

Student Success and Major Choice

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UNDERGRADUATE STUDENT SUCCESS

ACADEMIC AFFAIRS

Major Choice at Application

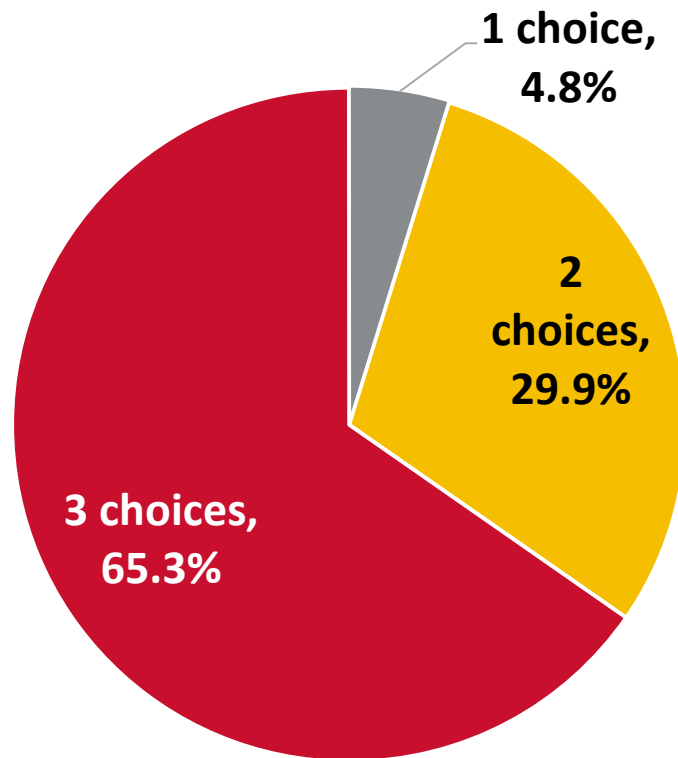
- Students select up to 3 major options
 - Third option is limited
- Exploratory Studies (undeclared)
 - Not accepted to one of application choices
 - Major of choice
- Considerations
 - Enrollment yield
 - Student behavior
 - Best fit

Freshman Admission Requirements

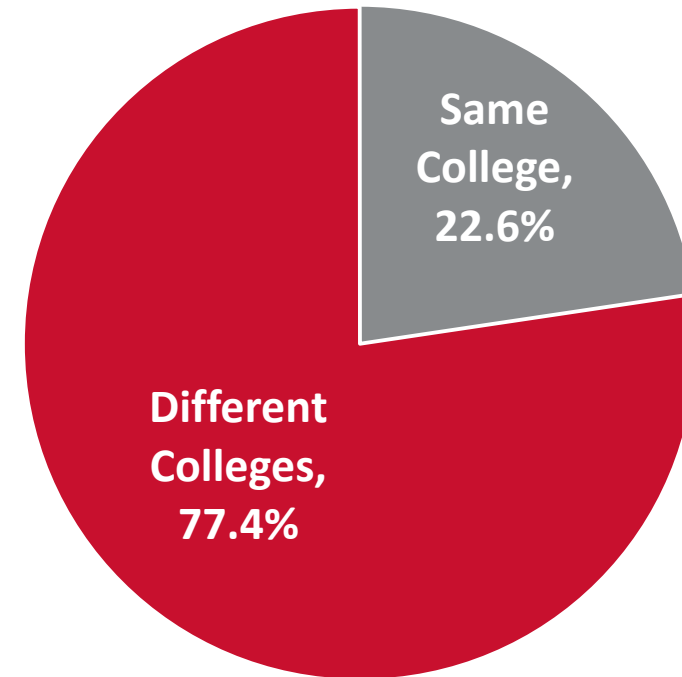
College	Minimum SAT / ACT
Business	1270 / 26
Engineering	1270 / 26
Natural Sciences and Mathematics	1170 / 24
All other colleges <ul style="list-style-type: none">• Technology• Liberal Arts and Social Sciences (CLASS)• Education• Exploratory Studies (undeclared)	1080 / 21

Major Choice Patterns

Number of Choices on Application



Is second choice college the same or different from first choice college?



Exploratory Studies

- Short-term preparatory major for undeclared students
- Specialized advisors help students explore their academic and career interests, complete prerequisite coursework, and select their best fit major
- Program structure includes freshman seminar, social support, and specialized outreach
- Students are expected to declare a degree-seeking major by 60 hours

Research Questions

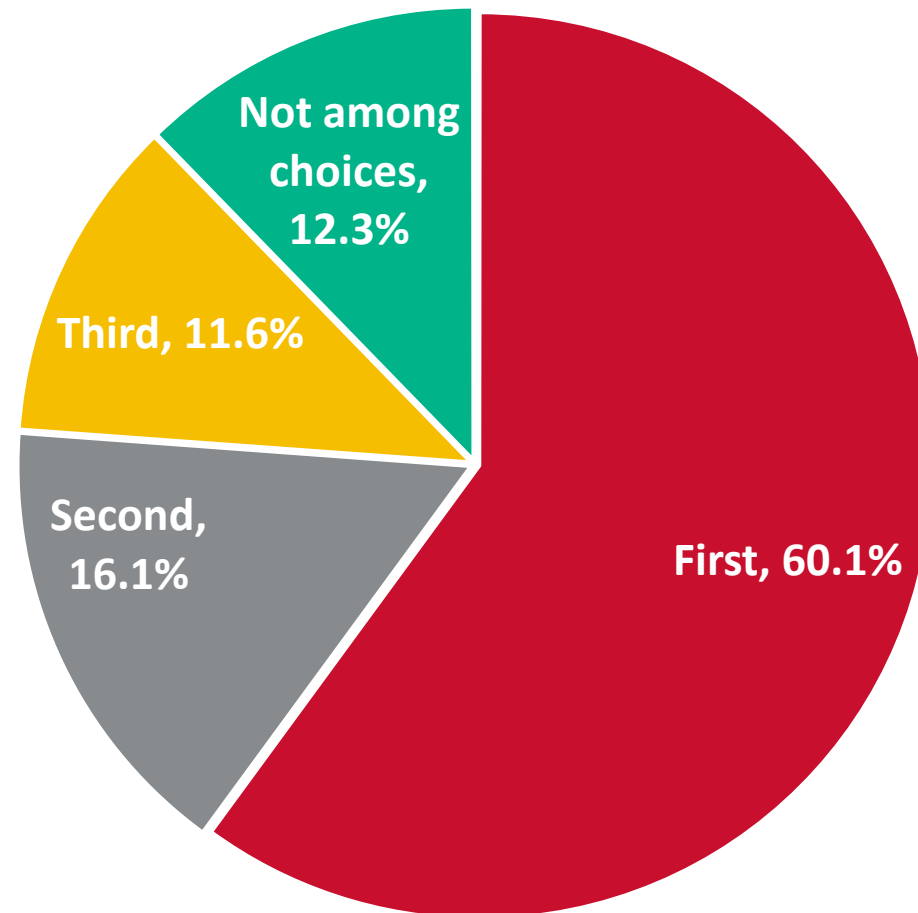
- What do students in their third choice look like, compared to students in their first or second choice?
- Are students in their third choice successful?
 - Retention in university/college
 - SCH completed
 - Cumulative GPA
- How do success outcomes for students in Exploratory Studies compare to students in other colleges?

