

Major Highlights and Conclusions

- Summer Bridge participants in 2014 had a significantly higher cumulative GPA after their first year than non-participants. Participants were also significantly more likely to be retained the next Fall than non-participants.
- University College students who participated in Summer Bridge were significantly more likely to be retained in Indianapolis, even net the effect of high school GPA, receiving a Pell grant, registration date, and living in campus housing.
- Among beginners who registered less than 40 days before 2014 Fall census, Summer Bridge participants were significantly more likely to be retained at the Indianapolis campus than non-participants.
- In 2015, late registrants who participated in Summer Bridge were more likely to be a 21st Century Scholar than late registrants who did not participate. This was not the case in 2014.
- Seventy percent of African American students in who participated in Bridge were retained in Indianapolis in Fall 2015, compared to 58% of African American beginners who did not participate.
- Ninety-eight percent of 2015 Summer Bridge participants indicated that they would recommend Summer Bridge to another first-year student.

The purpose of this investigation is to explore the differences between beginning freshmen who participated in Summer Bridge in 2014 and those who did not. Specifically, this report presents differences in demographic and academic characteristics between participants and non-participants that may contribute to the likelihood of them earning a higher GPA and returning to IUPUI for their fall semester. Next, this report displays outcomes of participants and non-participants in order to further examine the impact of Summer Bridge on student success. The report concludes by displaying differences between 2015 Summer Bridge participants and non-participants on similar demographic and academic characteristics. Some of the major findings are included below. Caution should be taken as these analyses do not account for the effects of self-selection.

- Participation in Summer Bridge seemed to have a greater impact for students admitted to University College than for Dual/Direct admits. University College students who participated in Summer Bridge in 2014 had a lower mean high school GPA and average SAT score than University College students who did not participate. However, University College students who participated in Bridge had a higher mean GPA in their first year and were more likely to be retained at the Indianapolis campus in the fall 2015 than University College students who did not participate in Bridge. University College students who participated in Bridge were even more likely to be retained net the effect of high school GPA, receiving a Pell grant, registration date, and living in campus housing.
- Among beginners in 2014 who registered less than 40 days before Fall census, 82% of Summer Bridge participants were retained in the fall compared to 60% of non-participants. In 2015, several Summer Bridge registration slots were held open for late registrants, which may explain the differences in the population. Specifically, in 2014 22% of late registrants who participated in Bridge received a Pell grant, compared to 46% of late registrants who did not participate in Bridge. In 2015, there was no significant difference among late registering Bridge participants and non-participants. Likewise, in 2014, 15% of late registrants who participated in Bridge were 21st Century Scholars, compared to 36% of late registrants who participated in Bridge in 2015. These results suggest that leaving Summer Bridge slots open for late registrants may help more low income students take advantage of the program. Further exploration will be needed to determine if late registrants that participated in Bridge were as successful as students in 2014.
- Seven out of ten African American students who participated in Bridge in 2014 were retained on the Indianapolis campus in Fall 2015 compared to 58% among African American students who did not participate in Bridge. Similarly, 73% of first generation students who participated in Bridge in 2014 were retained in Indianapolis in Fall 2015 compared to 63% of first generation students who did not participate in Bridge.
- Students who participated in Summer Bridge in 2015 felt as if they benefited from participation. Ninety-three percent of respondents indicated they were very satisfied or satisfied with the resources and information Summer Bridge provided to them. In addition, about 98% of respondents indicated that they would recommend Summer Bridge to other first-year students.

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Demographic and Academic Characteristics of 2014 Summer Bridge Participants

About 45% of 2014 first-year students who participated in Summer Bridge were directly admitted to their program, compared to 36% of students who did not participate in Summer Bridge (Table 1). Among University College first-year students, 2014 Summer Bridge participants actually had a slightly lower average high school GPA and average SAT than non-Summer Bridge participants. Summer Bridge participants were also more likely to identify as Latino and were more likely to be a 21st Century Scholar. Dual/Direct Admit students who participated in Summer Bridge were more likely to identify as African-American, more likely to identify as Latino, and more likely to be a 21st Century Scholar than Dual/Direct Admits that did not participate. Among both University College and Dual/ Direct admits, Bridge participants were more likely to have lived in campus housing in the Fall 2014 semester and enrolled earlier than students who did not participate in Bridge.

