



Understanding 21st Century Scholars at IUPUI Indianapolis

The purpose of this investigation was to enhance the understanding of 21st Century Scholars (TFCS) students' characteristics, demographics, academic success outcomes, and persistence rates. Additionally, this research brief will explore the effect of various TFCS programs compared to, and in conjunction with, other educational equity programs. This report focuses on TFCS first-time beginners who receive state aid and also on TFCS that receive additional IUPUI institutional aid and programming support.

Indiana's 21st Century Scholars Program offers income-eligible Indiana resident students up to four years of paid tuition at an eligible Indiana college or university after they graduate from high school. In middle and high school, 21st Century Scholars are connected to programs and resources to help them plan, prepare, and pay for college. Once in college, Scholars receive support to complete their college degrees and connect to career opportunities. Scholars attending IUPUI have the opportunity to participate the 21st Century Scholars Success Program, which offers first-year peer mentoring, academic support, and workshops that focus on academic success, career development, and personal growth. A select group of students are also invited to participate in Students Success coaching ("coaching"). Though the criteria for selection into success coaching have changed over the years, generally students are selected based on a combination of late enrollment and high levels of unmet financial need. Students not selected for coaching and not receiving services from other educational equity programs such as Diversity Enrichment and Achievement Program (DEAP), the Student Support Services program (SSS), or the Nina Scholars Program (Nina) are encouraged, but not required, to participate in peer mentoring. Highlights of these analyses include the following.

- The number of 21st Century Scholars (TFCS) students enrolled at IUPUI Indianapolis location increased from 251 in 2010 to a peak of 776 in Fall 2016. There were 683 TFCS students in the Fall 2019 Indianapolis beginner cohort.
- The one-year retention rate for the Fall 2018 cohort of TFCS institutional grant recipients at Indianapolis was 63%, compared to 70% for all resident beginners. However, TFCS students who received peer mentoring had a similar retention rate (70%) to all undergraduates.
- Retention rates were highest for TFCS students that had received some programming, regardless of which programming students participated in. 2018 TFCS beginners who received peer mentoring had a 70% retention rate, while high-risk TFCS receiving coaching were retained at 59%. Conversely, TFCS students who did not receive any programming from TFCS, DEAP, SSS, or Nina had a 43% retention rate.
- Fall 2018 TFCS beginners who did not participate in any educational equity programs earned a significantly lower GPA in their first fall semester, regardless of the programs in which TFCS students participated.
- Not participating in programming was especially damaging for first generation students. Only 37% of Fall 2018 first generation TFCS beginners who did not participate in any programming from TFCS, DEAP, or SSS were retained in Fall 2019.

