consisted of 106 (57.0%) females and 80 (43.0%) males. Of these students, 131 (70.4%) identified as White or European American; 28 (15.1%) identified as Asian or Asian American; six (3.2%) identified as African American, Black, or African; one (0.5%) identified as Hispanic and/or Latinx; 16 (8.6%) were

multiracial; and four (2.2%) chose not to disclose their race or ethnicity. Demographic information for 12 students in the comparison group was unavailable.

For reference, the overall university undergraduate population on the Columbus campus in 2017-2018 was about 50% male and 50% female; about 70% of students were White or European American; about 7% were Asian or Asian American; about 6% were African American, Black or African; about 4% were Hispanic and/or Latinx. Therefore, female students were overrepresented in both the STEP and comparison groups.

QUESTIONNAIRE AND SCALES

Students in both groups were invited to complete questionnaires at the beginning of Semester 1 and at the end of Semester 2 to explore the effects of participation in the program. Items on the questionnaires focused on the extent to which students agreed with a series of statements pertaining to different areas of growth and development. The questionnaire listed the following potential areas: belonging to the university, perseverance, and academic, leadership, and career self-efficacy. Academic self-efficacy refers to a student's belief in their ability to succeed in academic tasks, such as studying and achieving good grades, while leadership self-efficacy is the confidence in one's ability to lead others effectively, including decision-making and team motivation. Career self-efficacy pertains to the belief in one's ability to succeed professionally (Bandura, 1997; Chemers, Watson & May, 2000). Each type of self-efficacy shapes behaviors and decisions within its domain. For perseverance and belonging, students responded using a 5-point Likert scale where 1 represented *Strongly Disagree* and 5 represented *Strongly Agree*. For the scale measuring each type of self-efficacy (i.e., academic, leadership, career), students were asked to rate their confidence from 0% (*Not at all confident*) to 100% (*Completely confident*), based on studies by Vancouver et al. (2014) and Halper et al. (2018). A mean or average score was calculated for each scale. Mean scores were between 1–5 for the perseverance and belongingness scales and out of 100% for the self-efficacy scales. Students had to provide a response to at least 80% of the scale items to receive a score in each area. Higher scores indicated greater feelings of belongingness, perseverance, and confidence.

Experts have cited the sense of belonging, perseverance, and self-efficacy as constructs that contribute to key measures of student success, namely satisfaction, involvement, retention, and academic progress (Han et al., 2017; Tinto, 2017; Vuong et al., 2010; Wang & Kennedy-Phillips, 2013). However, these variables are, on their own, indicators of student development.

DATA ANALYSIS

Mean scores for each scale were analyzed for the STEP students and the comparison group. Dependent samples t-tests were conducted to identify potential changes in mean scores between the first and second time points for each group. An analysis of variance (ANOVA) was performed on each scale to identify if trends for the STEP group significantly differed from those of the comparison group.

Results

In Table 2, we report the overall trends of students' self-reported levels of growth and development related to goals of STEP and the potential group differences across the two time points. The column denoted "STEP change" indicates if STEP students grew significantly in each area between autumn 2017 and spring 2018. The column denoted "Comparison change" indicates if the students in the comparison group changed significantly (i.e., either grew or declined) over time. An upward arrow symbol (↑) indicates significant growth in either group over time. A downward arrow symbol (↓) indicates a significant decline in either group over time. The rightmost column displays notations indicating if the trends (i.e., STEP student change and comparison group change) significantly differed.

Table 2
Descriptive and Inferential Statistics for all Measures

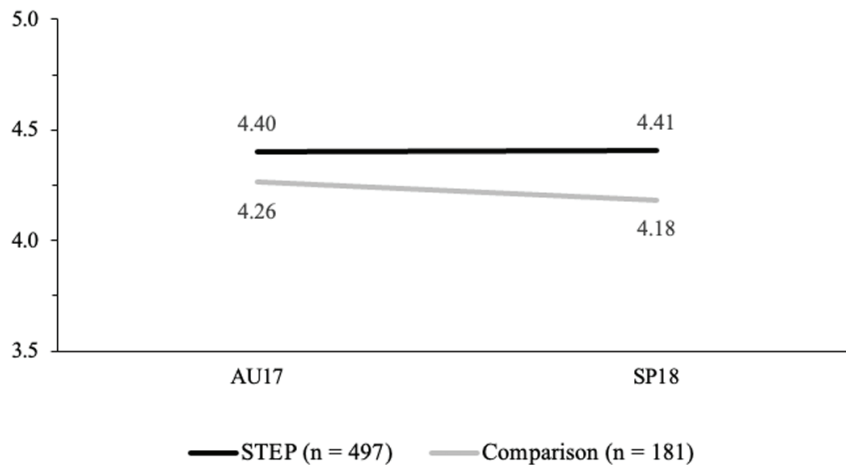
Measure	STEP		STEP change	Comparison		Comparison change	Repeated
	Semester 1	Semester 2		Semester 1	Semester 2		ANOVA significance
Perseverance	4.01	4.08	(↑)*	4.00	3.98		†
Belonging at university	4.40	4.41		4.26	4.18	(↓)*	†
Academic self-efficacy	81.60	83.05	(↑)**	79.17	77.63		**
Career self-efficacy	74.15	78.70	(↑)***	71.90	73.47		*
Leadership self-efficacy	83.33	85.21	(↑)***	79.51	81.50	(↑)†	