Table 1
2014 Summer Bridge Cohort Characteristics^{1 2 3}

Attended Bridge	N	High School GPA	Best SAT	Hours attempted	Direct Admit	Female	African American	Latino (a)	Two or More Races	21st Century Scholar	First Generation	Pell received first fall	Campus Housing ⁴	Unmet financial First Fall Semester	Avg. Days Prior to Classes Register
			<i>Means</i>						<i>Percentages</i>					<i>Means</i>	
Overall															
Bridge Participants	679	3.36	1036	15.1	45%	59%	10%	10%	4%	29%	32%	42%	55%	\$5,049	66.6
Non-Bridge Participants	2,765	3.39	1036	14.5	36%	56%	8%	6%	4%	21%	34%	41%	31%	\$5,348	51.9
All Students	3,444	3.39	1036	14.6	38%	57%	9%	7%	4%	23%	33%	42%	36%	\$5,291	54.8
University College Admits															
Bridge Participants	372	3.22	965	14.9	N/A	63%	12%	11%	4%	32%	37%	46%	50%	\$5,936	62.2
Non-Bridge Participants	1,762	3.30	982	14.5	N/A	62%	11%	8%	4%	25%	38%	48%	28%	\$6,067	49.8
All UC Admits	2,134	3.29	979	14.6	N/A	62%	11%	8%	4%	26%	38%	48%	32%	\$6,046	51.9
Dual/Direct Admits															
Bridge Participants	307	3.52	1115	15.4	N/A	54%	8%	8%	4%	26%	26%	37%	60%	\$4,051	72.1
Non-Bridge Participants	1,003	3.56	1129	14.3	N/A	46%	4%	4%	3%	15%	26%	29%	37%	\$4,011	55.5
All Dual/Direct Admits	1,310	3.55	1125	14.6	N/A	48%	5%	5%	3%	17%	26%	31%	43%	\$4,021	59.4

¹ First-time Bachelor's-degree seeking beginning students. Part-time students are included

² Missing cases excluded. Percentages rounded to the nearest whole.

³ Bolded and italicized items significantly different based on chi-square test or independent samples t-test results ($p < .05$).

⁴ Campus Housing includes Park Place

First-year students who participated in Summer Bridge were more likely to complete the Entering Student Survey (ESS) than students who did not participate in Summer Bridge (83% of Summer Bridge participants compared to 73% of non-participants) (Table 2). Both University College admits and Dual/Direct Admits also rated their sense of belonging at IUPUI as higher than students who did not participate in Summer Bridge.

Table 2
2014 Summer Bridge Entering Student Survey Results^{1 2 3}

Attended Bridge	N	Response Rate	Mean Sense of Belonging rating⁴	Percentage working 20 or more hours a week	Percentage spending 5 or more hours caring for dependents
		<i>Percentage</i>	<i>Mean</i>	<i>Percentages</i>	<i>Percentages</i>
Overall					
Bridge Participants	563	83%	5.68	6%	15%
Non-Bridge Participants	2013	73%	5.44	6%	17%
All Students	2,576	75%	5.49	6%	17%
University College Admits					
Bridge Participants	372	78%	5.69	7%	18%
Non-Bridge Participants	1,268	73%	5.44	8%	22%
All UC Admits	1,557	74%	5.49	7%	21%
Dual/Direct Admits					
Bridge Participants	307	90%	5.67	5%	12%
Non-Bridge Participants	1,003	75%	5.43	4%	9%
All Dual/Direct Admits	1,310	78%	5.50	4%	10%

¹ First-time Bachelor's-degree seeking beginning students. Part-time students are included

² Missing cases excluded. Percentages rounded to the nearest whole.

³ Bolded and italicized items significantly different based on chi-square test or independent samples t-test results ($p < .05$).

⁴ For more information on the Sense of Belonging scale, see Appendix A.

Summer Bridge Outcomes

University College admits who participated in Summer Bridge earned a higher GPA in their first fall than non-participants (Table 3). University College admits who participated in Bridge were also more likely to be retained at the Indianapolis campus in the Spring 2015 semester as well as the Fall 2015 semester. Both University College and Dual/Direct Admits who participated in bridge were more likely than non-participants to have completed 30 or more credit hours in their first fall and spring semesters.

Table 3
2014 Summer Bridge Cohort Outcomes^{1 2 3}

Attended Bridge	N	First Fall GPA	Fall GPA < 2.00	First Year Cumulative GPA	First Year GPA < 2.00	Total Credits Earned First Fall and Spring	Completed 30 Total Hours First Fall and Spring	Retained in Spring 2015 at Indianapolis campus	Retained in Fall 2015 at Indianapolis campus	Retained in Fall 2015 at any IU campus
		<i>Mean</i>	<i>Percentage</i>	<i>Mean</i>	<i>Percentage</i>	<i>Means</i>		<i>Percentages</i>		
Overall										
Bridge Participants	679	2.94	15%	2.82	18%	23.0	32%	92%	75%	79%
Non-Bridge Participants	2,765	2.79	21%	2.71	21%	20.7	22%	85%	67%	73%
All Students	3,444	2.82	20%	2.73	21%	21.1	24%	86%	68%	74%
University College Admits										
Bridge Participants	372	2.81	18%	2.66	23%	21.2	21%	91%	72%	76%
Non-Bridge Participants	1,762	2.65	24%	2.57	25%	19.5	16%	84%	63%	70%
All UC Admits	2,134	2.68	23%	2.58	25%	19.8	17%	85%	64%	71%
Dual/Direct Admits										
Bridge Participants	307	3.11	11%	3.01	12%	25.2	44%	94%	78%	83%
Non-Bridge Participants	1,003	3.04	14%	2.96	15%	22.7	30%	87%	74%	78%
All Dual/Direct Admits	1,310	3.05	14%	2.97	14%	23.3	33%	89%	75%	79%

¹ First-time Bachelor's-degree seeking beginning students. Part-time students are included

² Missing cases excluded. Percentages rounded to the nearest whole.

