

Analysis of Retention and Graduation Rates for 2015-2022

Executive Summary

- The purpose of this report is to 1) review and map trends in retention and graduation rates over the past seven years (2015-2022), 2) identify “at-risk” student groups and significant factors affecting retention and graduation, and 3) evaluate and support effective intervention programs for retention/graduation.
- **Overall TUG retention increased by 1.1% this year;** this was the first increase since 2019.
- **Hispanic retention slightly decreased by 0.3%** (from 77.9% to 77.6%) while White retention increased by 1.7%.
- It was observed that the following three Hispanic groups seemed to contribute to the retention decrease: **Hispanic Females, Commuters, and Non-PELL Recipients.**
- **However, the lower Hispanic retention this year does not seem to be associated with their satisfaction, but with their low academic achievement (i.e., academic disqualification & probation rates)** of Hispanic females and Hispanic commuters this year (see pp. 9-10 for more info).
- **Hispanic PELL recipients’ retention has begun to bounce back, increasing by 3.2%.** This may suggest that low-income Hispanic students are beginning to recover from the effects of the pandemic.
- **African American retention increased greatly** this year by 7.4%.
- Resident student retention increased by 4.5% to overtake commuter student retention like before the pandemic.
- **First-time entering cohort retention decreased this year** by 3.7%. This is the first decrease in years, even during the pandemic. Meanwhile, **transfer-in cohort retention has increased** by 2.8%, the first increase since 2020.
- Again, this year the **food pantry users (FA21 and/or SP22) showed a higher retention** than non-users: 84.7% vs 78.8%, respectively.
- A logistic regression analysis showed that **Disqualification/Probation Status and GPA are very significant predictors** of the 2021-2022 retention (< .01).
- **The six-year graduation rate of the 2016 entering cohort (2016-2022) decreased from the previous year by 1%, though it still remains above 60%.**
- **Hispanic graduation rate slightly increased by 2%** while the White graduation rate decreased by 4% this year.

I. Retention Rates

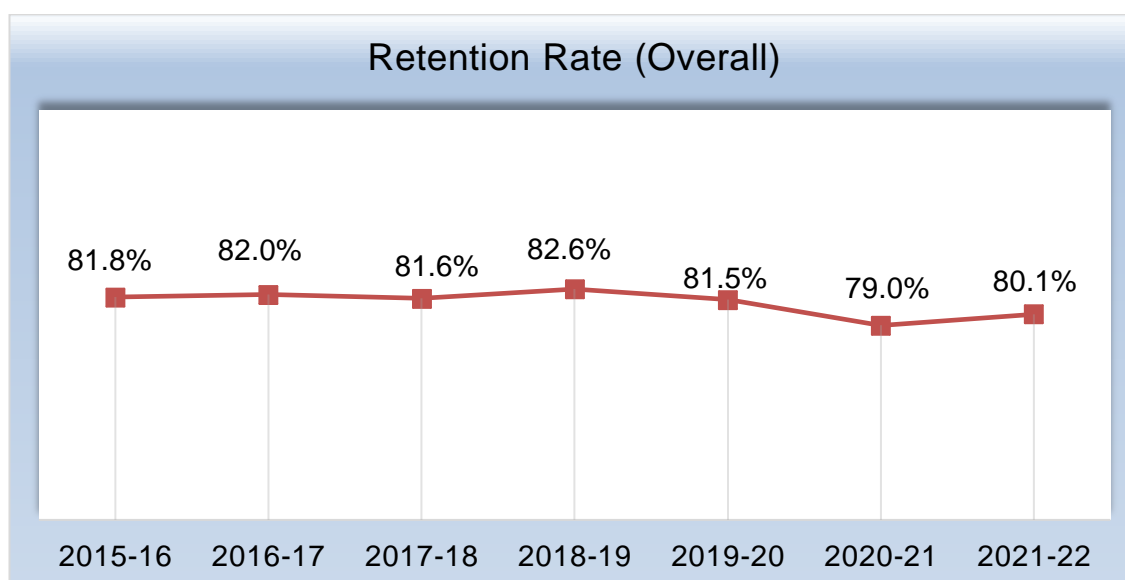
This retention report is for the traditional undergraduate (TUG) students only. Retention rate was calculated for each school year from the Fall 10th (or 15th) day to the 10th (or 15th) day of the following Fall semester. It should be noted that the following students were excluded from the retention pool: 1) Students who graduated or were accepted for commencement in the Fall semester of the previous year and the Spring semester or Summer of the following year, and 2) Student-at-large with non-degree.

National reporting standards for retention can be found at the following URL:

<http://www.airweb.org/EducationAndEvents/IPEDSTraining/Tutorials/Pages/default.aspx>).