Note. † $p < .1$. * $p < .05$. ** $p < .01$. *** $p < .001$.

We predicted that students in STEP would demonstrate an increase in their sense of belonging to the university over the course of the program and that students not in STEP would not demonstrate change. We conducted paired sample *t*-tests and repeated measures ANOVA analyses to test this prediction. STEP students showed no change in their belongingness over time ($p = .69, d = .02$). However, those not in STEP showed significant decreases in belongingness over the course of the second year ($p = .04, d = .10$). When comparing STEP and non-STEP student trends over time, there was a marginally significant difference, $F(1, 676) = 3.76, p = 0.05, \eta p2 = 0.006$ (see Figure 1).

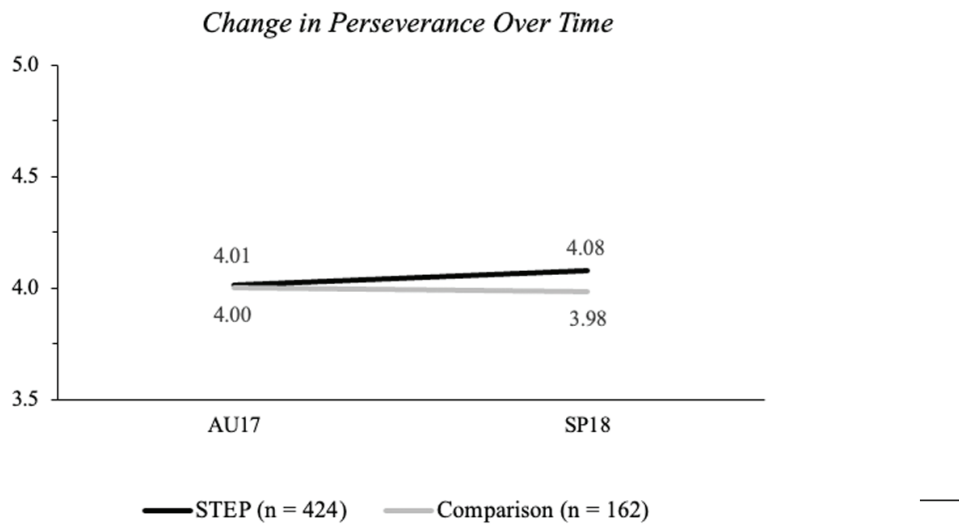
Figure 1

Change in Sense Of Belonging Over Time



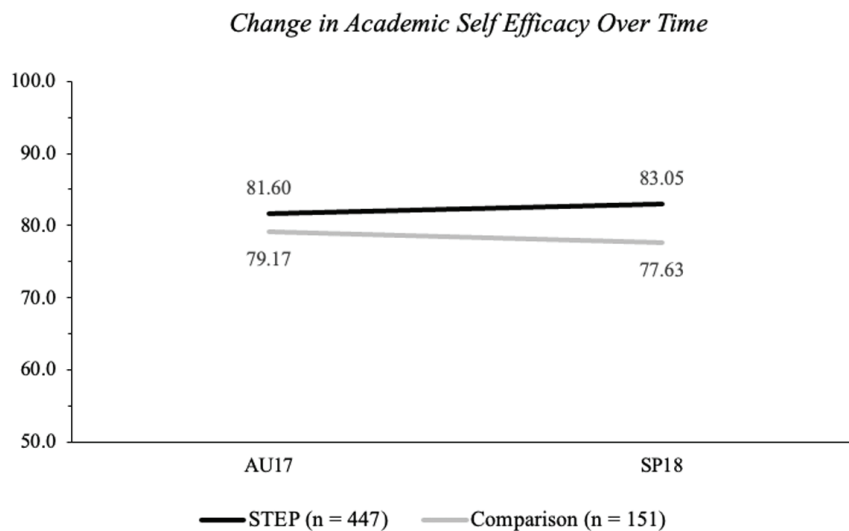
Next, we predicted that students in STEP would demonstrate an increase in perseverance over the course of the program and that students not in STEP would not demonstrate a change in perseverance. We conducted paired sample *t*-tests and repeated measures ANOVA analyses to test this prediction. STEP students improved their perseverance over time ($p = .01, d = .12$), and those not in STEP did not ($p = .65, d = .03$). When comparing STEP and non-STEP student trends over time, there was a marginally significant difference, $F(1, 584) = 2.88, p = 0.09, \eta p2 = 0.003$ (see Figure 2).

