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Acquiring Social Capital: Conclusions from a Social Science Summer Bridge Community

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Acquiring Social Capital: Conclusions from a Social Science Summer Bridge Community

Abstract

In an effort to improve performance and retention of first-year college students, a few institutions have started offering summer bridge programs. Varying from days to weeks or months, these programs offer an extended orientation to college life, teach specific academic skills and/or content, and help students form social connections with peers, faculty, and staff and increasing their social capital. While bridge programs are gaining popularity in STEM fields, there is potential value in expanding these programs to other disciplines. In this analysis, we offer both a narrative summary and findings from our summer bridge program and living learning community in the social sciences. Results include positive student perceptions of the program and mixed results regarding academic performance and retention rate. We conclude with an overview of lessons learned and future directions for summer bridge programs and living learning communities, as well as empirical research in this domain.

Keywords

summer bridge, social capital, student mentoring, college transition

This article summarizes how a summer bridge and living learning community (LLC) could improve student performance and potentially retention. Particular focus is paid to how such a program could also increase students' perceptions of acquired social capital. We begin by providing an overview of summer bridge and LLC programming, followed by a summary of the intricacies and evaluative components of our program, and conclude with recommendations for future programs and research.

The summer bridge model is not new; in fact many institutions have incorporated such programs to help at-risk student populations successfully transition during their first year (for a comprehensive review see Sablan, 2014). Many of the prior programs have worked with specific populations such as minority students or those in STEM fields (Raines, 2012; Tomasko, Ridgway, Waller, & Olesik, 2016). As a result, although there is current empirical research examining the effectiveness of bridge programs, much of the literature specifically concerns programs targeting the aforementioned students. To date, there is a paucity of research examining the effectiveness of bridge programs specifically tailored toward the social sciences.

The aim of the current study is to examine the effectiveness of a summer bridge program coupled with an LLC specifically for social science majors. As Tinto (2010) has summarized, LLCs offer students the opportunity to form their own self-supporting groups, helping to bridge the divide between their academic and social lives on campus and enhancing their learning. Tinto (2010) explains that students' "social engagement in class became a vehicle for their academic engagement, and both enhanced their learning." Terenzini, Pascarella, and Blimling (1999) provide a great summary of LLCs in general and allude to our specific goals when they summarize that LLCs involve high levels of student-faculty interaction, intellectually oriented programming, academic advising, and a supportive peer environment. LLCs offer an opportunity to promote active and collaborative student-faculty interactions, as well as promoting student interaction with diverse peers (Pike, Kuh, & McCormick, 2011). Our program sought to build upon these past successes and utilize a social capital mechanism to achieve our goals. We highlight our findings herein, specifically describing the details of our program geared toward first-year students majoring in psychology and criminal justice.

Summer Bridge Programs

The first-year college experience can be a daunting one for many students. In an effort to aid the transition to college, most institutions offer first-year orientation programs to introduce multiple aspects of higher education to new students. These orientation programs typically occur prior to the start of classes and serve as a catalyst to help students form peer connections, navigate campus,

and acclimate to college life. However, while orientation programs are effective, they should not be confused with summer bridge programs, which are typically longer in duration (varying from one week to two months) and in some cases may include course credit (Bir & Myrick, 2015; Reichert & Absher, 1997). Whereas the typical college orientation is designed to quickly integrate students into campus life, summer bridge programs are more focused interventions aimed at aiding student performance and retention by teaching specific academic skills or content. Bridge programs often include condensed course content, study skills acquisition, critical and analytical thinking acquisition, as well as mentoring to help students navigate the college experience. The summer bridge model may also be coupled with a year-long LLC in which students live in the same student housing and often take multiple classes together and/or attend tutoring and mentoring sessions during the academic year (Sablan, 2014). Depending on program goals, most bridge programs identify potential first-year participants based on one of three criteria: (a) demographic characteristics such as first-generation or minority status; (b) major or field of study; or (c) formal testing to identify a remedial group (Sablan, 2014).