Methods

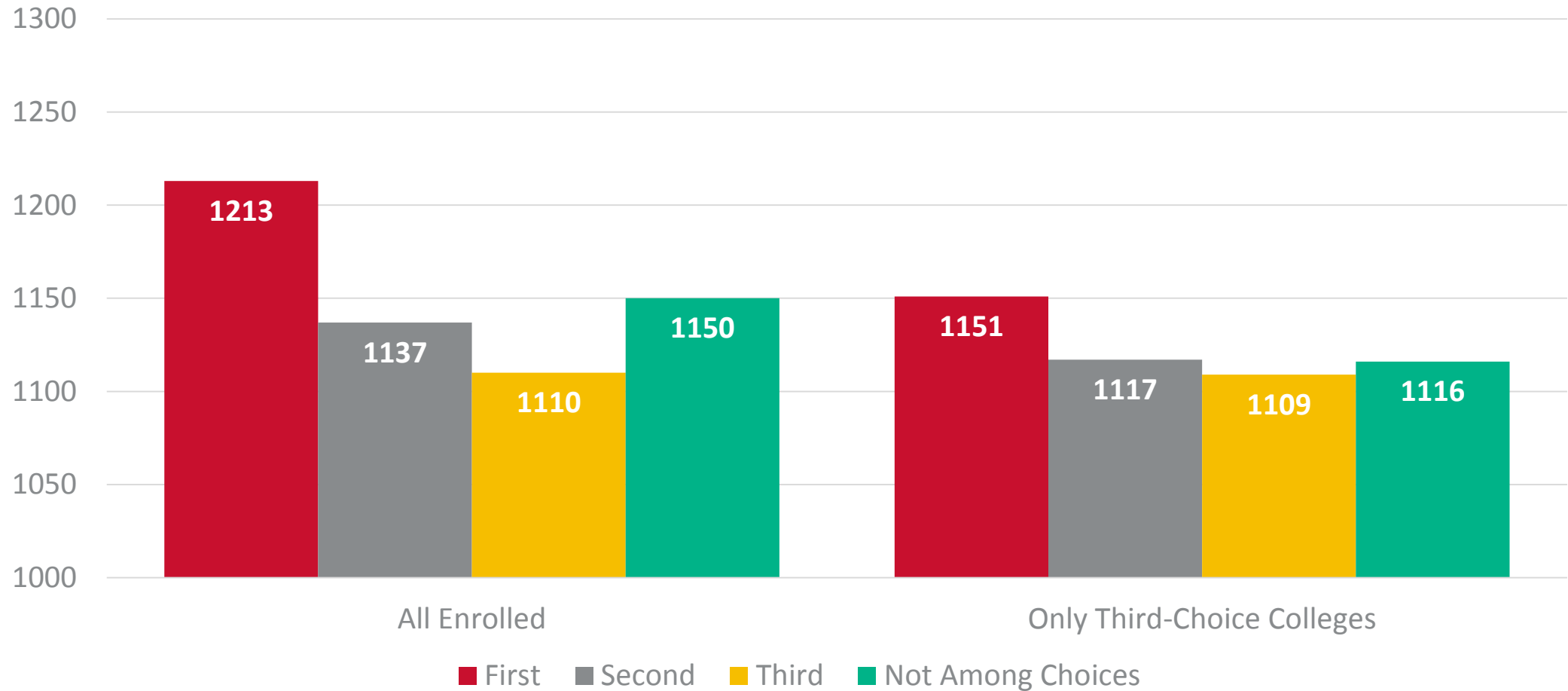
- Included Fall 2015, Fall 2016, and Fall 2017 FTIC cohorts
- Grouped students by college choice rather than major choice
- Limited success comparisons to students in colleges that allow third-choice majors
- Outcomes as of end of first full year (incl. summer term if applicable)
- Used regression analysis for statistical tests of patterns

What do students in their
third choice look like?

How many students end up in their third choice?