1) Overall Retention

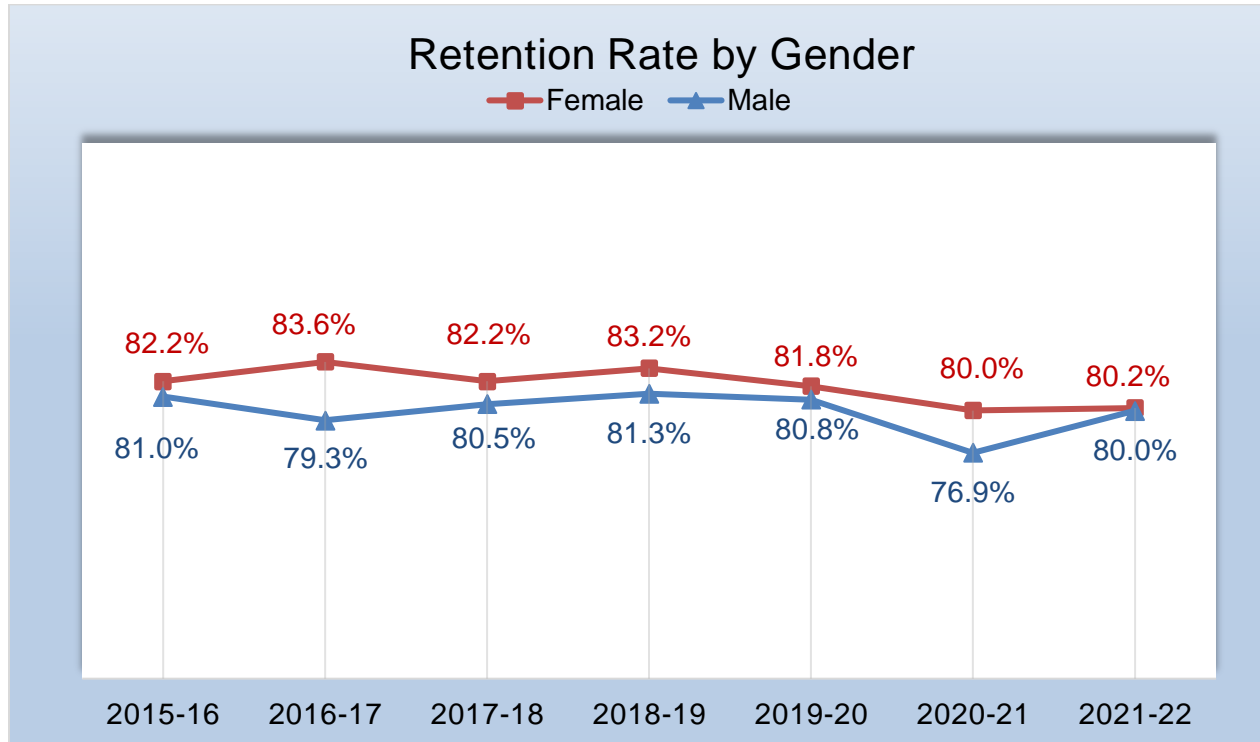
- Vanguard overall retention increased by 1.1% this year and bounced back to 80%.
- This was the first increase since 2019 and may suggest recovery from the pandemic effect.



<i>School Year</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	1097	897	81.8%
2016-2017	1118	917	82.0%
2017-2018	1176	960	81.6%
2018-2019	1250	1032	82.6%
2019-2020	1314	1071	81.5%
2020-2021	1386	1095	79.0%
2021-2022	1385	1110	80.1%

2) Gender

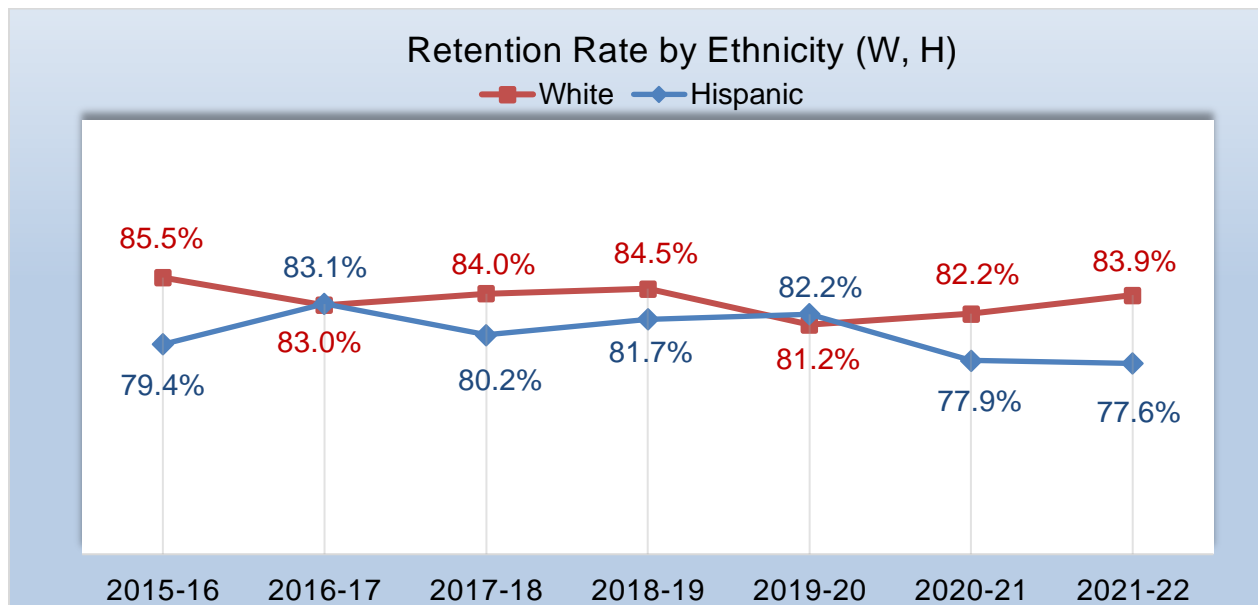
- Male retention greatly increased this year by 3.1% and bounced back to 80% from 76.9% while female retention has slightly increased by 0.2% from 80.0% to 80.2%.
- The gender difference in retention almost disappeared this year.