While investments in these programs continue, research on the effectiveness of bridge programs is still rather limited and has yielded mixed results with respect to academic performance and retention rates. Part of what makes summative conclusions difficult is that programs vary not only in scope and duration but also in the target population (specific majors or demographic groups). Sablan (2014) provides a summary of the challenges in empirically evaluating bridge programs, citing factors such as lack of comparison groups, absence of qualitative data to supplement quantitative data, and missing assessments of curricular components. Few assessments also employ a randomized control design since it is generally not feasible based on the scope of the program and intended goals. As such, the comprehensive evaluation of the effectiveness of bridge programs is somewhat constrained.

Despite the current challenges in measurement and evaluation, there are signs which suggest bridge programs may positively impact academic outcomes. For example, one bridge program designed for minority students (African American, Hispanic, and Native American) in engineering majors utilized a summer course-for-credit program coupled with a fall seminar (Reyes, Anderson-Rowland, & McCartney, 1998). This course-based program led to higher GPAs among the bridge students compared to non-participants, albeit not statistically significantly but with significant increases in retention rates compared with demographically similar non-participants. A program at an HBCU in the Southeast United States included a four to five week intervention designed for incoming students with significantly lower high school GPA, SAT math, SAT verbal, and SAT combined scores. Program assessment revealed college GPA and

first-year retention rates significantly above the non-bridge participants (Bir & Myrick, 2015). Interestingly, this difference appeared driven by larger differences among the female students. While 4-, 5-, and 6-year graduation rates were higher for the bridge participants overall, they were not significantly higher.

Summer bridge programs have also been found to positively affect students' sense of academic preparedness and belongingness. Tomasko, Ridgway, Waller, and Olesik (2016) evaluated a 6-week program targeting first-generation and underrepresented minorities in STEM disciplines. Students were surveyed before starting and immediately after the program. At post-test, participants reported higher confidence in their ability to succeed at college, higher perceptions of improved study skills, and a greater sense of belongingness than reported at the program's onset. Comparisons to a control group, however, were not available given the nature of the research design and program. However, positive trends with regard to retention were observed, particularly for female, underrepresented minority, and first-generation students compared to the university averages for these groups.

Students from historically underrepresented and disadvantaged backgrounds have been commonly targeted groups for bridge programs. The University of Cincinnati recently implemented a bridge program to increase recruitment, academic success, and retention of nursing students from the aforementioned backgrounds (Pritchard et al., 2016). This 6-week program was designed to facilitate academic preparation by allowing participants to take classes in Anatomy and Physiology, Chemistry, and Mathematics. Students also attended academic skills workshops, engaged in field experiences in the nursing profession, and lived together on campus. A post-program assessment showed that participants ranked relationship building with peers, faculty, and staff to be among the most important components of the program. Results also showed gains in first-year GPA and retention for these students compared to their peers from similar backgrounds.

Bridge programs appeal to institutions for a variety of reasons. Some seek to improve performance in a particular major, while others provide aid to a specific demographic group. Thus, bridge programs are being tested across the nation. We have only highlighted a selected number of programs with empirical evidence tracking their effectiveness, but keep in mind there exist numerous programs that have not yet written on their experiences. The few we highlighted herein is intentional given their alignment with the goals of our bridge program and LLC. Namely, our program sought to improve performance and retention of students' in the social sciences by increasing students social capital. Given that Tomasko, Ridgway, Waller, and Olesik (2016) and Pritchard et al. (2016) observed bridge programs had a positive impact on students sense of belongingness and

relationships, respectively, we envisioned our bridge program achieving similar results in addition to potential academic gains.