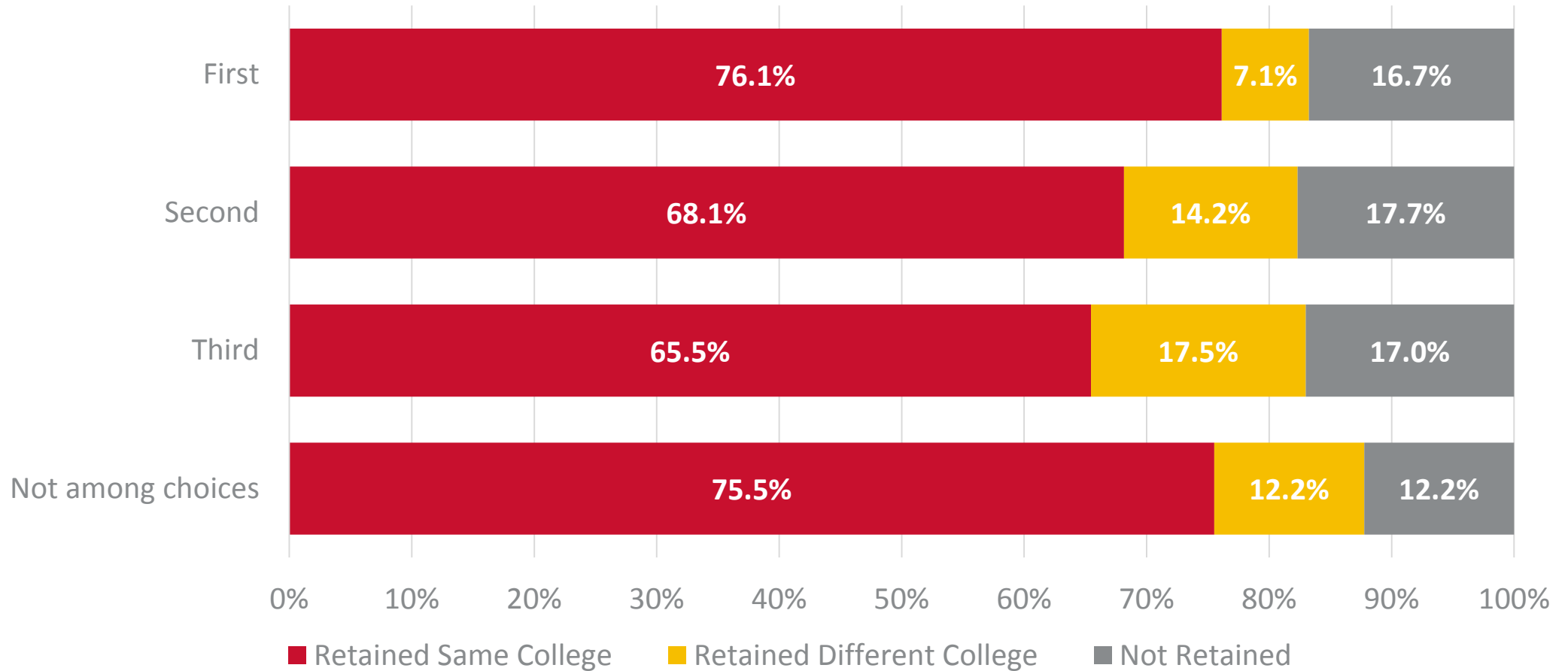


SAT Scores by College Choice

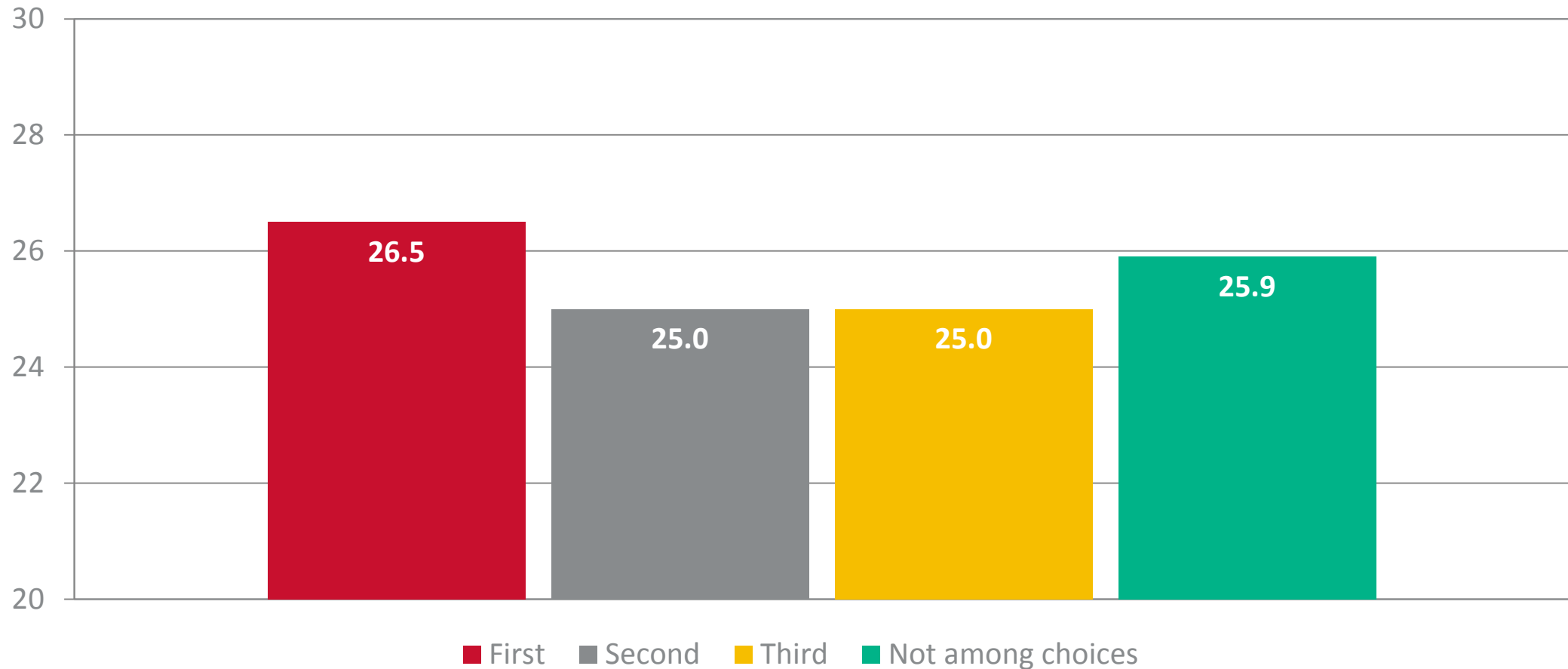


Are students in their third
choice successful?