³ Bolded and italicized items significantly different based on chi-square test or independent samples t-test results ($p < .05$).

Table 4 displays the results of Bridge participants and non-participants in Math and English courses during their first fall semester. Bridge participants on average did about as well in their fall Math courses as non-participants. This was true for both Direct Admits and University College students. However, the DFW rate in English courses for beginners who did not participate in Bridge was significantly higher than the DFW rate for students who did participate in Bridge. This was especially the case for University College students. Twenty percent of University College students who did not participate in Bridge received a D, F, or W in their first fall English course, compared to 12% of Bridge participants in University College. University College students who participated in Bridge had a slightly, but not significantly, higher average grade in their first English course compared to University College students who did not participate. However, among Direct Admits, those who did not participate in Bridge had a slightly, but not significantly, higher average grade in their first English course than Direct Admits that did participate.

Table 4
2014 Summer Bridge English and Math Outcomes^{1 2}

Attended Bridge	N ³	Average Math Grade	DFW Rate Math	Average Math Grade less than 2.0	Average Math Grade greater than 3.5	N ³	Average English Grade	DFW Rate English	Average English Grade less than 2.0	Average English Grade greater than 3.5
<i>Percentages</i>						<i>Means</i>				
Overall										
Bridge Participants	566	2.55	28%	22%	30%	363	2.88	12%	12%	31%
Non-Bridge Participants	2,170	2.51	28%	24%	26%	1,179	2.82	18%	16%	35%
All Students	2,736	2.52	28%	24%	27%	1,542	2.84	17%	15%	34%
University College Admits										
Bridge Participants	332	2.37	34%	27%	24%	217	2.81	12%	14%	29%
Non-Bridge Participants	1,447	2.37	31%	27%	22%	872	2.74	20%	18%	32%
All UC Admits	1,779	2.37	32%	27%	22%	1,089	2.76	19%	17%	32%
Dual/Direct Admits										
Bridge Participants	234	2.80	20%	15%	37%	146	2.98	11%	10%	35%
Non-Bridge Participants	723	2.76	21%	19%	34%	307	3.04	12%	10%	43%
All Dual/Direct Admits	957	2.77	20%	18%	35%	453	3.02	12%	10%	40%

¹ First-time Bachelor's-degree seeking beginning students. Part-time students are included

² Bolded and italicized items significantly different based on chi-square test or independent samples t-test results ($p < .05$).

³ Math outcomes include only students enrolled in at least one Math course. English outcomes include only students enrolled in at least one English course.

Summer Bridge Outcomes by Registration Date

In 2014, 433 Summer Bridge participants registered for classes more than 65 days before census (early registrants). A total of 148 participants registered between 40 and 65 days before census (moderate) and 97 registered less than 40 days before census (late registrants). Among late registrants, 82% of those that participated in Summer Bridge were retained in Indianapolis in Fall 2015, compared to 60% of late registrants that did not participate. In 2014, late registrants who participated in Summer Bridge had a significantly lower high school GPA than non-participants. They were also significantly less likely to have received a Pell grant in their first fall and were more likely to have been living in campus housing. In 2015, late registrants who participated in Bridge were somewhat different. Late registrants who participated in Bridge in 2015 had a significantly lower mean high school GPA like those in 2014. However, unlike in 2014, late registrants in 2015 were significantly more likely to be 21st Century Scholars. Also, unlike 2014, in 2015 late registrants who participated in Bridge were no more or less likely to have received a Pell in their first fall semester than non-participants. These data suggest that more low income students may have taken advantage of the opportunity to register late for Summer Bridge. Future analyses will determine if low income students who registered late also benefitted from Bridge participation.

Table 5
2014 Summer Bridge Registration Date and One-Year Retention¹

Registration Date	Summer Bridge Participants		Non-Participants		Overall Beginners	
	N	Retained in Fall 2015 at Indianapolis campus	N	Retained in Fall 2015 at Indianapolis campus	N	Retained in Fall 2015 at Indianapolis campus
Early (66 days or more before census)	433	73%	891	75%	1,324	75%
Moderate (40-65 days before census)	148	74%	956	66%	1,104	67%
Late (39 days or less before census)	97	82%	916	60%	1,013	62%
Total	678	75%	2,763	67%	3,441	68%

¹ Bolded items are practically or statistically significantly different based on chi-square test results ($p < .05$) for Summer Bridge participants compared to nonparticipants.