By targeting social capital as a mechanism, we sought to provide opportunities systematically for students to build meaningful relationships with peers, mentors, and faculty. We envisioned that social capital, which in this context refers to the access of social networks and connections, would help the students navigate their complex new environment (Sandoval-Lucero, Maes, & Klingsmith, 2014). Social capital has been offered as a way for students to leverage social relationships in order to advance an individual's goals (Holland, 2010) and share access to valuable information, while establishing social and behavioral norms (Coleman, 1988). For our program, valuable information would have ranged from course and college policies to resources and opportunities available. Similarly, social and behavioral norms included study skills and other proactive student behavior (e.g. regular sleep patterns, social networking, club participation). Social capital has also been observed to positively impact retention, GPA, and feelings of satisfaction with the institution (for a review see Schwartz, et al., 2017), so we envisioned similar results from our summer bridge and LLC program.

Psychology and Social Science Intensive

Purpose

Following the success of a summer bridge program and LLC in biology at our university, we were awarded a one-year grant from the Jessie Ball duPont Fund to test the effectiveness of summer bridge programs in other disciplines. Additional areas included social science (psychology, sociology, and criminal justice), business, sport sciences, and chemistry, although only the social science program is described and summarized within this article. The social science program, coined the Psychology and Social Science Intensive (PSI), was designed to prepare students to meet the academic demands of college, with the hope that the retention rate and perceptions of social capital would be positively impacted. Since our university, a small private university (~3,000 students) in the Southeast United States, seeks to improve retention and emphasizes small courses for relationship building, targeting these variables was consistent with these goals and institutional mission.

Specific elements within the 7-day program included an introduction to college life, study and college survival skills, an introduction to scientific literacy and critical thinking, as well as public speaking and career guidance. To encourage retention, the program also sought to increase students' perceived social capital through peer and faculty mentoring. An additional key component of the PSI was a living learning community (LLC) in which students lived in the

same residence hall and took the same General Psychology and Gateway (Introduction to College) courses together. It was our hope that this intensive programming and intentional community would facilitate students' academic success, sense of social capital, and retention at our university.

Participants

Participants were recruited to participate in the PSI program based on specific criteria in accordance with grant stipulations; the grant requested male and minority students be given first priority. Given the limited number of declared social science males to recruit, in addition to recruiting minority students, we also expanded our selection criteria to include students coming from farther geographical distances. To recruit participants, letters were sent to incoming first-year students who declared their intention to major in psychology, criminal justice, and sociology. As an incentive to participate, participants were informed the LLC would be housed in the newest dormitory on campus and they would be allowed to move in early.

Twenty-three incoming social science students ultimately joined the PSI in August 2017: 19 psychology majors and 4 criminal justice. The participant population consisted of 15 females and 8 males. Of these, 15 students identified as Caucasian, 6 African American, 1 Asian American, and 1 "2 or more races." Fifteen were in-state students; 8 were out-of-state. The average high school weighted GPA was 3.65 ($SD = 0.57$). The 16 students who took the SAT had an average combined SAT of 1081.25 ($SD = 115.46$), while the 14 students who took the ACT had average composite ACT of 20.29 ($SD = 4.32$). A summary of these demographic characteristics are included in Table 1.

Table 1
Descriptive Statistics for PSI Cohort

	Minimum	Maximum	Mean	SD
Sex	Females = 15	Males = 8		
High-school weighted GPA	2.60	4.9	3.65	0.57
SAT Math	430	660	538.13	59.47
SAT Verbal	400	700	543.13	77.18
SAT Combined	880	1280	1081.25	115.46
ACT	14	27	20.29	4.32