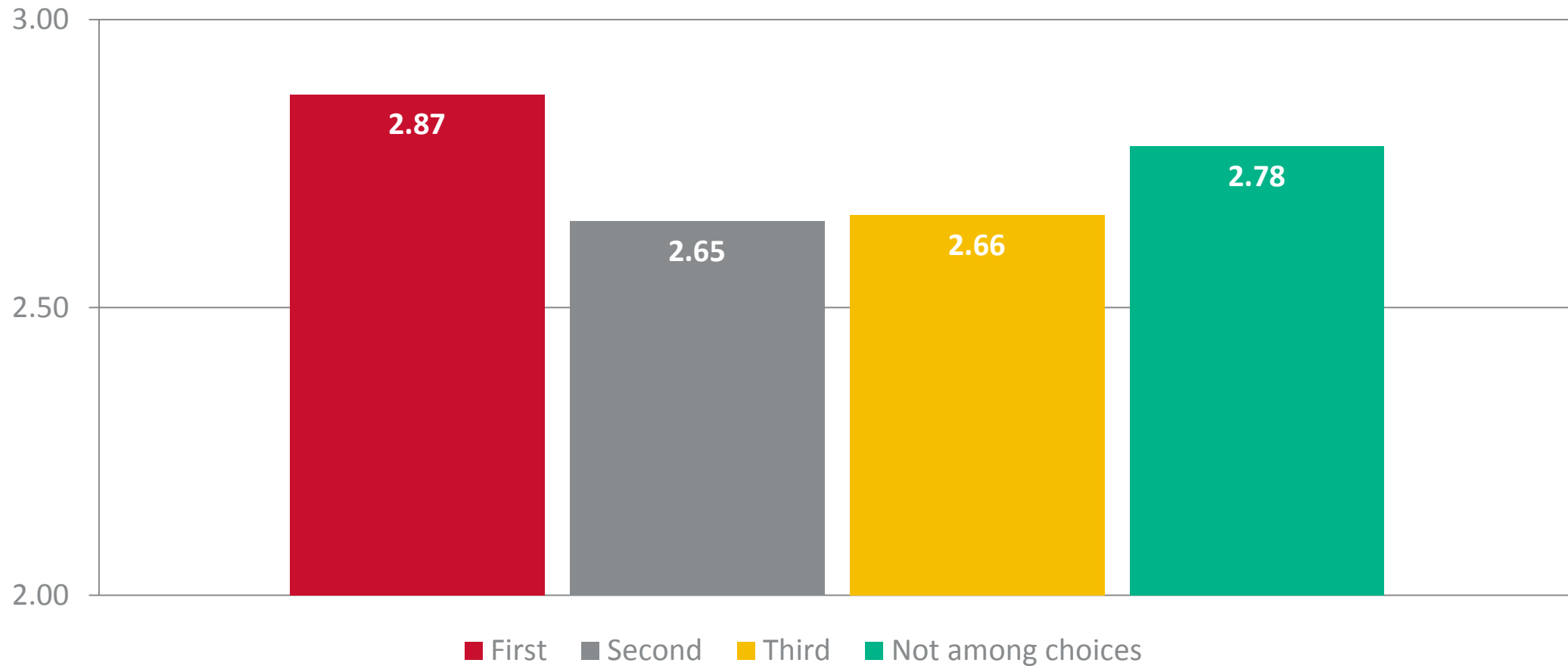
Success: One-Year Retention



Success: Year 1 Credit Hours Completed

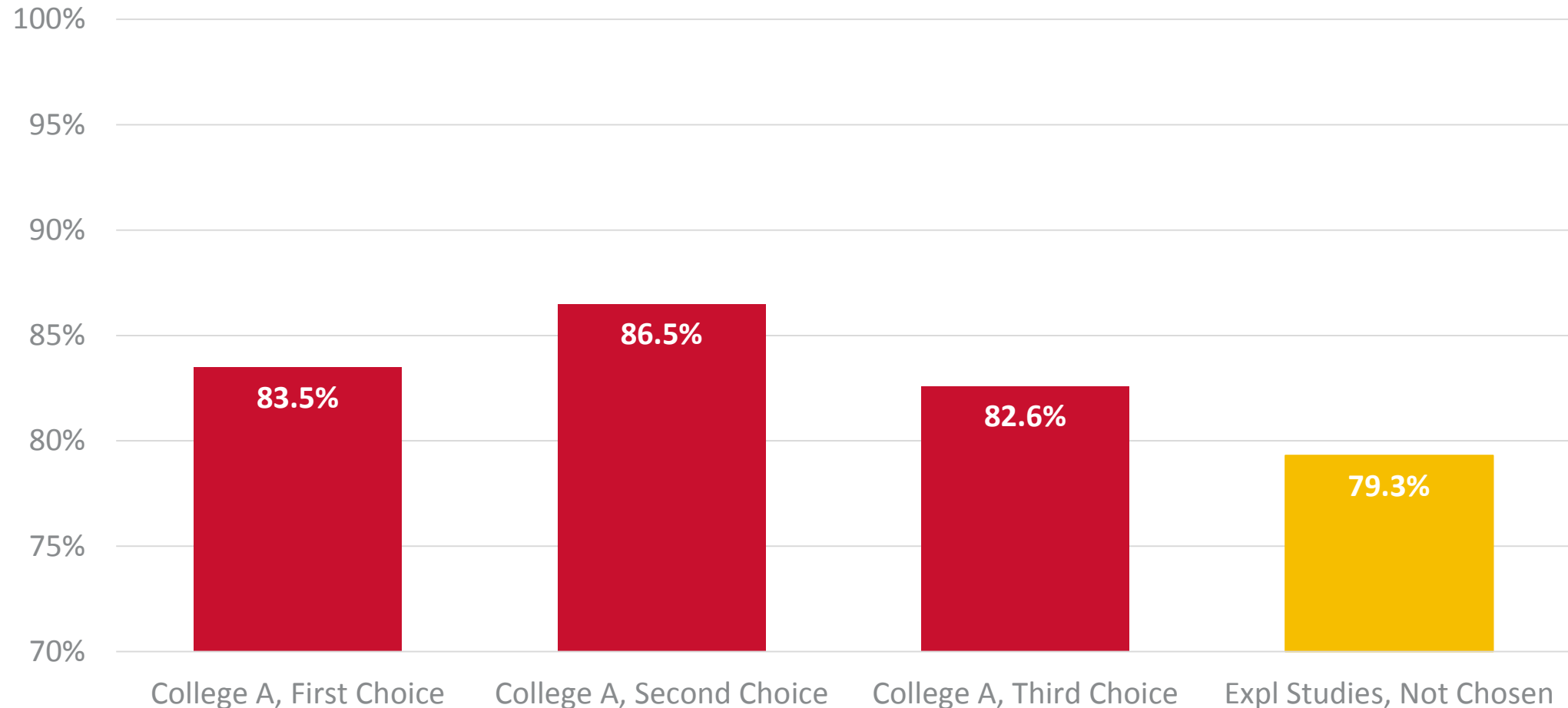


Success: Year 1 Cumulative GPA