Table 6
Summer Bridge Cohort Characteristics – Late Registrants^{1 2 3}

Year	Attended Bridge	N	High School GPA	Best SAT	Hours attempted	Direct Admit	Female	African American	Latino (a)	Two or More Races	21st Century Scholar	First Generation	Pell received first fall	Campus Housing ⁴	Unmet financial First Fall Semester	Avg. Days Prior to Classes Register
																Means
2014	Bridge Participants	97	3.20	1009	14.5	31%	43%	5%	8%	0%	15%	31%	22%	28%	\$5,787	25.8
	Non-Bridge Participants	916	3.32	1010	13.9	33%	54%	10%	8%	4%	23%	37%	46%	16%	\$6,549	27.9
	All Late Registrants	1013	3.31	1010	13.9	33%	53%	10%	8%	4%	22%	36%	44%	18%	\$6,509	27.7
2015	Bridge Participants	152	3.28	971	14.7	28%	56%	10%	9%	8%	36%	42%	39%	28%	\$3,580	29.3
	Non-Bridge Participants	862	3.36	1020	13.6	35%	52%	10%	9%	6%	23%	36%	42%	21%	\$5,631	28.0
	All Students	1,014	3.35	1013	13.8	34%	53%	10%	9%	6%	25%	37%	42%	22%	\$5,381	28.2

¹ First-time Bachelor's-degree seeking beginning students who enrolled 39 days or less before the Fall 2014 census. Part-time students are included

² Missing cases excluded. Percentages rounded to the nearest whole.

³ Bolded and italicized items significantly different based on chi-square test or independent samples t-test results ($p < .05$).

⁴ Campus Housing includes Park Place

2014 Summer Bridge Outcomes by Various Student Groups

Seven out of ten African American students who participated in Summer Bridge were retained in Fall 2015, compared to 58% of African American students who did not participate in Summer Bridge. First generation students who participated in Summer Bridge earned a higher mean GPA in their first year and were more likely to be retained both at the Indianapolis campus and at any IU campus in the Fall 2015 semester compared to first generation students who did not participate in Summer Bridge. Summer Bridge participants who received a Pell grant in their first year also earned a significantly higher GPA in their first year than non-participants who received a Pell grant. (Table 7)

Table 7
2014 Summer Bridge Outcomes by Various Student Groups^{1 2 3}

	Summer Bridge Participants					Non-Participants				
	N	First-Year GPA	% First-Year GPA Below 2.0	Retained in Fall 2015 at Indianapolis campus	Retained in Fall 2015 at any IU campus	N	First-Year GPA	% First-Year GPA Below 2.0	Retained in Fall 2015 at Indianapolis campus	Retained in Fall 2015 at any IU campus
African American	71	2.44	25%	70%	73%	217	2.25	36%	58%	61%
Asian American	17	2.83	12%	76%	76%	113	2.92	15%	83%	88%
Latino(a)	64	2.67	23%	69%	72%	173	2.56	23%	68%	76%
Two or More Races	28	2.62	25%	71%	71%	110	2.53	27%	61%	65%
International	65	3.00	15%	88%	89%	38	2.79	15%	82%	82%
Female	397	2.85	16%	67%	73%	1,533	2.79	19%	72%	78%
First Generation	215	2.73	20%	73%	78%	905	2.53	28%	63%	69%
Pell Grant	284	2.65	22%	66%	73%	1,119	2.51	28%	62%	68%
Conditional Admit	62	2.25	34%	69%	73%	9	2.00	33%	67%	78%
Part-Time Students	10	2.15	20%	60%	60%	114	2.69	28%	52%	53%

¹ Missing cases were excluded.

² International students defined by admissions processed by International Affairs Office

³ Bolded items are practically or statistically significantly different based on ANOVA results or chi-square test results ($p < .05$).

2014 Summer Bridge Outcomes by Bridge Section

Table 8 depicts the retention and First-Year cumulative GPA of students in each student who participated in each Summer Bridge section. More than 85% of respondents who participated in the DEAP, Dental Hygiene, International 1, International 2, Journalism, Media Arts and Science, and STEM 1 Bridge sections were retained in Indianapolis in the Fall 2015 semester. The mean first-year GPA in 9 different Bridge sections (Dental Hygiene, Exploring Health Careers, Health and Life Sciences Exploratory, International 2, Kinesiology, Media Arts and Science, PETM, Psychology, and Science) was higher than a 3.00. Caution should be used when interpreting these results because of low enrollment in some Bridge sections.