Bridge Programming

The intensive programming portion of the PSI consisted of seven days of activities designed to facilitate community building and academic preparation in the days prior to the university's traditional fall semester two-day first-year student orientation. On Day 1 students moved into student housing, completed any remaining required documentation (registration, parking, health records, etc.), and joined the faculty and peer mentors for welcome meetings and a kickoff reception. Day 2 was the first full day of programming. Students participated in community-building activities, received an overview of campus technology, took in a sample lecture from sociology faculty, and participated in a note-taking strategies intervention. Day 3 was spent off-campus at a local outdoor adventure center where students completed various strategic team-building activities designed to encourage critical thinking, as well as team cooperation and identification of individual strengths. Day 4 included personality and career assessments, career development and planning, and academic advising. Day 5 was devoted to scientific literacy; students received an introduction to research coupled with applied practice through construction of arguments that would lay the basis for team debates the following day. Day 6 began our wrap up with a visit from the campus counseling office, continued with debate preparation with assistance from mentors, and concluded with oral debates on current topics in psychology and criminal justice. The last half-day, Day 7, allowed students to speak with a current social scientist conducting research using neuroimaging.

During this intensive, participants also received formal peer mentoring, with faculty not present, along with a final culminating award celebration on the final morning. Days 2 through 6 consisted of approximately 8 hours of formal programming each day with additional evening activities conducted by Residence Life such as sand volleyball, ice cream socials, and karaoke, to note a few. All meals and snacks were provided to participants at no cost. The program itself was also free for students, and no stipends or additional monetary incentives were offered for participating, nor was any course credit given. At the conclusion of the intensive programming, students participated in the university's traditional two-day orientation with other first-year students.

Living Learning Community (LLC)

In addition to the summer bridge intensive, students participating in the PSI also participated in an LLC for the 2017-2018 academic year. This community had several components and goals that are worthy of further overview. As a part of the LLC, students lived together in a newer dormitory on campus, with genders split by hall. Students also took two classes together, a Gateway 101 (an Introduction to College 1-credit course) and a General Psychology 3-credit

course, both of which were taught by a bridge program faculty mentor. Finally, community mentors worked with the students for peer mentoring and supplemental instruction and also coordinated monthly special events. By having the students located in the same dormitory, we sought to ensure that students utilized their social capital networks and leveraged these to form study groups, but also social groups.

At our university, all first-year students take a Gateway 101 (Introduction to College) course which serves to engage students in discussion around topics such as time management, academic recourses, health and wellness, roommate conflict management, and course registration, among many others. Given that the PSI students had received and discussed quite a few of these facets within the summer bridge intensive, the decision was made to keep these students in a Gateway course together, both to capitalize on their already developed social capital and relationships with peers and faculty and to ensure that they did not have information repeated verbatim within this course. This gateway course is also co-facilitated by two additional student mentors so that students further connect with upper-class peers who provide valuable advice for navigating the college experience. Goals for this course included covering the aforementioned topics, but more explicitly helping the students successfully integrate into the campus community and problem solve any concerns that arise. While the bridge intensive provided a great stepping stone, there is only so much of this integration and problem solving that can be achieved before the semester starts. Anecdotally comparing this experience to another Gateway course experience without a summer bridge precursor suggested a remarkable difference in willingness to engage among the students, both with the course and each other. Assuredly the bridge program facilitated comfort and confidence to participate in this course and get the most of out the experience. The instructor, having spent so much time with them before the semester, was also better able to target information specific to student interests,.

During the Fall 2017 semester, PSI participants also took General Psychology with a bridge faculty member but were split into two sections of the course. Again, the goal through this course was not only to help students succeed by using their established relationships with faculty but also to utilize peer and mentor resources. Tutoring was available to students from a psychology major community mentor, who was available with twice a week in the students' dormitory as a part of the LLC. Student comfort in the classroom was again evident from the first day of class. While the instructor did not measure engagement or contributions to class discussion, it did feel as though PSI students were immediately more comfortable in class and more willing to contribute to the class discussions. This comfort appeared to also aid the class as a whole, having spillover effects to the non-PSI students in both sections.