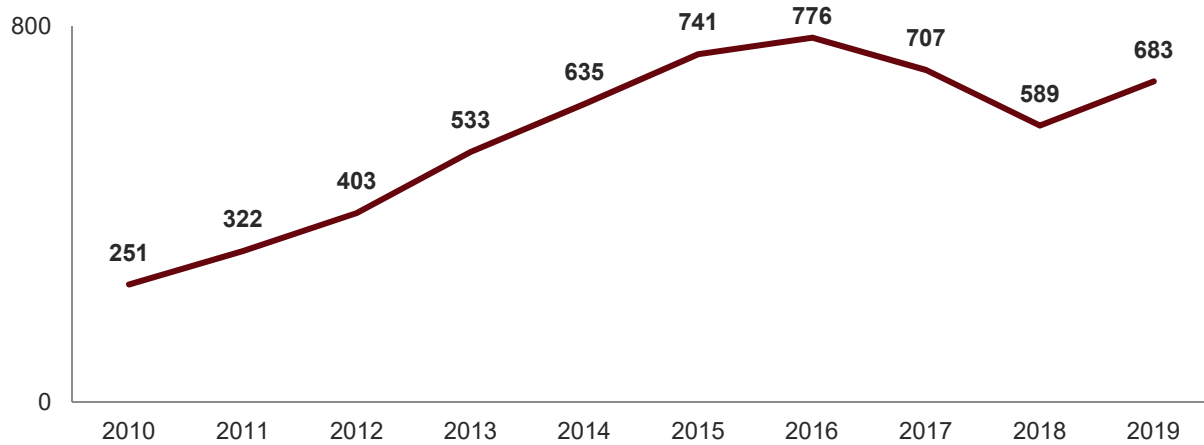
21st Century Scholar Enrollment

The number and percentage of first-time beginners who were TFCS increased from 2010 to 2016. After a brief decline, the number of 21st Century Scholars increased slightly in Fall 2019. Figures



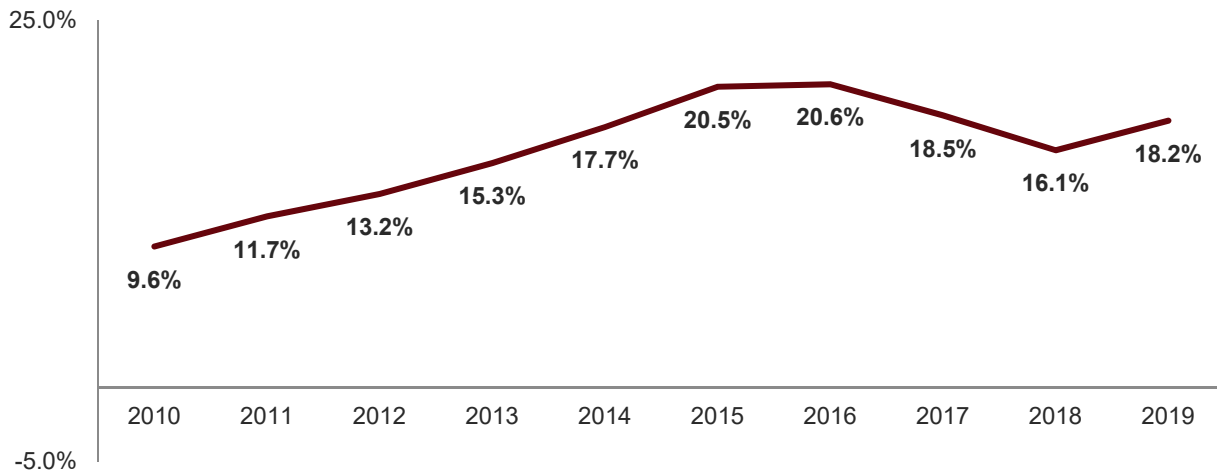
1 and 2 display the numbers and percentages of TFCSs who received state aid from Fall 2010 to Fall 2019. Beginning in 2017, the state of Indiana began requiring students to complete 12 activities in order to receive the scholarship. These new requirements, along with the recent increase in beginners who are not Indiana residents, may be responsible for the smaller number and percentage of students participating.

Figure 1
Number of IUPUI Indianapolis First-Time Beginners who were 21st Century Scholars¹



¹ Includes resident and non-resident students

Figure 2
Percentage of IUPUI Indianapolis First-Time Beginners who were 21st Century Scholars¹



¹ Includes resident and non-resident students

Participation in Educational Equity Programming

Students who receive the IUPUI TFCS institutional grant were expected to participate in TFCS programming and maintain at least a 2.5 GPA. Not surprisingly, students participating in other educational equity but not TFCS programming were more likely to be African American or Latinx. First generation students were more likely to be participating in programming from multiple sources. TFCS students who were not receiving any programming were different from others in several important ways. TFCS beginners not receiving programming had lower high school GPA



and SAT scores than students who participated in either TFCS peer mentoring or TFCS coaching. They were also enrolled in significantly fewer credit hours than peer mentoring participants. TFCS beginners receiving no programming were also less likely to have received an Indiana Honor’s Diploma, were less likely to be living in campus housing, and had a significantly higher level of unmet financial need. Beginners receiving TFCS coaching registered significantly later than other participants, likely a reflection of the selection criteria.