<i>School Year</i>	<i>Gender</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	Female	696	572	82.2%
	Male	401	325	81.0%
2016-2017	Female	703	588	83.6%
	Male	415	329	79.3%
2017-2018	Female	770	633	82.2%
	Male	406	327	80.5%
2018-2019	Female	855	711	83.2%
	Male	395	321	81.3%
2019-2020	Female	881	721	81.8%
	Male	433	350	80.8%
2020-2021	Female	941	753	80.0%
	Male	445	342	76.9%
2021-2022	Female	956	767	80.2%
	Male	429	343	80.0%

3) Ethnicity (White & Hispanic)

- **Hispanic retention slightly decreased by 0.3%** while White retention increased by 1.7%, thereby increasing the gap between the two groups (6.3%) this year, 77.6% and 83.9%, respectively.
- It seems that the **Hispanic retention did not bounce back this year unlike the White retention**. This explored on the following page.

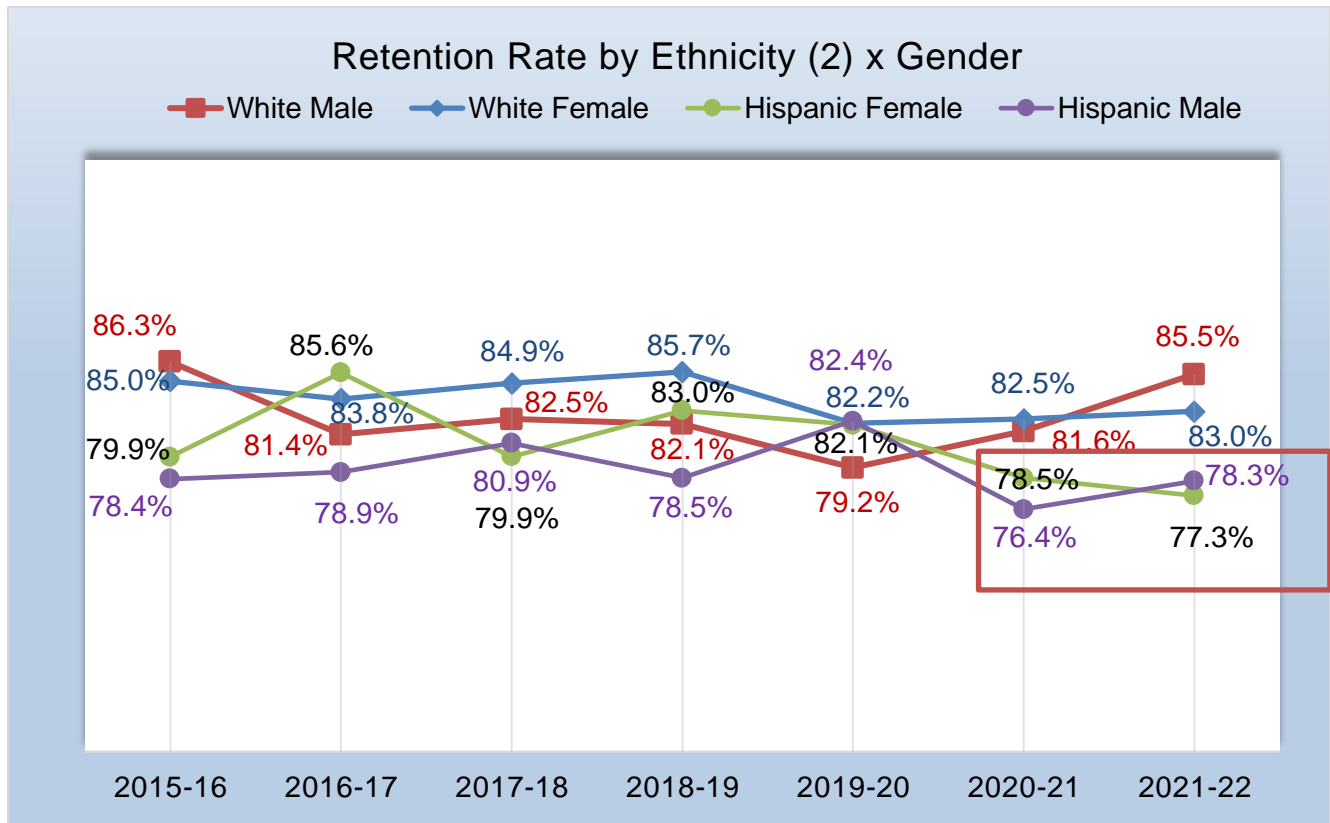


<i>School Year</i>	<i>Ethnicity (2)</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	White	504	431	85.5%
	Hispanic	417	331	79.4%
2016-2017	White	470	390	83.0%
	Hispanic	432	359	83.1%
2017-2018	White	432	363	84.0%
	Hispanic	506	406	80.2%
2018-2019	White	419	354	84.5%
	Hispanic	579	473	81.7%
2019-2020	White	441	358	81.2%
	Hispanic	611	502	82.2%
2020-2021	White	449	369	82.2%
	Hispanic	678	528	77.9%
2021-2022	White	435	365	83.9%
	Hispanic	701	544	77.6%