Table 8
Fall 2014 Summer Bridge Results by Bridge Section

Bridge Type	N	Direct Admit	First Generation	African American	Latino/a	Pell received	Retained in Fall 2015	Retained in Fall 2015	First-Year Cumulative GPA
						first fall	at Indianapolis campus	at any IU campus	
						<i>Percentages</i>			
									<i>Means</i>
Biology	27	59%	52%	4%	15%	63%	81%	81%	2.86
Business	25	16%	60%	0%	8%	52%	68%	68%	2.87
DEAP	9	56%	22%	78%	22%	56%	89%	89%	2.73
Dental hygiene	4	0%	50%	0%	25%	50%	100%	100%	3.36
Education	23	57%	39%	4%	13%	35%	57%	61%	2.65
Engineering	24	50%	25%	8%	8%	42%	67%	67%	2.32
Exploratory 1	20	15%	15%	10%	20%	50%	65%	75%	2.60
Exploratory 2	17	0%	29%	29%	6%	47%	82%	82%	2.32
Exploratory 3	17	0%	24%	18%	12%	35%	76%	82%	2.17
Exploratory 4	13	8%	38%	15%	15%	62%	58%	58%	2.08
Exploratory 5	15	0%	33%	7%	13%	40%	73%	73%	2.19
Exploring health careers	24	4%	33%	17%	0%	46%	67%	75%	3.26
Health & life sciences exploratory	14	0%	50%	7%	0%	57%	64%	79%	3.26
Health professions programs 1	19	0%	47%	16%	26%	53%	58%	63%	2.58
Health professions programs 2	14	0%	43%	7%	0%	43%	50%	64%	2.53
Herron	25	96%	28%	4%	24%	60%	68%	84%	2.77
Informatics/HIA	17	100%	12%	12%	0%	24%	59%	65%	2.71
International 1	18	6%	6%	0%	0%	6%	89%	89%	2.80
International 2	19	21%	16%	0%	5%	0%	89%	89%	3.31
International 3	15	7%	27%	0%	0%	0%	80%	87%	2.86
International Engineering	23	52%	26%	9%	9%	17%	78%	78%	2.54
Journalism	8	88%	0%	38%	13%	63%	100%	100%	2.05
Kinesiology	24	75%	33%	21%	0%	50%	67%	83%	3.27
Liberal arts 1	23	26%	48%	9%	9%	52%	83%	87%	2.94
Liberal arts 2	24	38%	17%	13%	8%	54%	71%	79%	2.93
Media Arts and Science	24	92%	42%	4%	4%	42%	92%	92%	3.17
Money Matters	13	8%	77%	15%	23%	85%	77%	85%	2.87
PETM	24	83%	29%	8%	4%	54%	71%	83%	3.11
Psychology	24	58%	46%	25%	0%	58%	83%	88%	3.06
Science	27	93%	19%	4%	7%	22%	81%	81%	3.48
SPEA 1	17	41%	53%	6%	24%	59%	59%	71%	2.49
SPEA 2	18	33%	6%	17%	11%	33%	83%	83%	2.41
STEM 1	24	88%	21%	0%	13%	25%	88%	88%	2.97
STEM 2	25	80%	24%	8%	8%	40%	84%	84%	2.95
Technology	22	77%	32%	9%	14%	27%	77%	77%	2.89
All	679	45%	32%	10%	10%	42%	75%	79%	2.82

2014 Summer Bridge Outcomes

Summer Bridge participants and non-participants earned a similar one-year GPA after adjusting for the effect of high school GPA, receiving a Pell grant in the fall 2014 semester, and the number of days before census that the student registered. (Table 9) This is true overall, as well as for University College (Table 10) and Dual/Directly admitted students. (Table 11)

Table 9
Analysis of Covariance (ANCOVA) One-Year GPA

	N	Average One-Year GPA	Adjusted One-Year GPA
Bridge Participants	674	2.82	2.75
Non-Bridge Participants	2,720	2.71	2.71
All Students	3,394	2.73	

¹ Missing cases were excluded from the analysis.

² Ancova results suggest that the average GPA of Bridge participants was not significantly greater than the average GPA of non-participants net the effect of High school GPA, receiving a Pell grant, or number of days enrolled before census.

Table 10
Analysis of Covariance (ANCOVA) One-Year GPA – University College Admits only

	N	Average One-Year GPA	Adjusted One-Year GPA
Bridge Participants	368	2.66	2.61
Non-Bridge Participants	1,730	2.57	2.56
All Students	2,098	2.58	

¹ Missing cases were excluded from the analysis.

² Ancova results suggest that the average GPA of University College Bridge participants was not significantly greater than the average GPA of non-participants net the effect of High school GPA, receiving a Pell grant, or number of days enrolled before census.

Table 11
Analysis of Covariance (ANCOVA) One-Year GPA – Dual/Directly Admits only

	N	Average One-Year GPA	Adjusted One-Year GPA
Bridge Participants	306	3.01	2.99
Non-Bridge Participants	990	2.96	2.94
All Students	1,296	2.97	

¹ Missing cases were excluded from the analysis.