Table 1
Demographic characteristics of Fall 2018 21st Century Scholars by educational equity program participation

	<i>N</i>	Female	African American	Latinx	First Generation	Age	Received Pell	Unmet Financial Need
		<i>Percentages</i>				<i>Mean</i>		
No programming	171	60%	16%	19%	56%	18.2	89%	\$5,581²³⁴⁵
TFCS peer mentoring only	250	70%	9%	15%	50%	18.2	84%	\$1,985
TFCS coaching only	149	62%	11%	14%	43%	18.2	87%	\$4,030²
In DEAP, SSS, or NINA, not 21st century peer mentoring or coaching	61	72%	44%	30%	59%	18.2	98%	\$3,629
Receiving TFCS peer mentoring or coaching and services from either DEAP or SSS	40	80%	28%	48%	73%	18.1	88%	\$2,385
All TFCS Beginners	671	67%	16%	19%	52%	18.2	87%	\$3,529

Bold and italicized items indicate revealed statistically significant differences between groups at $\alpha \leq 0.05$.

Table 2
Comparison between Fall 2018 21st Century Scholar beginners by participation in educational equity programs

	<i>N</i>	High School GPA	SAT Score	High School Honors Diploma	Direct Admit	Days Enrolled Before Census	Course Load	Attempted at least 15 credit hours	Tested into Remedial Math	Living in Campus Housing
		<i>Mean</i>		<i>Percentages</i>		<i>Mean</i>			<i>Percentages</i>	
No programming	171	3.32	1037	58%	35%	55.1³	15.1	67%	56%	35%
TFCS peer mentoring only	250	3.48¹	1080¹⁴⁵	74%	42%	60.8³	15.5¹	84%	48%	42%
TFCS coaching only	149	3.46¹	1087¹⁴⁵	70%	41%	46.8	15.4	81%	47%	52%
In DEAP, SSS, or NINA, not 21st century peer mentoring or coaching	61	3.37	999	74%	11%	60.7³	15.2	80%	44%	54%
Receiving TFCS peer mentoring or coaching and services from either DEAP or SSS	40	3.44	1013	70%	15%	58.1	15.3	75%	58%	65%
All TFCS Beginners	671	3.42	1059	69%	36%	56.1	15.4	78%	50%	45%

Bold and italicized items indicate revealed statistically significant differences between groups at $\alpha \leq 0.05$.

¹ Significantly greater than students not receiving programming

² Significantly greater than students who received TFCS peer mentoring only

³ Significantly greater than students who received TFCS coaching

⁴ Significantly greater than students who received programming from DEAP or SSS but not TFCS.