In the Spring 2018 semester, the students continued to live together in the dormitory but were not coordinated to take classes together. However, many choose to take both required and elective courses together, capitalizing on these social networks. Students planned these courses and schedules together during the Gateway course in the Fall, and many appeared to appreciate the opportunity to continue to facilitate their comfort in their classes by ensuring someone they were close with was also in the course. During the Spring 2018 semester, the community mentor still met regularly with students to put on special events and was available for meetings throughout the week but did not directly engage in tutoring with the students.

Program Assessment and Outcomes

At the end of the intensive portion of the programming, students completed a survey to evaluate their perceptions of the program. Students were queried on whether the program increased their social capital, belongingness, and confidence. Students were also prompted with open-ended questions in order to further assess the program through qualitative assessment. Additionally, in order to assess the possible effectiveness of the PSI intensive and LLC on retention rates and academic performance, a sample of social science majors with similar academic profiles (SAT scores, ACT scores, and high school weighted GPA) was used as a pseudo-control group. With approval of our human subjects research board, throughout the Fall 2017 and Spring 2018 semesters, secondary institutional data was compiled and compared between groups. Variables of interest included semester and cumulative GPA, semester and cumulative earned credits, status at the university (returning, transferred, academic probation or suspension), DFW rates, and changes to intended major. This section summarizes the assessment of the intensive program, followed by an evaluation of academic variables from the students' first year within the LLC.

Intensive Program Assessment

At the conclusion of the intensive portion of the program, students completed a survey to assess the degree to which they were comfortable with tasks that would be required of them at college, as well as to what degree they developed meaningful connections with peers, faculty, and mentors. Students were also asked if they felt a sense of belongingness, had confidence in meeting college expectations, and had increased awareness and knowledge of campus resources, among other items. Table 2 provides a summary of student comfort with navigating components key to success in college. Table 3 summarizes student confidence in engaging in the classroom, engaging with students in and out of the classroom, and seeking assistance from students, faculty, and staff.

Table 2
Summary of Student Comfort

Student comfort with:	Very uncomf.	Somewhat uncomf.	Neutral	Somewhat comf.	Very comf.	Mean	SD
Accessing library databases	0	0	5	13	5	4.00	0.64
Locating research articles	0	1	5	13	4	3.87	0.76
Constructing an evidence-based arg.	0	0	5	14	4	3.96	0.64
Organizing notes for studying	0	0	2	9	12	4.43	0.66
Forming social relationships with peers	1	0	3	6	13	4.30	1.02
Approaching instructors for assistance	0	0	2	8	13	4.48	0.67
Approaching peers for assistance	1	0	2	9	11	4.26	0.96
Seeking advice from mentors	0	0	2	9	12	4.43	0.66

Since our survey was administered only after completion of the program, we cannot say for certain that the program increased student comfort and confidence, nor can we say this comfort and confidence is above levels students would have obtained in the traditional 2-day orientation. However, given these high scores it is clear students are at least somewhat comfortable engaging in the academic and campus environment in a number of ways, and it is encouraging to see high levels of self-reported comfort and confidence consistent with the scope and goals of the program. The program appeared to aid participant comfort with peers, student mentors, and instructors. Research has suggested bridge programs can provide time to foster such relationships and in turn provide benefits from this acquisition of social capital (Pritchard et al., 2016). We found support for these benefits, since student comfort with instructors was evident not only at the end of the intensive portion of the program, as reflected with the quantitative scores, but again was anecdotally observed throughout the General Psychology and Gateway

courses in the Fall semester. With regard to student confidence, we see a similar pattern of results. A majority of participants reported moderate to high confidence that they would ask questions in class, speak with students in or outside of class, seek advice and assistance from faculty, staff, and peers, and engage in the social environment of the campus. It was our hope that in turn this confidence would lead to positive gains in academic performance.