² Ancova results suggest that the average GPA of Dual/Directly Admitted Bridge participants was not significantly greater than the average GPA of non-participants net the effect of High school GPA, receiving a Pell grant, or number of days enrolled before census.

Logistic regression results suggest that attending Summer Bridge did have a significant effect on retention, net the effect of High school GPA, receiving a Pell grant, days registered before campus, and whether or not a student was living in campus housing. The model for University College admits (Table 12) suggests that a University College student with an average high school GPA, no Pell, not in campus housing, who registered late would have a 0.60 predicted probability of returning for the next fall semester. If that student were to attend Summer Bridge, their probability of being retained would increase to 0.66. Participation in Summer Bridge did not have a significant effect on fall-fall retention for Dual/Direct Admit students net the effect of the other independent variables. (Table 12)

Table 12
Logistic Regression Results for Fall-Fall Retention at Indianapolis Campus

Variable	β	Standard Error	Odds Ratio
Overall[^]			
Constant	0.46 *	0.11	
Attended Bridge	0.23 *	0.11	1.26
High School GPA ¹	1.30 *	0.11	3.68
Pell ²	-0.29 *	0.08	0.75
Registration date/10 ³	0.07 *	0.02	1.12
Campus Housing ⁴	0.11	0.09	1.33
University College Admits Only^{^^}			
Constant	0.41 *	0.14	
Attended Bridge	0.32 *	.014	1.38
High School GPA ¹	1.06 *	0.14	2.88
Pell ²	-0.20 *	0.10	0.82
Registration date/10 ³	0.06 *	0.02	1.06
Campus Housing ⁴	0.05	0.11	1.05
Dual/ Direct Admits Only^{^^^}			
Constant	0.46 *	0.19	
Attended Bridge	0.07	0.18	1.08
High School GPA ¹	1.66 *	0.20	5.27
Pell ²	-0.41 *	0.14	0.66
Registration date/10 ³	0.09 *	0.03	1.09
Campus Housing ⁴	0.23	0.15	1.23

* Statistically significant effect net the effect of the independent variables at $\alpha \leq 0.05$.

¹ For the analysis, High school GPA was centered about the overall mean High School GPA (3.39). The odds ratio therefore reflects the change in the odds of retention if the students' GPA was above or below 3.39.

² Students who received a Pell grant during the Fall 2014 semester.

³ Registration date is the number of days before census that the student registered divided by 10. These data suggest that for every 10 days that a student enrolled before fall census, the odds of being retained would increase by a multiple of 1.08.

[^] Nagelkerke $R^2 = 0.10$.

^{^^} Nagelkerke $R^2 = 0.06$.

^{^^^} Nagelkerke $R^2 = 0.14$.

Characteristics of 2015 Summer Bridge Participants

In 2015, Summer Bridge participants differed from other first-year student who did not participate in Summer Bridge in a number of important ways. (Table 13) Specifically, Summer Bridge participants had a significantly lower high school GPA and average SAT score compared to non-participants. Summer Bridge participants were significantly more likely to be female, African American, Latino/a, or first generation. They were also more likely to have received 21st Century Scholars funds or to have received a Pell Grant during the Fall 2015 semester. However, Summer Bridge participants were also more likely to be living in Campus Housing, had significantly lower levels of unmet financial need, and registered earlier than nonparticipants.

2015 Summer Bridge participants were once again significantly more likely to complete the Entering Student Survey than students who did not participate in Summer Bridge, though the overall response rate dropped somewhat (Table 14). As in 2014, Summer Bridge participants in 2015 rated their overall sense of belonging at Orientation higher than Bachelor's degree seeking beginners who did not participate in Summer Bridge. Summer Bridge participants were however more likely to indicate that they were working 20 or more hours per week off campus than students who did not participate in Summer Bridge.

Table 13
2015 Summer Bridge Cohort Characteristics^{1 2 3}

Attended Bridge	N	High School GPA	Best SAT	Hours attempted	Direct Admit	Female	African American	Latino (a)	Two or More Races	21st Century Scholar	First Generation	Pell received first fall	Campus Housing ⁴	Unmet financial	Avg. Days
														First Fall Semester	Prior to Classes Register
			<i>Means</i>						<i>Percentages</i>					<i>Means</i>	
Bridge Participants	895	3.41	1025	15.2	40%	62%	10%	10%	6%	44%	40%	49%	50%	\$3,762	62.6
Non-Bridge Participants	2608	3.44	1051	14.4	42%	56%	7%	7%	5%	18%	32%	36%	36%	\$4,545	54.2
All Students	3503	3.43	1045	14.6	42%	57%	7%	8%	6%	25%	34%	39%	40%	\$4,343	56.3

¹ First-time Bachelor's-degree seeking beginning students. Part-time students are included

² Missing cases excluded. Percentages rounded to the nearest whole.