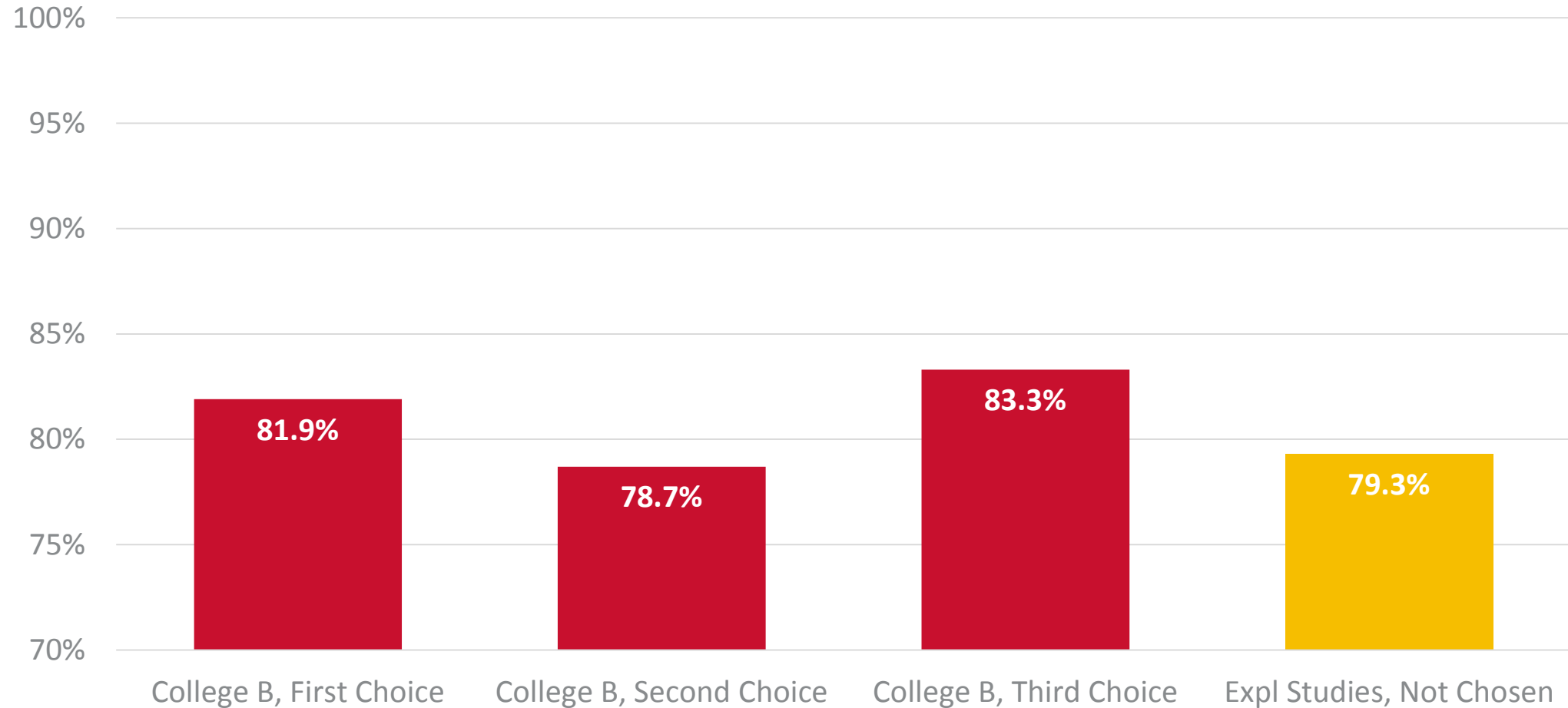


Comparing Exploratory Studies and Other Colleges

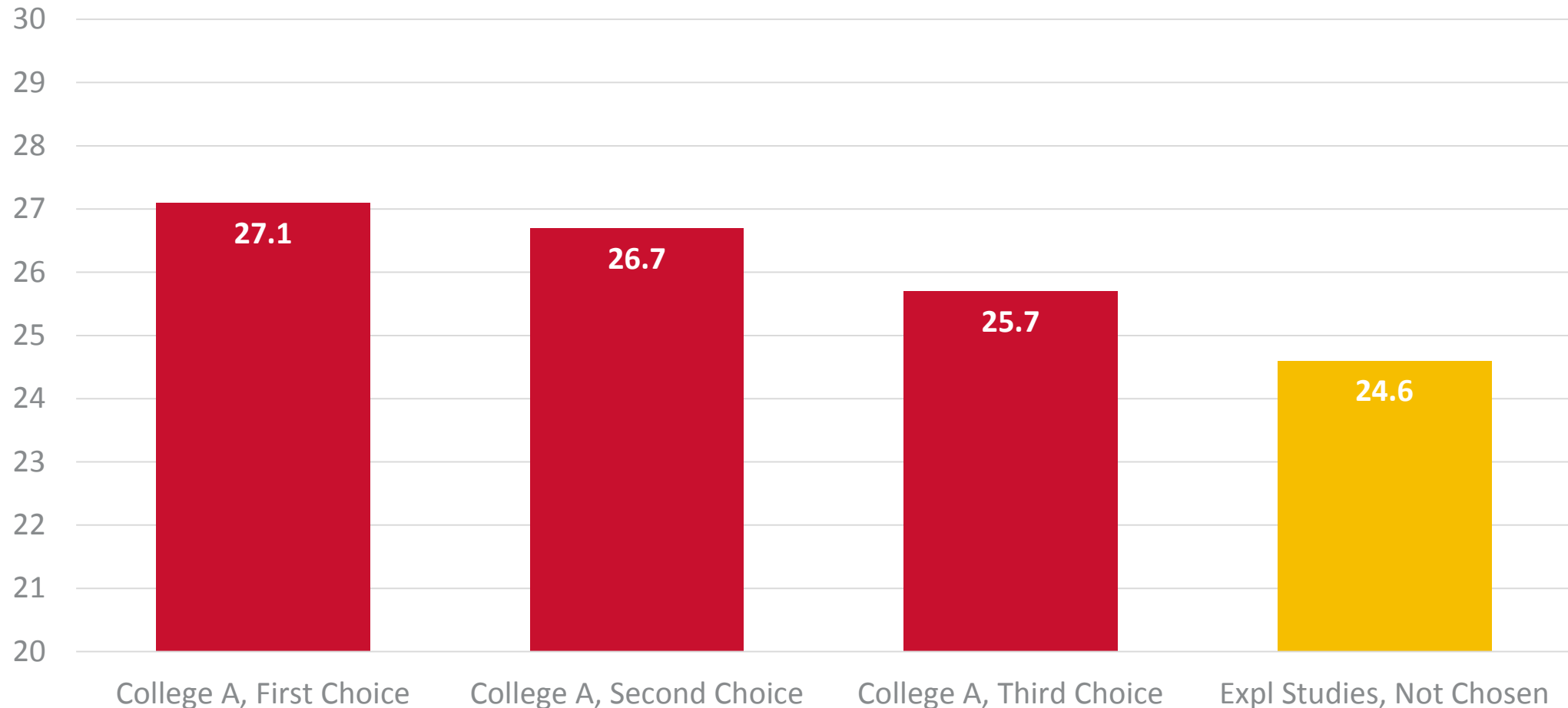
College A vs. Exploratory Studies One-Year Retention at UH