Table 3
Summary of Student Confidence

Student confidence to:	No Confidence	Slight Confidence	Moderate Confidence	High Confidence	Mean	SD
Ask questions in class	1	2	15	5	3.04	0.71
Contribute to a class discussion	0	3	13	7	3.17	0.65
Speak with other students in class	1	2	10	10	3.26	0.81
Study with students outside of class	1	2	8	12	3.35	0.83
Approach the instructor after class or outside of class	0	3	10	10	3.30	0.70
Ask for feedback regarding an assignment	0	2	14	7	3.22	0.60
Seek advice from faculty	0	2	13	8	3.26	0.62
Seek peer tutoring	0	0	7	16	3.70	0.47
Seek assistance from Academic Resource Center	0	1	8	14	3.57	0.59
Seek assistance from Writing Center	0	0	8	15	3.65	0.49
Attend a social event on campus	1	3	12	7	3.09	0.79

In addition to assessing student comfort and confidence, we also asked students how useful they found various components of the program. This qualitative data was cited as a common missing element among many bridge

program evaluations (Sablan, 2014). Components of the program rated most useful included: forming relationships with peers, living in a living learning community, hearing from counseling services, peer mentoring, forming relationships with mentors, and discussing note-taking skills. Clearly, it appears the social and community aspects of the program were valued by the students. An open-ended item asked what component was most important to their transition to college. Again, peer bonding was the most common response, as 11 of the 23 students mentioned this component. Many participants offered that they sometimes struggle making new friends and being social, one also citing that the evening programming helped them get to know their peers better. We also asked participants an open-ended question about what should be included in future programs. Suggestions included more active learning and hands-on activities, site visits to volunteer or internship locations, and additional discussions with social science professionals.

Finally, we asked, “What did you think of the PSI Program? Would you recommend the program to a future student? Why or why not?” Overall, students responded positively to this item, with many citing the relational component, for instance: “The PSI program is a really amazing way to meet people and make friends before school starts”; “At first I thought I was going to hate it because I didn't want to be here and I didn't think I would make new friends, but I did and it really helped me get out of my comfort zone”; and “The PSI program was helpful in forming relationships with the mentors, peers, and with the professors.” Participants also noted how the program was beneficial for their transition to college: “It is a very taxing experience getting adjust[ed] to a new environment and the PSI program made the transition way easier”; “It was a great experience and allowed me to become connected and learn the campus better”; and “I would recommend the program to a future student because it helps you get settled at (university) earlier, you make new friends, and you get introduced to professors.” Students also offered additional constructive feedback such as “I would suggest maybe fitting in time for more lectures on psych material, limiting time for the career tests that we did, include a trip to the rehabilitation facilities” and “Spread the lectures out by days because it can get tiring if it goes for long periods of time.” Once more, this qualitative feedback speaks to the value of the community component and also indicates a desire for more discipline-related content. This discipline-specific content is certainly a distinguishing feature for bridge programs compared with traditional orientation offerings and should have been further emphasized.

Bridge Program and Learning Community Outcomes

In order to evaluate whether the PSI program had a significant impact on student academic performance and retention, we tracked the participants in

comparison to a pseudo-control group of similar social science majors. We should note this design does not control for selection bias, since invited students chose whether they wanted to participate in the program. However, we were able to create a pseudo-control group by matching each PSI participant to another social science major with a similar academic profile (SAT score, ACT score, high school weighted GPA). Additionally, when creating this pseudo-control group we were not able to take into consideration variables such as motivation, financial state, and first-generation status, among others that may also have an impact on academic success and retention. Importantly, we should specify the differences between these two groups. While the PSI participants took part in the bridge program, lived in the same dormitory as a part of the LLC, took Gateway and General Psychology courses together in the Fall 2017 semester, and had community mentors throughout the academic year, the non-PSI students did not have any of these facets organized for their first-year experience.