4) Further Analysis on the Hispanic Retention

a) Ethnicity (White & Hispanic) x Gender

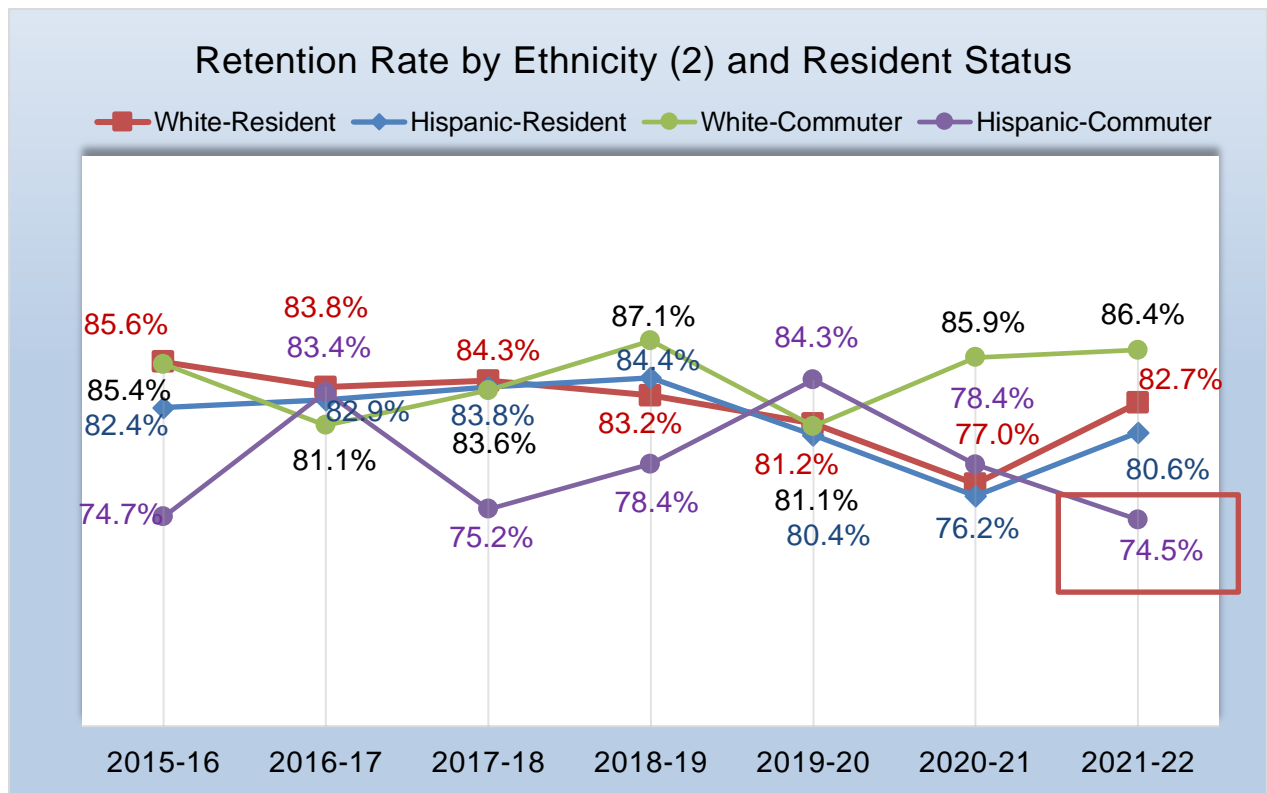
- While Hispanic male retention increased by 1.9%, **Hispanic female retention decreased by 1.2% this year.**
- Both White male and female retention increased by 3% and 0.5%, respectively.



<i>School Year</i>	<i>Ethnic x Gender</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	Hispanic Female	264	211	79.9%
	Hispanic Male	153	120	78.4%
	White Female	321	273	85.0%
	White Male	183	158	86.3%
2016-2017	Hispanic Female	271	232	85.6%
	Hispanic Male	161	127	78.9%
	White Female	303	254	83.8%
	White Male	167	136	81.4%
2017-2018	Hispanic Female	344	275	79.9%
	Hispanic Male	162	131	80.9%
	White Female	278	236	84.9%
	White Male	154	127	82.5%

2018-2019	Hispanic Female	407	338	83.0%
	Hispanic Male	172	135	78.5%
	White Female	279	239	85.7%
	White Male	140	115	82.1%
2019-2020	Hispanic Female	424	348	82.1%
	Hispanic Male	187	154	82.4%
	White Female	292	240	82.2%
	White Male	149	118	79.2%
2020-2021	Hispanic Female	479	376	78.5%
	Hispanic Male	199	152	76.4%
	White Female	291	240	82.5%
	White Male	158	129	81.6%
2021-2022	Hispanic Female	498	385	77.3%
	Hispanic Male	203	159	78.3%
	White Female	283	235	83.0%
	White Male	152	130	85.5%