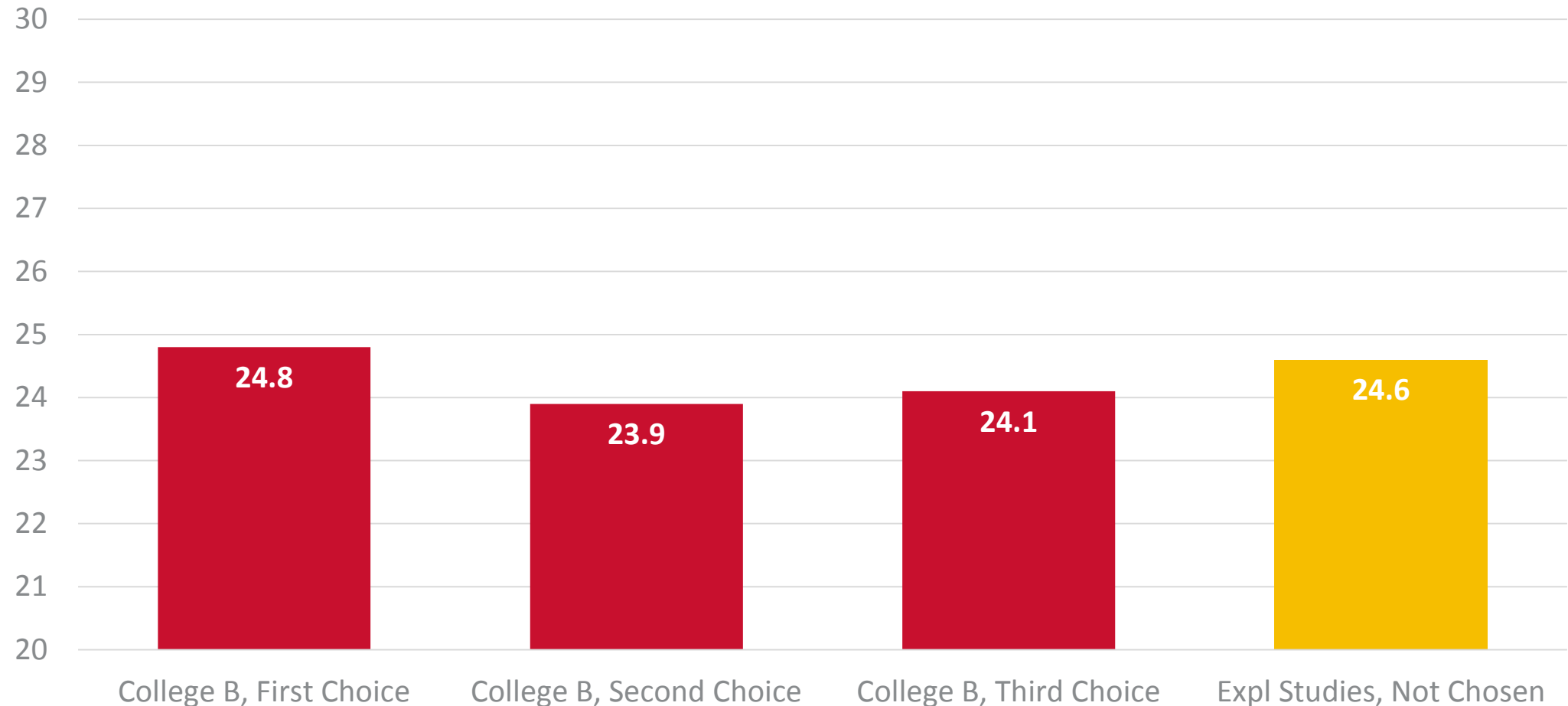
College B vs. Exploratory Studies One-Year Retention at UH



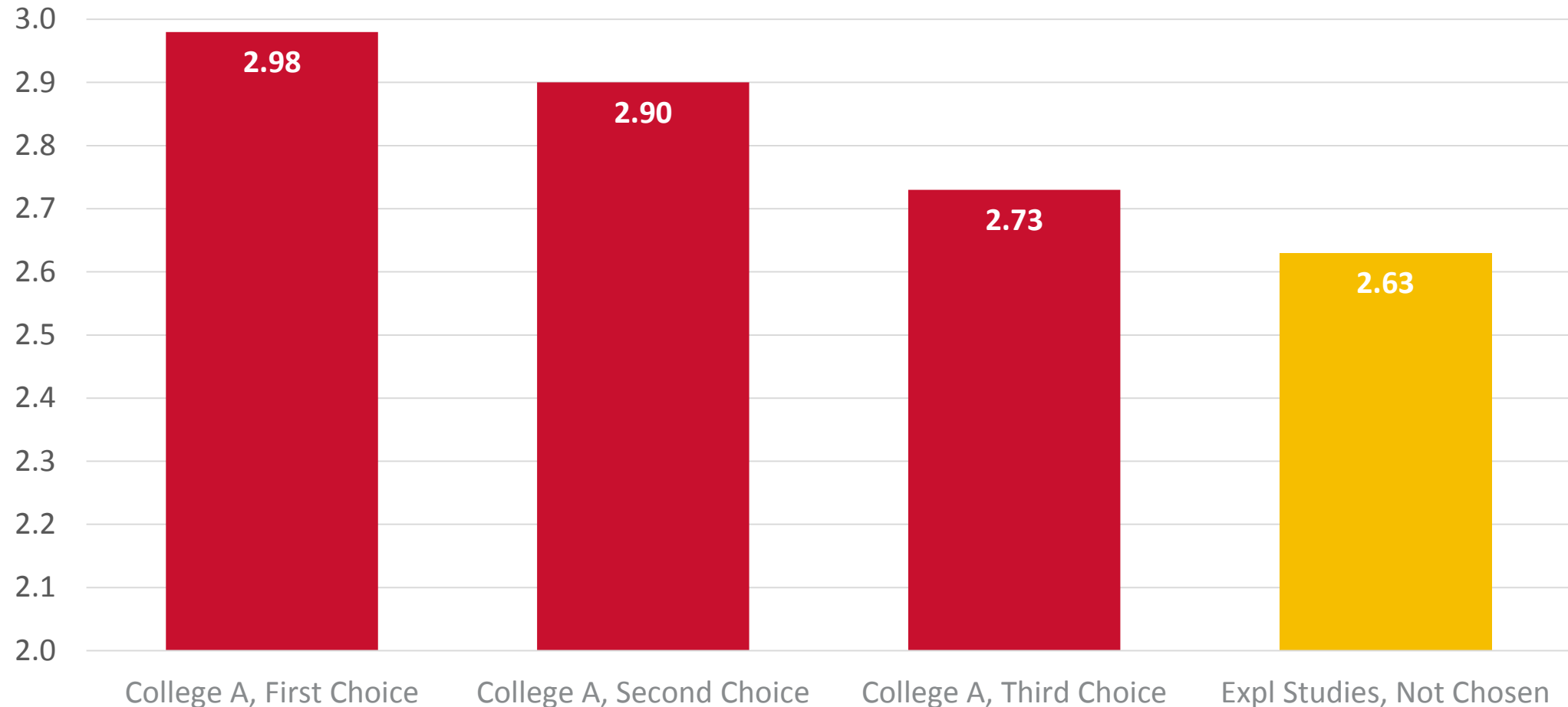
College A vs. Exploratory Studies Year 1 SCH Completed