³ Bolded and italicized items significantly different based on chi-square test or independent samples t-test results ($p < .05$).

⁴ Campus Housing includes Park Place

Table 14
2015 Summer Bridge Entering Student Survey Results^{1 2 3}

Attended Bridge	N	Response Rate	Mean Sense of Belonging rating ⁴	Percentage working 20 or more hours a week	Percentage spending 5 or more hours caring for dependents
Bridge Participants	658	74%	5.61	10%	19%
Non-Bridge Participants	1,726	66%	5.45	6%	17%
All Students	2,384	68%	5.50	7%	18%

¹ First-time Bachelor's-degree seeking beginning students. Part-time students are included

² Missing cases excluded. Percentages rounded to the nearest whole.

³ Bolded and italicized items significantly different based on chi-square test or independent samples t-test results ($p < .05$).

⁴ For more information on the Sense of Belonging scale, see Appendix A.

Table 15 presents demographic characteristics of the Fall 2015 Summer Bridge participants by section. The highest percentage of African American students were enrolled in the DEAP and Money Matters Bridge sections, while DEAP and Technology had the highest percentage of Latino/a students. Aside from Money Matters, at least half of all participants received a Pell grant in 19 separate Summer Bridge sections.

Table 15
Fall 2015 Summer Bridge Characteristics by Bridge Section

Bridge Type	N	Direct Admit	First Generation	African American	Latino/a	Pell received first fall
				<i>Percentages</i>		
Biology	29	76%	17%	3%	7%	31%
Business	21	29%	38%	14%	5%	43%
DEAP	25	24%	52%	64%	32%	64%
Dental Hygiene(DHYG)	9	0%	67%	0%	22%	78%
Education	24	54%	46%	0%	8%	29%
Engineering	25	64%	36%	12%	0%	44%
Exploring Health Careers (EXHC)	24	8%	42%	8%	4%	50%
EXPL	21	5%	43%	0%	5%	33%
Herron	24	100%	42%	8%	13%	58%
Health and Life Sciences Exploratory 1(HLSE1)	24	0%	21%	4%	17%	25%
Health and Life Sciences Exploratory 2(HLSE2)	17	6%	29%	6%	6%	47%
Health Professions Programs (HPP)	13	0%	46%	8%	23%	54%
International Engineering (IENG)	25	64%	24%	8%	12%	20%
Informatics/HIA (IHIA)	18	83%	11%	0%	0%	28%
International 1	21	10%	33%	0%	0%	0%
International 2	16	31%	38%	0%	0%	0%
Liberal Arts1	25	48%	24%	4%	12%	32%
Liberal Arts2	24	67%	42%	13%	4%	63%
Media Arts and Sciences (MAS)	21	86%	52%	5%	10%	33%
Money Matters (MONM)	14	0%	79%	43%	7%	100%
PETM1	22	77%	23%	14%	5%	50%
PETM2	24	79%	50%	8%	4%	58%
PETM3	24	67%	29%	0%	0%	38%
Psychology	23	43%	30%	13%	13%	52%
Science	28	43%	43%	11%	11%	50%
SPEA 1	21	48%	24%	5%	10%	38%
SPEA 2	24	13%	33%	4%	8%	58%
STEM 1	27	78%	30%	0%	4%	22%
STEM 2	20	75%	50%	5%	10%	40%
Technology	23	74%	30%	4%	26%	35%
UCOL1	26	42%	50%	15%	15%	73%
UCOL2	24	4%	58%	21%	17%	83%
UCOL3	27	30%	56%	7%	15%	74%
UCOL4	23	22%	48%	22%	9%	83%
UCOL5	24	21%	54%	0%	17%	75%
UCOL6	24	0%	50%	13%	13%	75%
UCOL7	25	24%	60%	20%	8%	84%
UCOL8	23	26%	65%	9%	13%	83%
UCOL9	22	9%	41%	5%	18%	36%
UCOL10	21	5%	19%	19%	10%	48%
All	895	40%	40%	10%	10%	49%

2015 Summer Bridge Evaluation Results

Of the students who participated in Summer Bridge in 2015, more than 93% of participants indicated that participating in Summer Bridge improved their ability to adjust to college life, appreciate social and cultural diversity, or improved their ability to live and work in a diverse and complex society. (Table 16) Overall, 93% of 2015 Summer Bridge participants indicated that the Summer Bridge provided them with the resources and information to help them succeed in college. (Figure 1) Ninety-eight percent of participants reported that they would recommend Summer Bridge to other first-year students. (Figure 2)

Table 16
Selected 2015 Summer Bridge Evaluation Results

	N	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Participating in the Summer Bridge improved my ability to...</i>		<i>Percentages</i>				
adjust to college life	858	0.0%	0.1%	4.0%	34.4%	61.5%
appreciate social and cultural diversity	861	0.1%	0.7%	5.7%	31.0%	62.5%
live and work in a diverse and complex society	859	0.0%	0.2%	6.4%	34.1%	59.3%