b) Ethnicity (Hispanic & White) × Resident Status

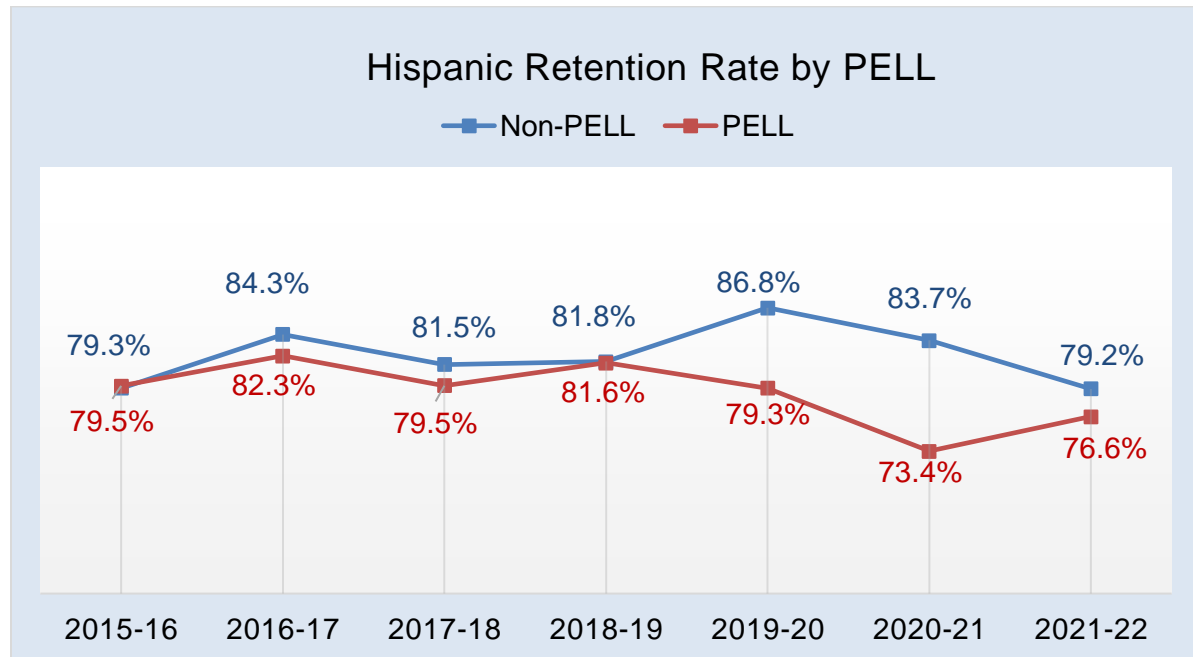


- **Hispanic commuter retention decreased by 2.5%** while Hispanic resident retention increased by 4.4% this year; there was **no significant gender difference**, Female 74%, Male 75.5%.
- Both White commuter and resident retention increased by 0.5% and 5.7%, respectively.

School Year	Resident Status x Ethnicity (2)	Retention Pool	Returned	Retention %
2015-2016	White-Resident	360	308	85.6%
	Hispanic-Resident	255	210	82.4%
	White-Commuter	144	123	85.4%
	Hispanic-Commuter	162	121	74.7%
2016-2017	White-Resident	327	274	83.8%
	Hispanic-Resident	269	223	82.9%
	White-Commuter	143	116	81.1%
	Hispanic-Commuter	163	136	83.4%
2017-2018	White-Resident	292	246	84.3%
	Hispanic-Resident	296	248	83.8%
	White-Commuter	140	117	83.6%
	Hispanic-Commuter	210	158	75.2%
2018-2019	White-Resident	280	233	83.2%
	Hispanic-Resident	315	266	84.4%
	White-Commuter	139	121	87.1%
	Hispanic-Commuter	264	207	78.4%
2019-2020	White-Resident	309	251	81.2%
	Hispanic-Resident	337	271	80.4%
	White-Commuter	132	107	81.1%
	Hispanic-Commuter	274	231	84.3%
2020-2021	White-Resident	187	144	77.0%
	Hispanic-Resident	151	115	76.2%
	White-Commuter	262	225	85.9%
	Hispanic-Commuter	527	413	78.4%
2021-2022	White-Resident	295	244	82.7%
	Hispanic-Resident	360	290	80.6%
	White-Commuter	140	121	86.4%
	Hispanic-Commuter	341	254	74.5%

c) Hispanic Retention by PELL

- Retention rate of the Hispanic PELL grant awardees increased by 3.2% while the non-PELL student retention decreased by 4.5% this year.



<i>School Year</i>	<i>PELL</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	Non-PELL	188	149	79.3%
	PELL	229	182	79.5%
2016-2017	Non-PELL	172	145	84.3%
	PELL	260	214	82.3%
2017-2018	Non-PELL	189	154	81.5%
	PELL	317	252	79.5%
2018-2019	Non-PELL	203	166	81.8%
	PELL	376	307	81.6%
2019-2020	Non-PELL	235	204	86.8%
	PELL	376	298	79.3%
2020-2021	Non-PELL	295	247	83.7%
	PELL	383	281	73.4%
2021-2022	Non-PELL	283	224	79.2%
	PELL	418	320	76.6%

d) Discussion on the Hispanic Retention

- It was observed that the three Hispanic groups seem to contribute to the low Hispanic retention this year (77.6%): **Hispanic Female, Commuter, and Non-PELL recipients.**
- **The low Hispanic retention this year does not seem to be associated with their satisfaction** based on the results of the Student Satisfaction Inventory (SSI) conducted in 2022 Spring below.
- The SSI results show that the **satisfaction levels of Hispanic students are similar to or higher than the other ethnic groups**, especially higher than White in all the five satisfaction items below (although the sample size of White is very small, $N \leq 10$).