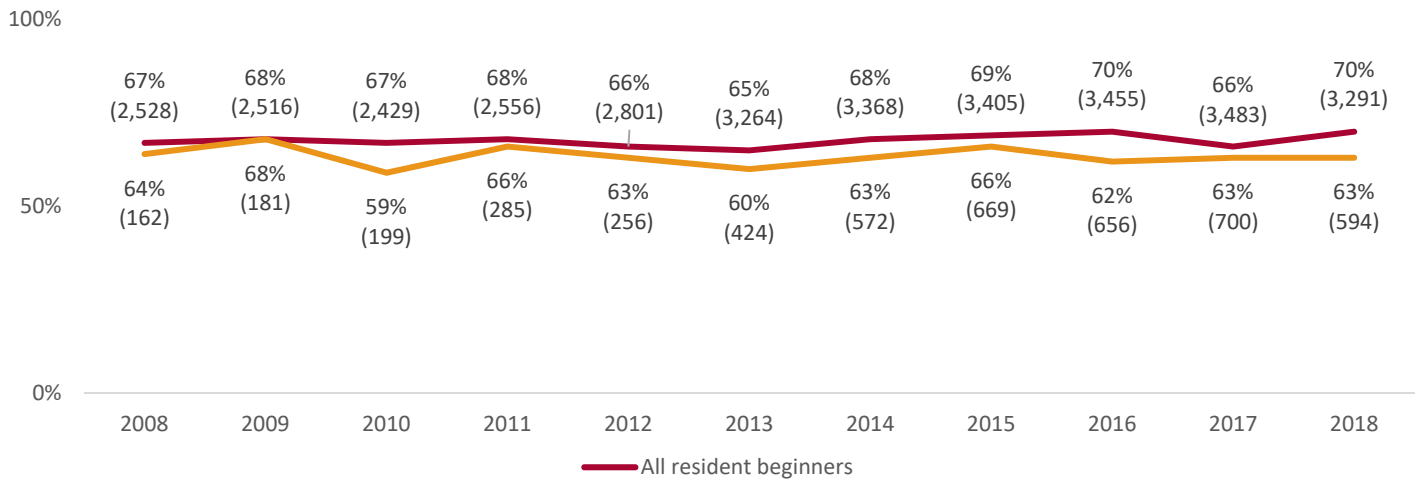
⁵ Significantly greater than students who received programming from DEAP or SSS and TFCS.



Outcomes

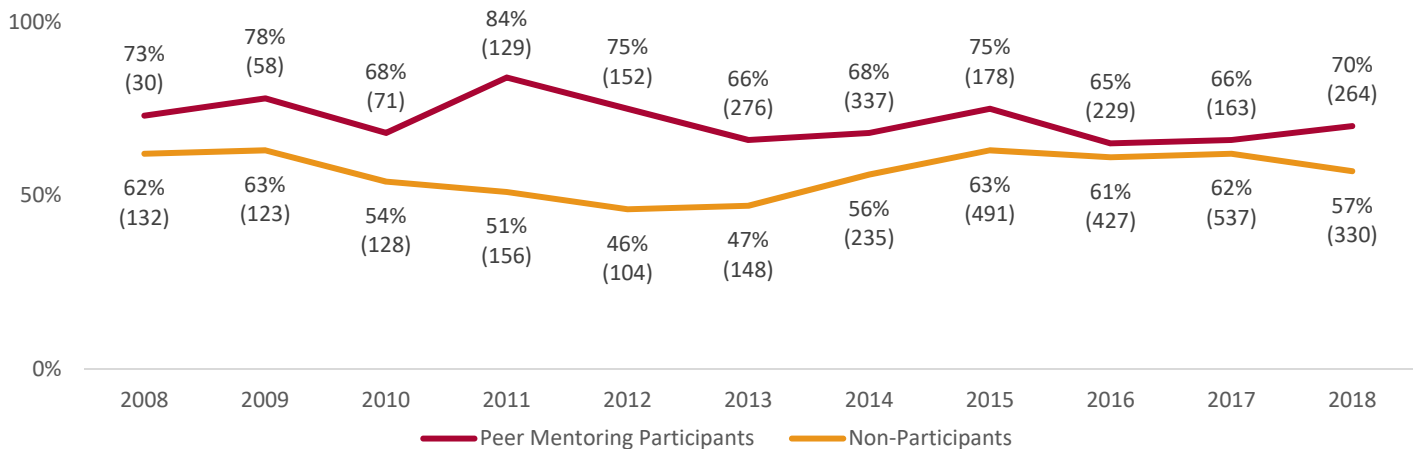
Figure 3 displays the retention rates at IUPUI of beginners who received the TFCS institutional grant compared to all Indiana resident beginners. Sixty-three percent of Fall 2018 beginners who received the TFCS institutional grant were retained at the Indianapolis location in Fall 2019 compared to 70% of all Fall 2018 Indiana resident beginners.