As summarized in Table 4, when comparing the PSI students with their non-PSI peers, the average high school GPA, ACT scores, and SAT scores were not significantly different, verifying that at least in academic profile these groups were similar. While we see evidence to suggest that PSI students outperformed their peers in Fall 2017 and Spring 2018 GPA, neither comparisons between groups are significant. Additionally, PSI students outperformed the control group in cumulative GPA after the first year and earned credits in both Fall 2017 and Spring 2017, though, once more, these comparisons with the control group are not significantly different. The variable closest to showing a significant difference is earned credits in Spring 2018, with the PSI students leading their peers by nearly 1.5 credit hours on average. While most differences are not significant, it is important to note the positive trends on these academic performance metrics. Perhaps with a larger sample size these differences might have been statistically significant. At the bottom of the table, we see that both groups had the same retention rate in returning for their second semester and second year. Therefore, it appears the PSI program did not affect retention between the first and second year.

When considering possible measurable outcome variables, we sought to stick to those concerning academic achievement and retention. Unfortunately, these variables do not allow us to directly measure the impact of the bridge intensive compared to the LLC. While the bridge program itself was assessed as noted earlier, the LLC was not directly assessed in a similar fashion.

Table 4
PSI and Non-PSI Pseudo Control Group Profile and Outcome Statistics

Variable	PSI		Non-PSI		t-test
	Mean	SD	Mean	SD	
Weighted HS GPA	3.65	0.57	3.67	0.55	-0.08
ACT	20.29	4.32	20.47	3.34	-0.13
SAT Math	538.13	59.47	523.57	60.46	0.66
SAT Verbal	543.13	77.18	524.29	71.76	0.69
SAT Combined	1081.25	115.46	1047.86	125.59	0.77
Fall 2017 GPA	2.47	0.97	2.31	0.88	0.61
Spring 2018 GPA	2.55	0.98	2.27	1.14	0.85
Cumulative GPA	2.59	0.87	2.32	0.96	0.95
Earned Credits Fall 2017	13.35	3.14	13.04	3.94	0.29
Earned Credits Spring 2018	14.43	3.04	12.77	4.84	1.34
Fall to Spring Retention		95.7%		95.7%	0
YR1 to YR2 Retention		69.6%		69.6%	0

Planning Takeaways

Looking back on this bridge and LLC experience, while there were many components we felt went well, there were other components we would do differently. For those considering creating similar programs we thought it pivotal that we describe some of our takeaways and suggestions. Our outline of bridge program suggestions, below, is followed by LLC recommendations.

In thinking of others planning future bridge programs, we first wanted to summarize our bridge planning takeaways. First, we suggest that programs identify their student population from the outset. For our program, while we identified our student population as social science majors, we were more fluid with how we recruited students, initially using criteria identified in our grant stipulation (men and minority students) and then expanding due to the small numbers within social sciences. While this broad criteria and sample perhaps aids in the external validity of our program and assessment, it makes identifying a true control group nearly impossible. Second, we recommend identifying clear program goals and designing programming accordingly. We sought to impact academic performance, retention, and social capital and thus designed days devoted to teaching academic skills, but we also allowed substantial time towards building community among the students and with peer mentors and faculty. Future programs should ensure that their goals are clear, that all components of

the program work towards those goals, and that direct and indirect assessment measures are utilized to evaluate the program.

With regard to the bridge program itself, we found ourselves learning quite a few lessons along the way, specifically, that peer mentors are essential, that interpersonal conflict should be addressed early, and that student learning should not be confined to the classroom. We cannot overemphasize the importance of peer mentors to the success of the program. We had three peer mentors who provided invaluable advice to the students, assisted faculty with planning and execution of the program, and provided a go-between for faculty and students. These peer mentors were essential with providing the students a knowledge base in order to help students navigate their transition to the institution. Similarly, just as in the classroom, addressing conflict early and head-on was essential to ensuring minor conflicts among a few did not degrade the experience for all students. If we had let such conflicts go unaddressed, it very well could have soured all participants on the program, the department, or the institution. Finally, one common suggestion for improvement from the students was to spend less time in the classroom. While we ventured across campus for various events and programming, we did find ourselves in the classroom too often. We suggest that future programs be careful to not overschedule time in the classroom but instead be creative in using on and off campus spaces for programming. Providing the students with a novel setting could have allowed additional learning to take place on days in which participants were growing restless from being in the same environment for too long.