Results of the Satisfaction Items of SSI in 2022 Spring

Ethnicity/Race		SAT1	SAT29	SUM1	SUM2	SUM3
Alaskan Native	Mean	4.75	4.73	4.67	4.25	4.83
	N	12	11	12	12	12
Asian	Mean	4.95	5.32	4.13	4.78	5.04
	N	22	22	23	23	23
Black/African-American	Mean	5.22	5.55	4.59	5.29	5.27
	N	106	101	111	111	111
Hispanic or Latino	Mean	5.09	5.34	4.55	4.95	5.27
	N	106	100	109	109	109
Native Hawaiian or Pacific Islander	Mean	4.33	5.33	5.00	5.67	6.00
	N	3	3	3	3	3
White/Caucasians	Mean	4.44	4.40	3.70	4.40	4.30
	N	9	10	10	10	10
Multi-racial	Mean	5.21	5.76	4.76	5.62	5.55
	N	29	29	29	29	29
Total	Mean	5.10	5.40	4.53	5.09	5.24
	N	287	276	297	297	297

-SAT1: "Most students feel a sense of belonging here" (1=not satisfied at all,..., 7=very satisfied)

-SAT29: "It is an enjoyable experience to be a student on this campus" (1=not satisfied at all,..., 7=very satisfied)

-SUM1: "So far, how has your college experience met your expectations?" (1=much worse than I expected,..., 7=much better than I expected)

-SUM2: "Rate your overall satisfaction with your experience here thus far" (1=not satisfied at all,..., 7=very satisfied)

-SUM3: "All in all, if you had to do it over, would you enroll here again?" (1=definitely not,..., 7=definitely yes)

- It should be noted that a **significantly higher disqualification and probation (DISQ/PROB) % was found in Hispanic female and Hispanic commuter** this year than in the last year.
- Hispanic female DISQ/PROB % went up to 25.9% after increasing by 9.6% from 16.3% to 25.9%, making it the first time ever that it is over 20%.
- Hispanic commuter DISQ/PROB % greatly increased by 17.3% (from 17.6% to 34.9%) this year while Hispanic resident DISQ/PROB % remained same at 19.2%
- A significant association was found between the DISQ/PROB % and retention this year ($<.01$) for both Hispanic females and Hispanic commuters.

DISQ/PROB % for Hispanic Males and Females

Hispanic Retention Pool	Gender	DISQ/PROB	Grand Total	DISQ/PROB %
2016	F	37	271	13.7%
	M	37	161	23.0%
2017	F	55	344	16.0%
	M	37	162	22.8%
2018	F	55	407	13.5%
	M	30	172	17.4%
2019	F	45	424	10.6%
	M	28	187	15.0%
2020	F	78	479	16.3%
	M	44	199	22.1%
2021	F	129	498	25.9%
	M	59	203	29.1%

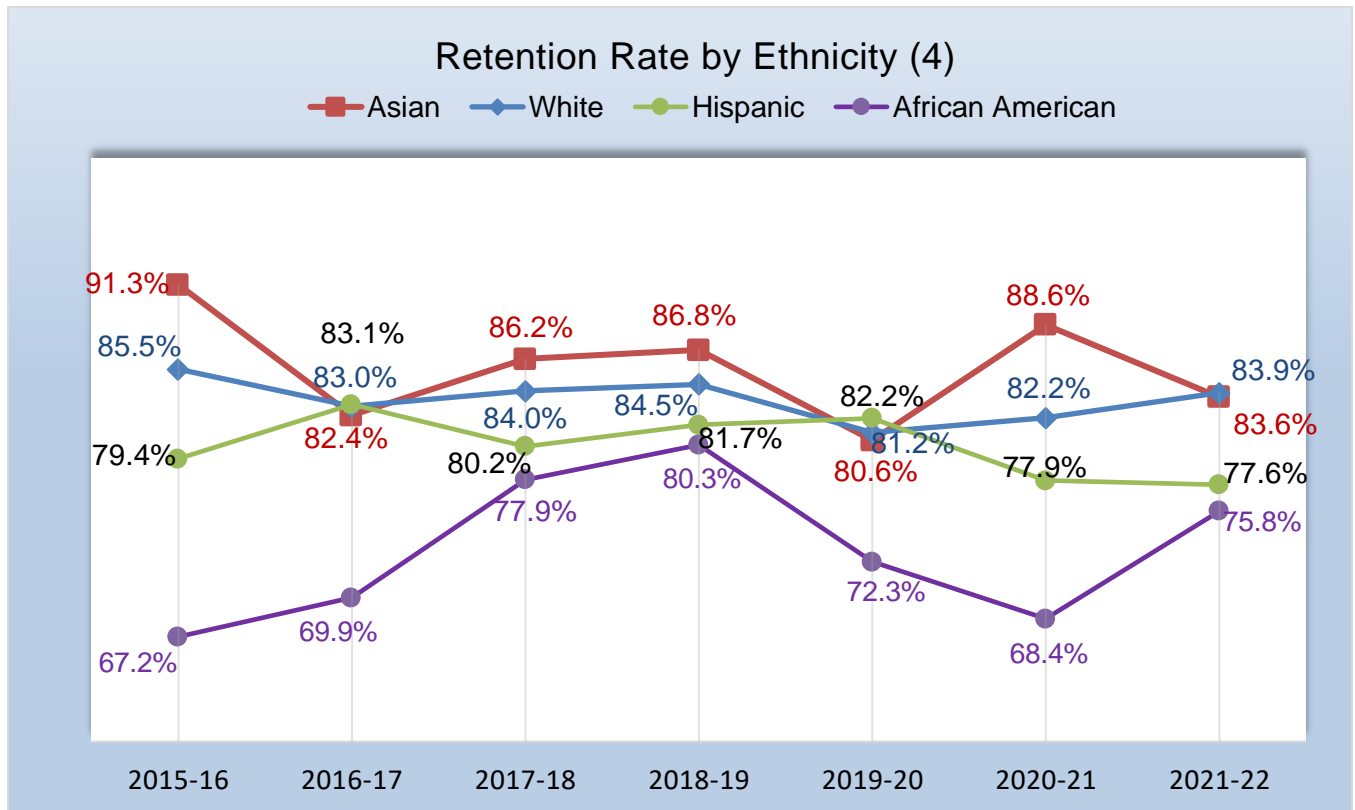
DISQ/PROB % for Hispanic Commuter and Resident Students