Figure 3
Retention at IUPUI of TFCS Institutional Grant Recipients Retained Compared to all Indiana Resident Beginners



TFCS students who participated in peer mentoring had consistently higher retention rates than students who did not. In 2018, 70% of TFCS institutional grant recipients who participated in peer mentoring were retained compared to 57% of those who did not. These students may have also received mentoring, coaching, or other services from offices besides the 21st Century Scholars office. Of 2018 TFCS students who did not participate in peer mentoring, 130 were enrolled in TFCS coaching, 16 received coaching from Inside Track, 60 were part of DEAP, 29 received services from SSS, and 2 were enrolled in Nina.

Figure 4
Retention at IUPUI of TFCS Grant Recipients Retained by Participation in peer mentoring 1



1 Of 2018 TFCS students who did not participate in peer mentoring, 130 were enrolled in TFCS coaching, 16 received coaching from Inside Track, 60 were part of DEAP, 29 received services from SSS, and 2 were enrolled in Nina.



Students who participated in some programming tended to have higher retention rates than students who did not participate in any programming. The only exception was Inside Track or TFCS coaching. However, students selected for that program are very at-risk. The fact that retention rates for that group are comparable to retention rates for students less at risk who did not participate in any programming is both commendable and concerning.

Figure 5
Retention at IUPUI of TFCS Grant Recipients by
Participation in peer mentoring, coaching, or Other Educational Equity programming