Specifically concerning the LLC, there are a number of important pieces of advice for those thinking of planning a similar initiative. In connecting the bridge program with the LLC, we advise programs think carefully about the desired outcomes within the bridge program and the desired outcomes within the LLC. This ensures that efforts are not duplicated and that, instead, items hallmarked as pivotal for the bridge program are reinforced through the LLC. While we sought to improve social capital, we also wanted to hit a number of transition to college items and areas of concern in the bridge program. These areas were then reinforced through the LLC and Gateway course, while social capital remained a goal throughout the fall courses and duration of the LLC. We felt these targeted variables were achievable given the duration and scope of our week-long bridge program. While a longer bridge program would be able to provide more academic content and preparation for specific courses, this was beyond the scope and capabilities of our week-long program. We suggest practitioners look at 6-week programs summarized in Pritchard et al. (2016) and Tomasko, Ridgway, Waller, and Olesik (2016) if they seek to include comprehensive academic content in their program.

Once more, we feel the need to highlight the importance of quality mentors, community mentors in the case of the LLC. Our community mentors were great with putting on events for the students to further bring them back together as a group outside of class. Unfortunately, our community mentors struggled to get students to regularly attend the open tutoring and supplemental instruction sessions. Although it was no fault of their own, we still advise that ideal community mentors are those who can energize and excite the students, as well as remain approachable to effectively aid the first-year students. We also suggest finding creative ways to incentivize attending these sessions.

A final piece of advice for those looking to start a bridge program and LLC at their institution is to assess what structures are already in place at the campus that might assist the effort. While our campus has experimented with LLCs in the past, they are by no means a hallmark of our institution. This becomes important as one considers the support structures in place to aid with an LLC throughout the academic year, especially, in our case, in the Spring when faculty had less face to face contact with the students. Reflecting upon the construction and impact assessment of our LLC, it is clear a university with more established protocols would have an advantage in this regard.

We finally want to note that our bridge program and LLC was not completed in isolation, but took a host of assistance from many individuals and offices throughout our campus. We worked closely with residence life, library instructional staff, career services, academic enrichment, academic services, counseling services, dining and catering, and other faculty and external partners. We also depended heavily on the efforts of peer and community mentors. The development of a bridge program and LLC brings many areas of the campus community together to work toward a common goal. It's not possible to throw a program together in just a few short months. This leads us to our final piece of advice: plan early. We began planning early in spring semester for the students arriving in August. This was sufficient for our bridge program but would not have been sufficient had the bridge duration been longer.

Conclusion

In summation, in our analysis of a social science bridge program and LLC we find optimism regarding the expansion of bridge programs into the social sciences. Students were eager for social science specific content during the intensive and throughout the academic year. Therefore, we highly recommend that bridge programs be considered for students in these majors. Levels of student comfort and confidence appeared to be high at the conclusion of our program and participants showed marginally higher GPAs relative to their counterparts. Given the levels of student comfort and confidence it would appear the students were able to develop a social capital base in order to aid their transition to the

institution. Additionally, by forming connections with faculty and upper-level students as mentors, the students had an additional resources that they could leverage for their success.

As bridge programs offer benefits to a wide variety of student groups, future research should continue to explore how to effectively design such programs, as well as how they might be used outside of STEM fields. Randomized control studies of bridge programs and LLCs should also be considered in order to truly test the effectiveness of these programs. Additionally, as a facet of these studies, thought should be given to the optimal length of a summer bridge program, with assessments carried out to compare the effectiveness of brief programs such as ours with programs lasting a month or more. While such endeavors would not be simple undertakings, they are a necessary step to verify the effectiveness of bridge programs and aid institutions with their cost-benefit analyses of running such programs.

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