Hispanic Retention Pool	Gender	DISQ/PROB	Grand Total	DISQ/PROB %
2016	Resident	43	269	16.0%
	Commuter	31	163	19.0%
2017	Resident	48	296	16.2%
	Commuter	44	210	21.0%
2018	Resident	37	315	11.7%
	Commuter	48	264	18.2%
2019	Resident	31	337	9.2%
	Commuter	42	274	15.3%
2020	Resident	29	151	19.2%
	Commuter	93	527	17.6%
2021	Resident	69	360	19.2%
	Commuter	119	341	34.9%

- Therefore, it was speculated that the poor academic achievement of Hispanic females and of Hispanic commuters, especially this year, primarily contributed to the low Hispanic retention.

5) Ethnicity (African American, Asian, Hispanic, and White)

- **African American retention increased greatly** this year by 7.4%



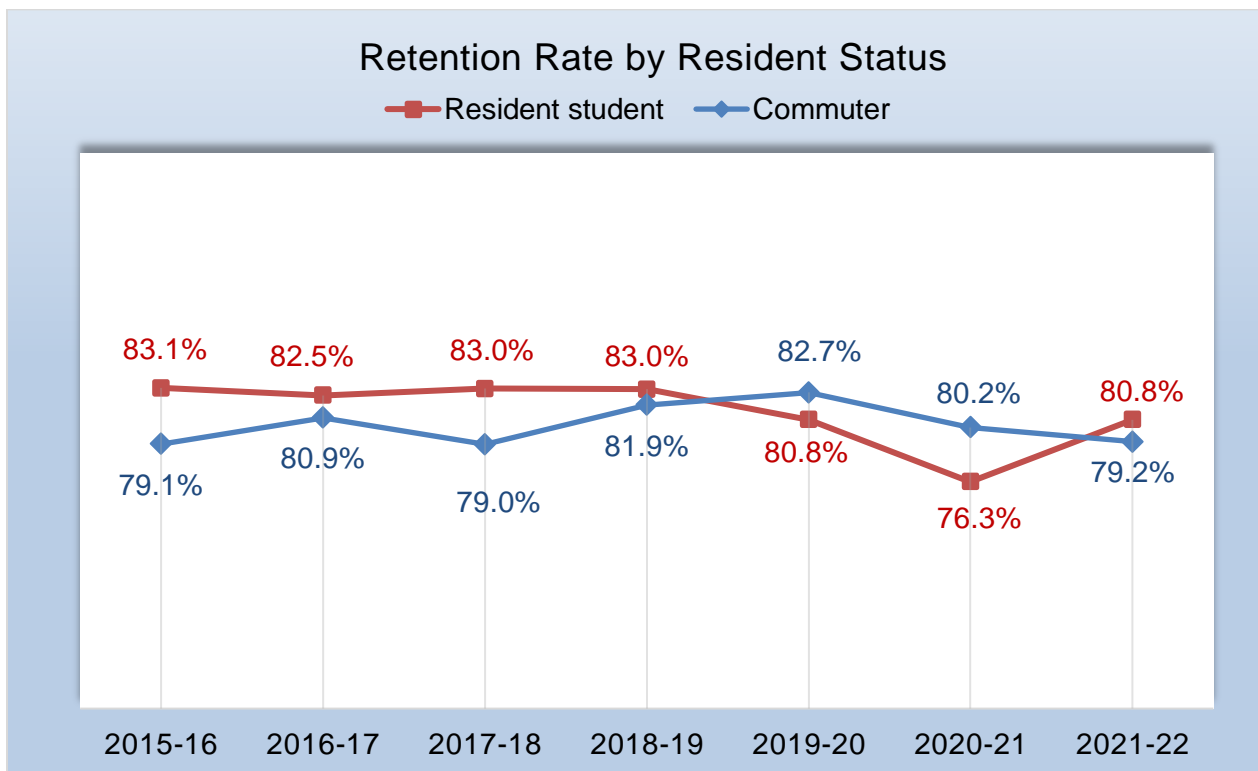
<i>School Year</i>	<i>Ethnicity (4)</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	Asian	23	21	91.3%
	White	504	431	85.5%
	Hispanic	417	331	79.4%
	African American	64	43	67.2%
2016-2017	Asian	34	28	82.4%
	White	470	390	83.0%
	Hispanic	432	359	83.1%
	African American	73	51	69.9%
2017-2018	Asian	29	25	86.2%
	White	432	363	84.0%
	Hispanic	506	406	80.2%
	African American	68	53	77.9%
2018-2019	Asian	38	33	86.8%
	White	419	354	84.5%
	Hispanic	579	473	81.7%
	African American	61	49	80.3%