Figure 2



Finally, we predicted that students in STEP would demonstrate an increase in their academic, leadership, and career self-efficacy over the course of the program and that students not in STEP would not demonstrate change in each of these areas of self-efficacy. We conducted paired sample *t*-tests and repeated measures ANOVA analyses to test this prediction. STEP students saw an increase in their academic self-efficacy over time ($p = .01$, $d = .11$). However, those not in STEP saw no change over the course of the year ($p = .18$, $d = .09$). When comparing STEP and comparison student trends over time, there was a significant difference, $F(1, 596) = 6.85$, $p = 0.01$, $\eta^2 = 0.011$ (see Figure 3).

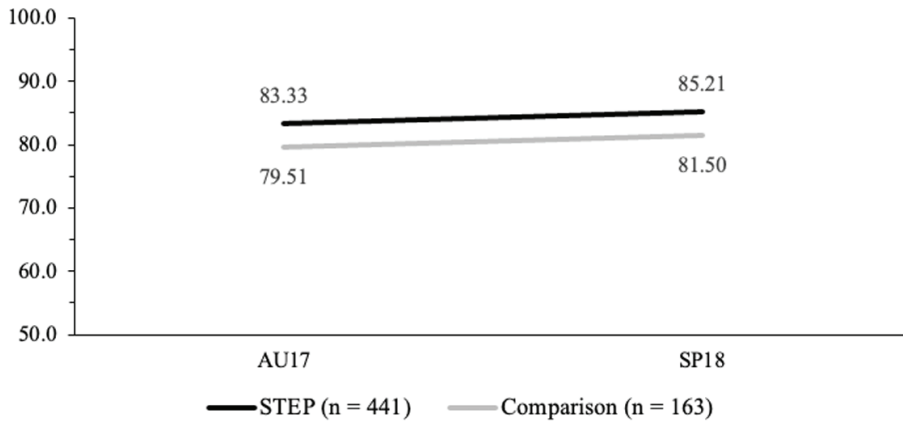
Figure 3



STEP students saw an increase in their leadership self-efficacy over time ($p < .001$, $d = .17$), and those not in STEP had just a marginally significant increase over the course of the year ($p = .09$, $d = .12$). When comparing STEP and comparison students' trends over time, there was no significant difference, $F(1, 602) = 0.10$, $p = 0.92$, $\eta^2 = 0.000$ (see Figure 4).

Figure 4

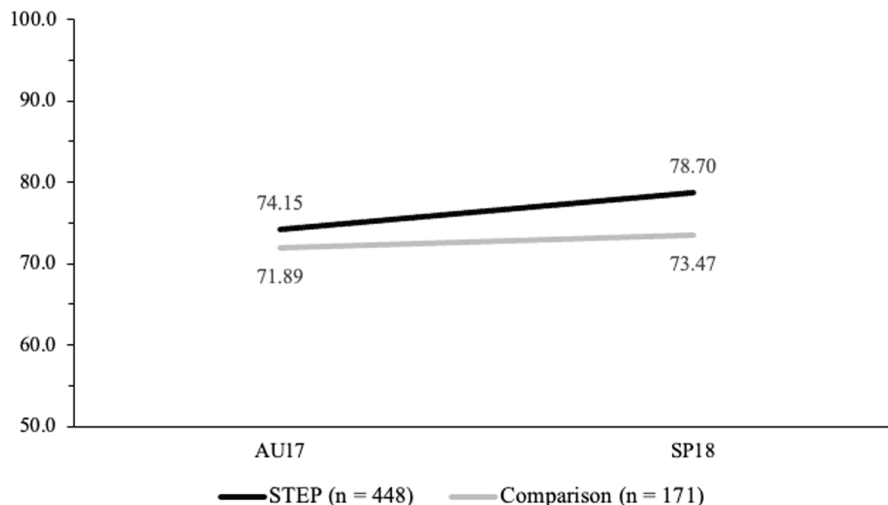
Change in Leadership Self-Efficacy Over Time



STEP students saw an increase in their career self-efficacy over time ($p < .001$, $d = .34$). However, those not in STEP saw no change over the course of the year ($p = .21$, $d = .09$). When comparing STEP and comparison student trends over time, there was a significant difference, $F(1, 617) = 5.60$, $p = 0.02$, $\eta^2 = 0.009$ (see Figure 5).