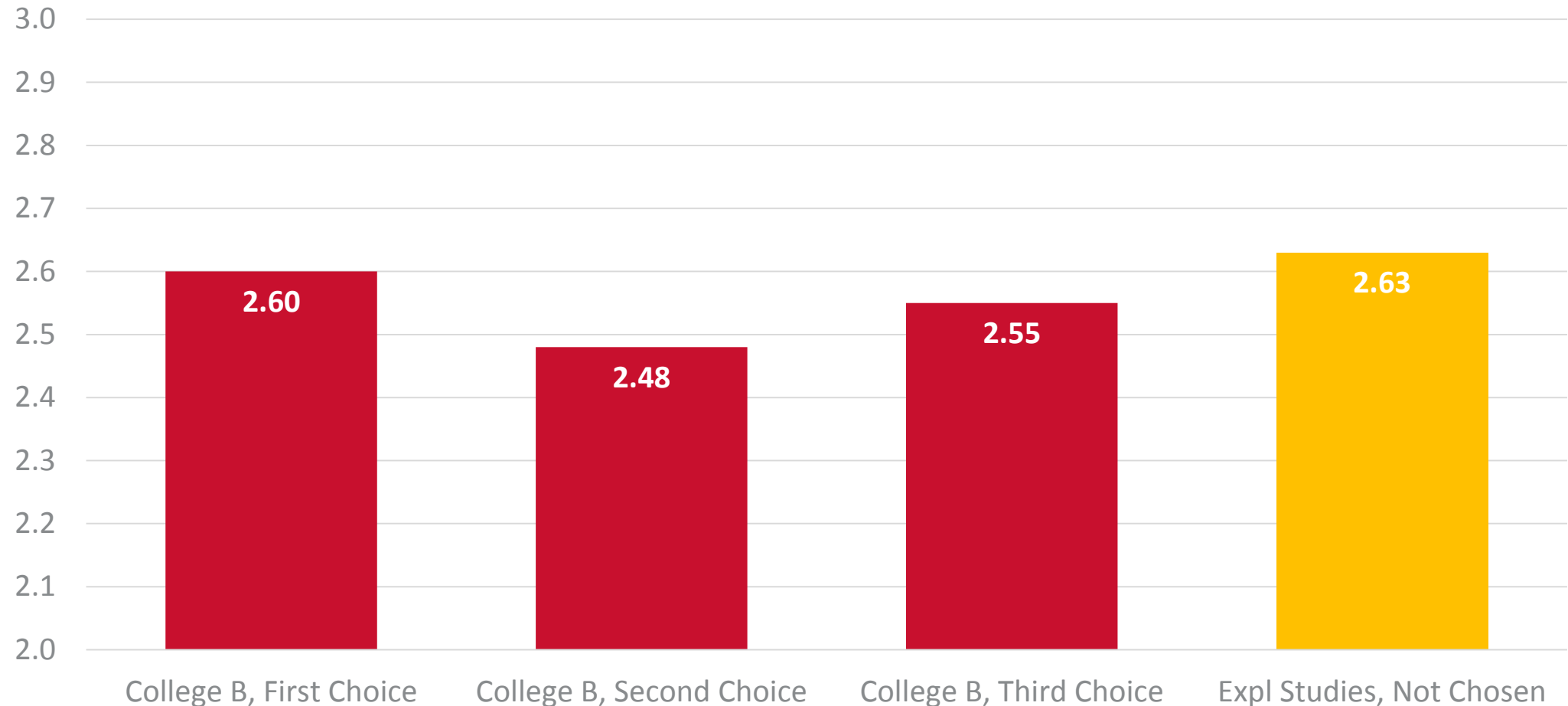
College B vs. Exploratory Studies Year 1 SCH Completed



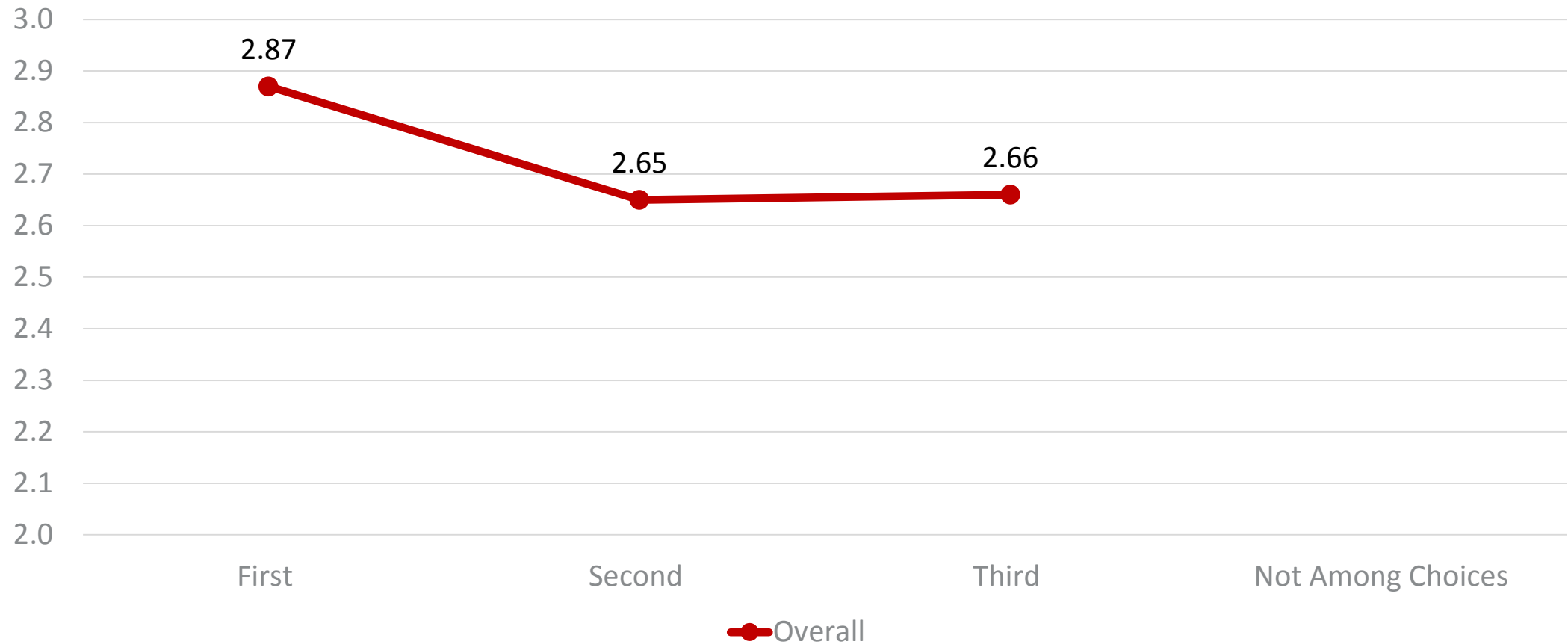
College A vs. Exploratory Studies Year 1 Cumulative GPA