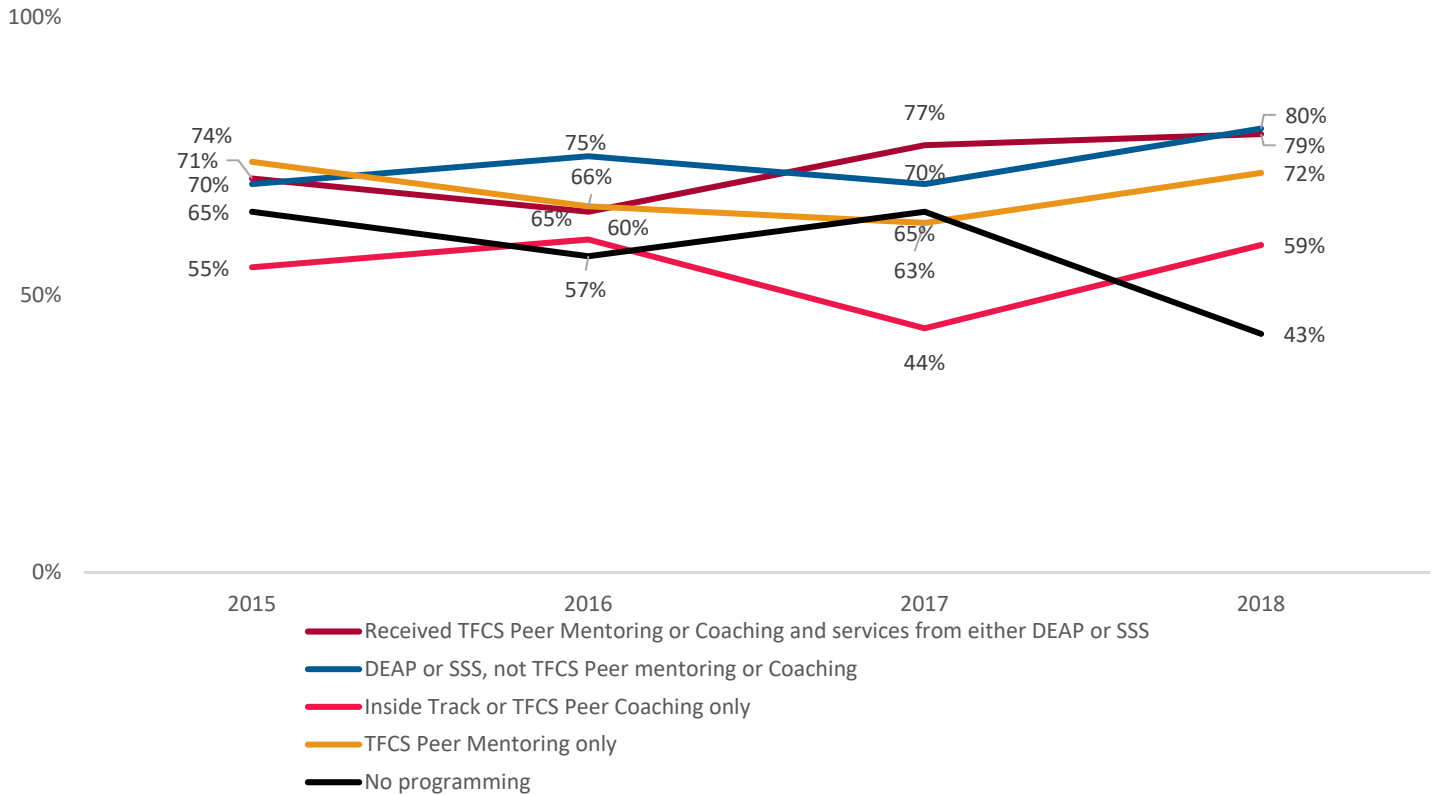


Table 3 displays retention rates for different groups of 2018 beginners that received the TFCS institutional grant. In all cases, students who participated in Bridge and peer mentoring, TFCS coaching, or other educational equity programs (such as DEAP or SSS) were at least slightly more likely to be retained than the overall retention rate. In most cases, students who received TFCS coaching had retention rates comparable to the overall retention rate. The exception, however, was for the 17 African American students who participated in TFCS coaching; 47% of those students were retained compared to 61% of all African American TFCS grant recipients.

By far, however, the most at risk group was students who did not participate in any educational equity programming. More than one-fourth (26%) of TFCS institutional grant recipients did not participate in any educational equity programs. The retention rate at IUPUI of those students was 43%, compared to 63% for all TFCS grant recipients.



Table 3
2018 Fall-Fall Retention Rates at IUPUI for TFCS Grant Recipient Beginners
By Demographic Characteristics

	Overall Retention Rate ¹	All peer Mentor Participants	TFCS coaching only ²	In DEAP or SSS, no TFCS Programming ³	TFCS Programming and DEAP/SSS/Nina	No TFCS Programming or DEAP/SSS/Nina
	<i>Percentage</i>					
All TFCS Institutional Grant Recipients	63% (594)	70% (264)	59% (138)	80% (56)	79% (39)	43% (154)
African American	61% (97)	69% (29)	47% (17)	70% (23)	64% (11)	50% (26)
Latinx	67% (116)	79% (42)	70% (20)	88% (17)	84% (19%)	33% (30)
First Generation	62% (315)	73% (131)	65% (62)	85% (33)	75% (28)	36% (89)
Received Pell in first academic year	63% (550)	71% (241)	60% (124)	80% (56)	82% (34)	43% (146)

¹ Retention rate for Fall 2018 Indiana resident beginners at the IUPUI campus was 70%.

² Participation in TFCS coaching included late registration at high levels of unmet financial need.

³ TFCS Programming includes peer mentoring and TFCS coaching.

An Analysis of Covariance was conducted to assess the effect of multiple interventions of first-year GPA, net the effect of high school GPA, enrollment date, and amount of unmet financial need. Results suggested that there were no significant differences between levels of intervention, net the other factors. However, every TFCS institutional grant recipient who received an intervention earned a significantly higher GPA than institutional grant recipients who did not participate in any programming. Students who received a grant but did not participate in any programming earned an average GPA of 1.93, while the average was 2.33 for TFCS coaching participants, 2.39 for DEAP/SSS/Nina students not receiving TFCS programming, 2.60 students receiving TFCS peer mentoring only, and 2.69 for students receiving TFCS coaching or peer mentoring and enrolled in DEAP, SSS, or Nina.