Figure 5

Change in Career Self-Efficacy Over Time



Discussion

We compared the growth and development of students involved in a comprehensive, multi-semester second-year program to students in a comparison group to describe the effects of participation on students' perseverance, sense of belonging, and self-efficacy. As illustrated by the results, students who participated in STEP reported significant growth across several important outcomes between the beginning of the fall semester and the end of the following spring semester (approximately nine months). The significant growth included higher levels of perseverance, academic self-efficacy, career self-efficacy, and leadership self-efficacy. Results were especially notable when viewed in comparison to peers who did not participate in STEP; students not in STEP reported a significant growth in terms of their leadership self-efficacy, and, notably, there was a significant decrease in their sense of belonging over the course of their second year. Taken together, results provide support for the benefits of participation in a second-year program.

EFFECTS OF HOLISTIC PARTICIPATION

First, STEP participants and students in the comparison group reported roughly the same levels of perseverance at the beginning of the school year. However, students in the comparison group did not report a significant change in perseverance over the course of the second year while STEP participants reported significant gains. Scholars, for decades, have invoked the idea of a "sophomore slump" (Freedman, 1956) to describe the second year as a period when students are more prone to exhibit reduced motivation and to question their intent to persist at the university level (Stockenberg, 2007; Webb & Cotton, 2019). The second year is a time when students are expected to become more independent while simultaneously encountering new stressors and assuming more responsibility for their future plans (Schaller, 2007). In other words, second-year students face an abundance of unique challenges that test their resolve and problem-solving capabilities. The fact that perseverance significantly increased among STEP participants over the course of the school year is a notable finding that lends credence to advocating for a program designed to meet second-year students' holistic needs.

Second, students who participated in STEP did not see a dramatic change in their sense of belonging at the institution over the course of the second year. What was notable, however, was that within the comparison group, there was a significant decline in students' sense of belonging. This finding aligns with much of the prior literature, suggesting that after a year in which institutional support is readily available, the absence of dedicated second-year programming leads many students to feel forgotten or neglected by their institution (Gansemer-Topf et al., 2007; Schaller, 2007, 2010). Though involvement in STEP was not associated with a significant increase in students' sense of belonging, participants' sense of belonging did not

diminish. This suggests involvement in a second-year program like STEP provides students with a key sense of support from the university community and guards against feelings of exclusion, isolation, or neglect. One explanation for this finding could be that STEP utilizes a cohort structure, whereby students meet weekly with a small group of 16 second-year peers and a faculty mentor, providing vital academic and social relationships to STEP participants. Such an approach aligns with Schreiner's (2013) recommendations for cultivating second-year students' sense of belonging because the cohort model facilitates positive relationships and meaningful partnerships between students, faculty, and staff and offers STEP participants a defined fit within the campus community.

Third, STEP participants reported their most notable gains with respect to measures of academic, career, and leadership self-efficacy. To be clear, STEP participants began the school year more efficacious than their peers in the comparison group. However, the dramatic gains among participants caused differences to widen by the end of the spring semester. Those in the comparison group reported a marginally significant increase in terms of their leadership self-efficacy, but to a lesser extent than what was seen among STEP participants. Prior scholarship has established that self-efficacy is positively related to a host of important outcomes for second-year students, including campus involvement, academic performance, and persistence at the university (Vuong et al., 2010; Wang & Kennedy-Phillips, 2013). It is encouraging to see all students improved their leadership self-efficacy over the course of the school year. Yet, it is especially noteworthy to recognize the relationship between STEP participation and gains in academic and career self-efficacy because selecting a major and career—and making adequate progress toward such goals—can be daunting for many second-year students (Kranzow & Foote, 2018; Sterling, 2018; Tetley et al., 2010).

LIMITATIONS

We note three important limitations to this work. First, students were not randomly assigned to the program but could freely choose whether to participate in STEP. Without random assignment, there is research-related concern that students who were selected to participate in STEP were inherently different from those who did not participate. When comparing the demographics of STEP students to those in the comparison group, we found some differences between the two groups. Most notably, female students in the STEP group were more likely than female students in the comparison group to respond to the questionnaire. The comparison group also included fewer White student respondents and many more Asian and Asian American student respondents than the STEP group. In addition to demographics, it is possible that students in the STEP group were different in their academic achievement or academic abilities, contributing to outcome differences between groups. A strength of the study methodology somewhat buffers this limitation; data analyses included both

between-group and within-group comparisons. In other words, we examined how the trend data of STEP students differed from the comparison group and also examined, separately, the change over time for STEP students and the change over time for the comparison group. We found that STEP students reported significant improvement in their perseverance and self-efficacy from when the program began in the fall to when it ended in the spring semester.