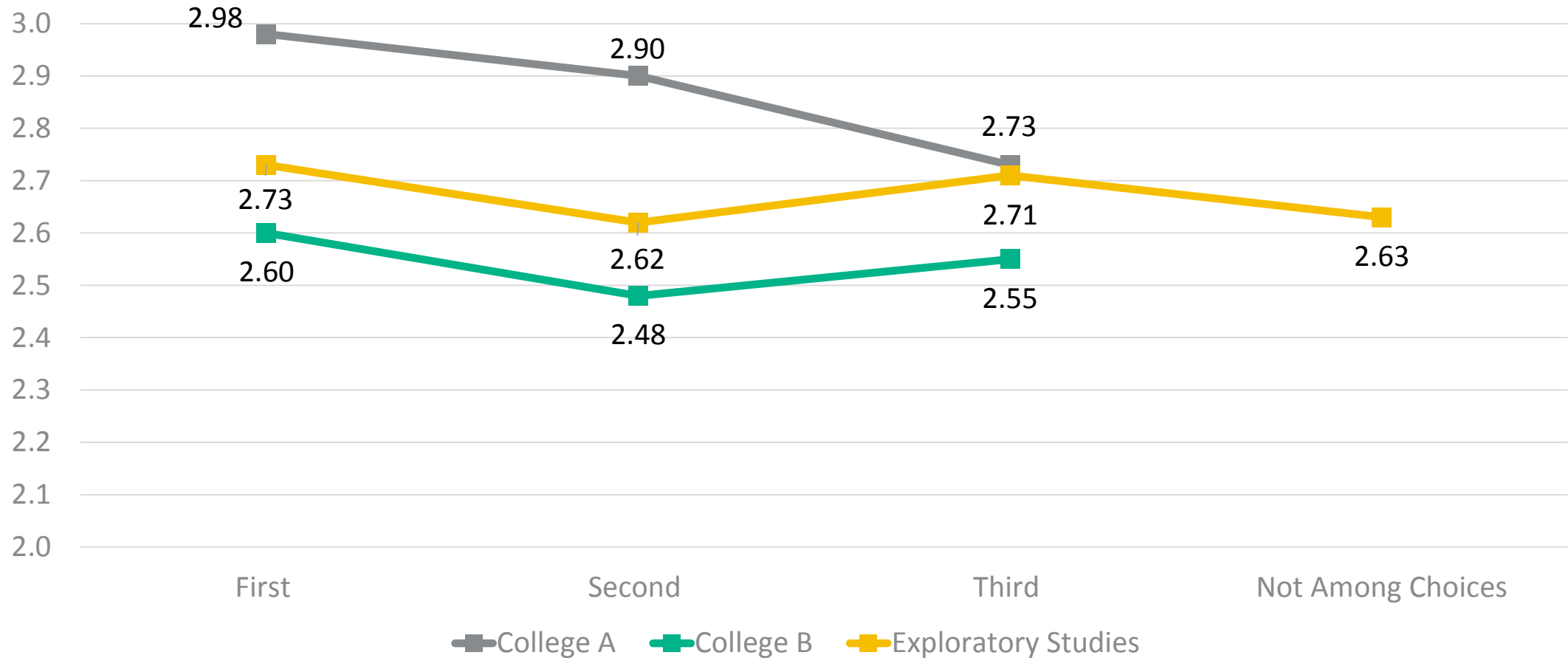
College B vs. Exploratory Studies Year 1 Cumulative GPA



The Effect of Major Choice May Differ by College (Using GPA as an Example)



The Effect of Major Choice May Differ by College (Still GPA)



Regression Analysis

Regression Analysis: Retention

	Retained Same College		Retained Different College	
Predictor	Coeff.		Coeff.	
Cohort				
Fall 2015	(omitted category)			
Fall 2016	0.103		-0.053	
Fall 2017	0.070		-0.084	
Male	-0.224	**	-0.426	***
Race / ethnicity				
African American	(omitted category)			
Asian / PI	0.644	***	1.239	***
Hispanic	-0.140		0.130	
International	0.505		1.835	***
White	-0.324	*	0.033	
All other race / ethnicity	-0.485	*	0.025	

* p<.05 **p<.01 ***p<.001

Regression Analysis: Retention, continued

	Retained Same College			Retained Different College	
Predictor	Coeff.			Coeff.	
Test Score	0.001	**		0.002	***
HS Class Rank Percentile	0.007	***		0.021	***
Major Choice					
First	(omitted category)				
Second	-0.127			0.391	**
Third	-0.047			0.518	***
Not among choices	-0.142			0.244	
College					
College A	(omitted category)				
Exploratory Studies	-0.659	***		1.401	***
College B	-0.050			0.260	
Constant	-0.132			-4.885	***

* p<.05 **p<.01 ***p<.001

Regression Analysis: SCH and GPA

	SCH Completed			Cumulative GPA	
Predictor	Coeff.			Coeff.	
Cohort					
Fall 2015	(omitted category)				
Fall 2016	0.574	*		0.068	**
Fall 2017	-0.288			-0.011	
Male	-0.840	***		-0.124	***
Race / ethnicity					
African American	(omitted category)				
Asian / PI	1.493	***		0.348	***
Hispanic	-0.206			0.122	***
International	1.237			0.404	***
White	0.731	*		0.224	***
All other race / ethnicity	0.465			0.145	*

* p<.05 **p<.01 ***p<.001

Regression Analysis: SCH and GPA, continued

	SCH Completed			Cumulative GPA	
Predictor	Coeff.			Coeff.	
Test Score	0.007	***		0.001	***
HS Class Rank Percentile	0.060	***		0.012	***
Major Choice					
First	(omitted category)				
Second	-0.428			-0.061	
Third	-0.237			-0.050	
Not among choices	-0.776	*		-0.070	
College					
Exploratory Studies	(omitted category)				
College A	0.320			0.082	*
College B	-1.293	**		-0.213	***
Retained at UH for 1 year	12.190	***		1.068	***

* p<.05 **p<.01 ***p<.001

Regression Analysis: SCH and GPA, continued

	SCH Completed			Cumulative GPA	
Predictor	Coeff.			Coeff.	
Interaction Terms					
2 nd Choice x College A	0.100			0.008	
2 nd Choice x College B	0.222			0.025	
3 rd Choice x College A	-0.621			-0.123	
3 rd Choice x College B	0.041			0.092	
No Choice x College A	2.387	***		0.182	*
No Choice x College B	2.039			0.381	**
Constant	4.264	***		-0.295	*

* p<.05 **p<.01 ***p<.001

Post Hoc Tests of Interaction

		SCH Completed		Cumulative GPA	
		Predicted Value	Difference from (1)	Predicted Value	Difference from (1)
1	Placed into Exploratory Studies (not among choices)	25.4		2.73	
2	3 rd Choice, College A	25.6	+0.2, n.s	2.71	+0.02, n.s
3	3 rd Choice, College B	24.7	-0.7, n.s.	2.63	-0.10*

Implications

- Overall, second- and third-choice students are more similar to each other than to first-choice students
- The most important impact of major choice is on likelihood of moving to a new college
- Effect of major choice on SCH and GPA depends on college
- Statistics
 - Look out for interactions!
 - Consider multinomial logistic regression

Questions?

Please complete the session evaluation in the conference app!