Table 4
ANCOVA Results: TFCS Institutional Grant Participation in Educational Equity Programs and First-Year Cumulative GPA¹

	N	Fall GPA	Adjusted Fall GPA*
TFCS Institutional Grant not participating in programming	154	1.93	2.18
TFCS peer mentoring only	201	2.60	2.42
TFCS coaching only	134	2.33	2.35
In DEAP, SSS, or Nina, no TFCS programming	56	2.39	2.42
Receiving TFCS programming and DEAP, SSS, or Nina	39	2.69	2.55
Overall	584	2.35	

Missing cases were excluded.

Differences between levels were not statistically significant based on Analysis of Covariance (ANCOVA) results ($p < .05$).

Partial Eta Squared indicated a very a small effect size.

* Covariate included in the model was High School GPA, Enrollment Date (proxy for student motivation) and amount of unmet financial need.

One hundred first-year 21st Century Scholars participated in the Inside Track “college success coach” Program in 2014, 2015, 2016. Beginning in 2017, Inside Track was replaced with professional coaching in the 21st Century Scholars office. The 2017 cohort had lower GPA and retention rates than previous Inside Track cohorts. In 2018, retention rates and GPA were comparable to previous Inside Track



cohorts. However, the 2018 group had a higher high school GPA and were more likely to be living in campus housing than the 2017 cohort.

Table 5
Professional coaching and Inside Track Student Outcomes Compared to a Matched Comparison Group*

Outcome and Comparison Measures	2018 All coaching Participants N=175	2017 All coaching Participants N=101	2016 Inside Track coaching Participant N=98	2015 Inside Track coaching Participant** N=100	2014 Inside Track coaching Participant N= 100	Matched Comparison Group* Fall 2013 N=112	Matched Comparison Group* Fall 2012 N=87
One-Year Retention Rate (any IU)	67%	54%	64%	60%	59%	50%	47%
One-Year Retention Rate (IUPUI IN)	62%	51%	60%	54%	57%	46%	46%
Fall-Spring Retention (Any IU)	83%	75%	84%	75%	82%	75%	74%
First Fall Semester GPA	2.43	1.87	2.28	2.23	2.24	2.02	2.20
First-Year GPA	2.40	1.95	2.24	2.24	2.18	1.93	2.06
First-Year GPA Below 2.00	31%	42%	32%	29%	37%	43%	44%
Comparison Measures							
High School GPA	3.46	3.28	3.31	3.30	3.22	3.27	3.24
Average SAT Score (pre-2017 scale)	1077	931	944	944	923	952	962
% Received Pell Grant in first academic year	87%	90%	94%	94%	95%	93%	93%
% African American, Latinx, Two or More Races	41%	48%	47%	40%	41%	34%	34%
% Living On Campus	53%	26%	48%	41%	10%	32%	22%

* Matched comparison group consisted of First-Time, Full-Time 21st Century Scholars Students at IUPUI Indianapolis who Received State and IUPUI Institutional Funds and did not participate in peer mentoring or summer bridge interventions (2013 and 2012 cohorts previous to the implementation of the Inside Track coaching interventions).

** 2015 Inside Track group includes only students who were 21 years old and under and excludes the Inside Track focused intervention on students 22-24 years old.

Conclusion

TFCS beginners who participate in programming, either from the TFCS office or in other forms, appear to be as successful, if not more successful, than all other TFCS Indiana resident beginners. However, more than one fourth (26%) of TFCS institutional grant recipients are not participating in any educational equity programs, despite being strongly encouraged to participate. These students seem to be at the greatest risk for low academic performance and departure from IUPUI. In addition to having higher levels of unmet need, TFCS beginners not participating in programming are also enrolled in fewer credit hours and are less likely to be living in campus housing. As a result, they have lower GPA in the first fall semester and lower fall-to-fall retention rates. Anything that could be done to encourage greater participation in programming should be encouraged.