A second limitation relates to how growth in one area of students' development impacts other aspects of students' lives. STEP students reported improvements in perseverance and academic, career, and leadership self-efficacy. The scope of this study did not allow us to analyze the broader, long-term impact of such improvements. In other words, we could not establish how—or if—such growth held constant over time, nor establish the broader significance and application of these results. For instance, does heightened career self-efficacy have a relationship with positive career outcomes down the road, like a more professional resume or more effective job search behaviors? Others have made similar claims (Deer et al., 2018); thus, it is reasonable to infer that a program like STEP may have broader impacts on outcomes like career preparation, leadership, and academic success. However, this is an important topic for future research.

Third, we studied sophomore learning pre-pandemic but not post-pandemic in this study. The cohort we examined included second-year students in 2017-2018. Future research should focus on sophomore learning in higher education post-pandemic to understand the unique challenges these students face, particularly in adapting to hybrid and in-person learning environments. Exploring the long-term effects of disrupted first-year experiences on academic success and engagement is crucial for developing effective support strategies.

IMPLICATIONS FOR PRACTICE

From these findings, there are actionable steps for stakeholders engaged with second-year student populations and programs. Campus leaders looking to better support second-year student populations can focus on the following recommendations: developing a cohort model, encouraging students to craft a capstone project during their second year, and building a second-year curriculum with learning outcomes that address second-year students' holistic development.

First, we recommend that second-year students work together in a cohort model, as meeting with a learning community is believed to support students' sense of belonging and perseverance. The cohort creates immediate and real-time student-to-student and student-to-faculty interactions and connections with the university. STEP faculty mentors engage students in community building and identify developmental

activities where STEP students can create greater connections with other students in the cohort, cultivating a sense of belonging and connection (Schreiner, 2013). Furthermore, as students and faculty make meaningful connections within the cohort, it is reasonable to presume that students feel cared for and supported by a representative of the university, which may contribute to their sense of belonging and sustain their perseverance at the institution.

A second implication is providing second-year students the opportunity to develop a capstone project with the support and guidance of a faculty mentor. One-on-one connections between a student and their faculty mentor may increase students' motivation to accomplish their goals, reduce the sophomore slump, and increase perseverance at the institution (Stockenberg, 2007). Students who participated in STEP were found to have higher gains regarding academic, career, and leadership self-efficacy (i.e., confidence in their ability to successfully perform a certain task; Bandura, 1986, 1987). These gains in self-efficacy may be due to students' engagement in developing their capstone project because STEP students include a personal statement and goals section within a written proposal. Making time for meaningful reflection while composing a personal statement and crafting long-term goals can make second-year students' pathways toward achievement feel more attainable (Kranzow & Foote, 2018; Sterling, 2018; Tetley et al., 2010).

Finally, we recommend that second-year students engage in a tailored curriculum with learning outcomes. In STEP, faculty mentors work with students throughout the year, focusing on seven curricular learning outcomes related to themes such as sense of self, identification of campus resources, academic goals, and personal strengths. We believe the significant levels of change in STEP students' academic, career, and leadership self-efficacy is associated with the universally implemented programmatic learning outcomes and curriculum. Scholars have associated students' increased self-efficacy with elevated engagement with their university (Vuong et al., 2010; Wang & Kennedy-Phillips, 2013); therefore, engaging second-year students in a year-long curriculum provides sustained support and connection with faculty, staff, and campus resources.

Conclusion

In summary, findings from this study demonstrate the effects of involvement in a comprehensive second-year program on students' holistic development. Over the course of the school year, students who participated in STEP reported increased measures of perseverance and self-efficacy while maintaining their overall sense of belonging to the institution. The literature shows that the second year is when many students question their academic progress, search for meaning, and consider departing from higher education. STEP appears to provide much-needed institutional support and guidance at a crucial moment in students' lives. Even though STEP is

an optional experience, over 26,000 students have elected to participate since the program launched in 2013. Such broad participation, combined with findings from the current study, illustrates the demand for comprehensive second-year programming and the positive impact on second-year students when such initiatives are designed in accordance with the literature. Based on this work, higher education leaders may consider how to design and implement similar initiatives at their respective institutions and how to contribute to scholarship that further details the unique needs of our second-year student populations.

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