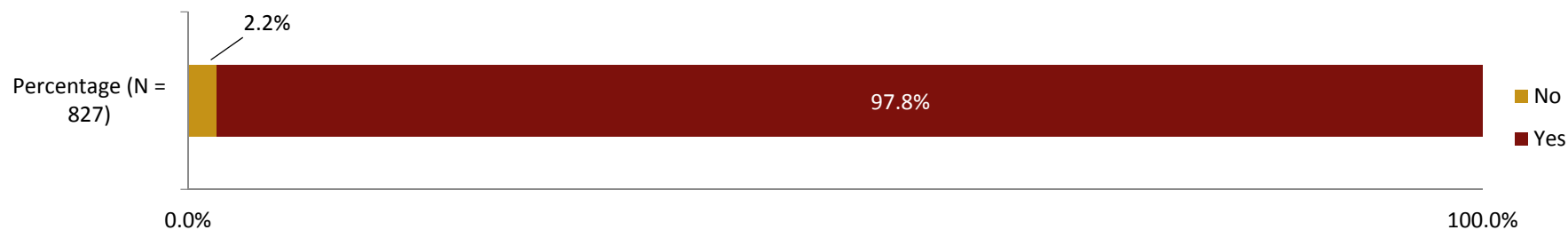
Figure 1

Overall, how satisfied were you that the Summer Bridge provided you with the resources and information to help you succeed in college?



Figure 2

Would you recommend the Summer Bridge to other first-year students?



Conclusions

2014 first-time beginners who participated in Summer Bridge had similar average high school GPA and similar SAT scores as non-participants. Summer Bridge participants were also just as likely to have received a Pell grant in the Fall semester as first-year beginners who did not participate. That said, Summer Bridge participants were more likely to be directly admitted to their school, were more likely to be in campus housing, and registered earlier (on average) than students who did not participate in Summer Bridge. These differences would appear to be related to differences in retention and GPA between participants and non-participants.

University College students who participated in Summer Bridge had a slightly lower average high school GPA and average SAT score than students who did not participate. However, participation in Summer Bridge did have a significantly positive effect on retention for students admitted to University College, net the effect of high school GPA, receiving a Pell grant, registration date, and living in campus housing. These results provide some evidence that Summer Bridge may contribute to the success of students who are not directly admitted to their program of choice.

Among beginners who registered late (less than 40 days before census), students who participated in Summer Bridge were significantly more likely to return in Fall 2015 than students who did not participate in Summer Bridge. However, late registrants who participated in Summer Bridge were significantly less likely to have received a Pell grant and were more likely to be in campus housing than late registrants who did not participate in Summer Bridge. In 2015, late registrants who participated in Summer Bridge were not significantly more likely to have received a Pell grant than non-participants, suggesting a difference in the population. The outcomes of 2015 late registering Summer Bridge participants should be monitored to see if changes in demographics have any effect on aggregate outcomes.

Seventy percent of African American students who participated in 2014 Summer Bridge were retained in Indianapolis in Fall 2015 compared to a 58% retention rate for African American students who did not participate. Likewise, 73% of first generation students who participated in Bridge were retained in Indianapolis in the Fall 2015 semester, while 63% of first generation students who did not participate were retained.

Beginners who participated in Summer Bridge in 2015 were different from non-participants in a number of important ways. Summer Bridge participants in 2015 had significantly lower mean high school GPA and SAT score, but attempted more credit hours during the first fall semester. In addition, 2015 Summer Bridge participants were also significantly more likely to be African American or Latino/a, or be the first in their family to attend college compared to beginners who did not participate in Summer Bridge. Summer Bridge participants in 2015 were significantly more likely to be a 21st Century Scholar or to have received a Pell grant compared to non-participants. Survey results from 2015 Bridge participants do suggest that students feel as if they received benefit from the program. Specifically, 93% of participants were very satisfied or satisfied that Summer Bridge provided them with the resources and information to help them succeed in college. GPA and retention rates for 2015 Summer Bridge participants will be monitored in order to determine if these differences in demographic and academic characteristics are related to further changes in student outcomes.

Appendix A
Sense of Belonging Scale

1. I feel a sense of belonging to IUPUI
2. I feel that I am a member of the IUPUI community
3. I feel that I fit right in on campus.
4. I feel connected with other IUPUI students
5. I see myself as part of the IUPUI community
6. It is important for me to graduate from IUPUI (e.g., rather than from another college)

Note: From the 2014 and 2015 Entering Student Survey (ESS). Respondents were asked to rate how much they agreed with each statement using the following scale 1=Strongly Disagree, 2 = Moderately Disagree, 3 = Slightly Disagree, 4 = Neither Disagree/Agree, 5 = Slightly Agree, 6 = Moderately Agree, 7 = Strongly Agree