2019-2020	Asian	62	50	80.6%
	White	441	358	81.2%
	Hispanic	611	502	82.2%
	African American	65	47	72.3%
2020-2021	Asian	70	62	88.6%
	White	449	369	82.2%
	Hispanic	678	528	77.9%
	African American	76	52	68.4%
2021-2022	Asian	61	51	83.6%
	White	435	365	83.9%
	Hispanic	701	544	77.6%
	African American	62	47	75.8%

6) Resident Status (Commuter & Resident)

- Resident students have historically shown higher retention rates than commuter students. However, for the past two years commuters had a higher retention (likely due to the pandemic).

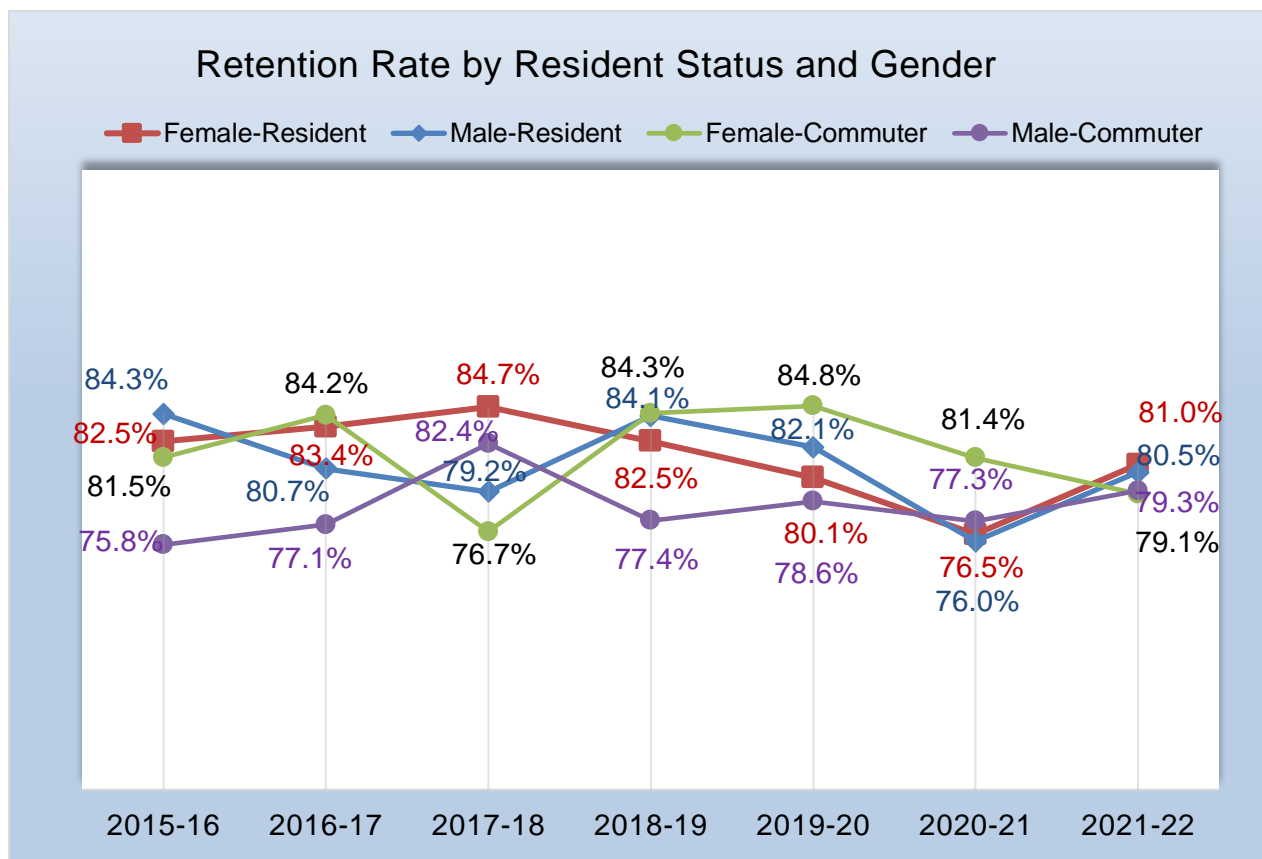
This year marked a return to historical standards, with resident student retention increasing by 4.5% to overtake commuter student retention once again.



<i>School Year</i>	<i>Resident Status</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	Commuter	358	283	79.1%
	Resident	739	614	83.1%
2016-2017	Commuter	362	293	80.9%
	Resident	756	624	82.5%
2017-2018	Commuter	410	324	79.0%
	Resident	766	636	83.0%
2018-2019	Commuter	474	388	81.9%
	Resident	776	644	83.0%
2019-2020	Commuter	481	398	82.7%
	Resident	833	673	80.8%
2020-2021	Commuter	951	763	80.2%
	Resident	435	332	76.3%
2021-2022	Commuter	571	452	79.2%
	Resident	814	658	80.8%

7) Resident Status x Gender

- Both female and male resident as well as male commuter showed higher retention this year by 3-4%. Female commuters, however, were the only group to decrease this year by 2.3%.



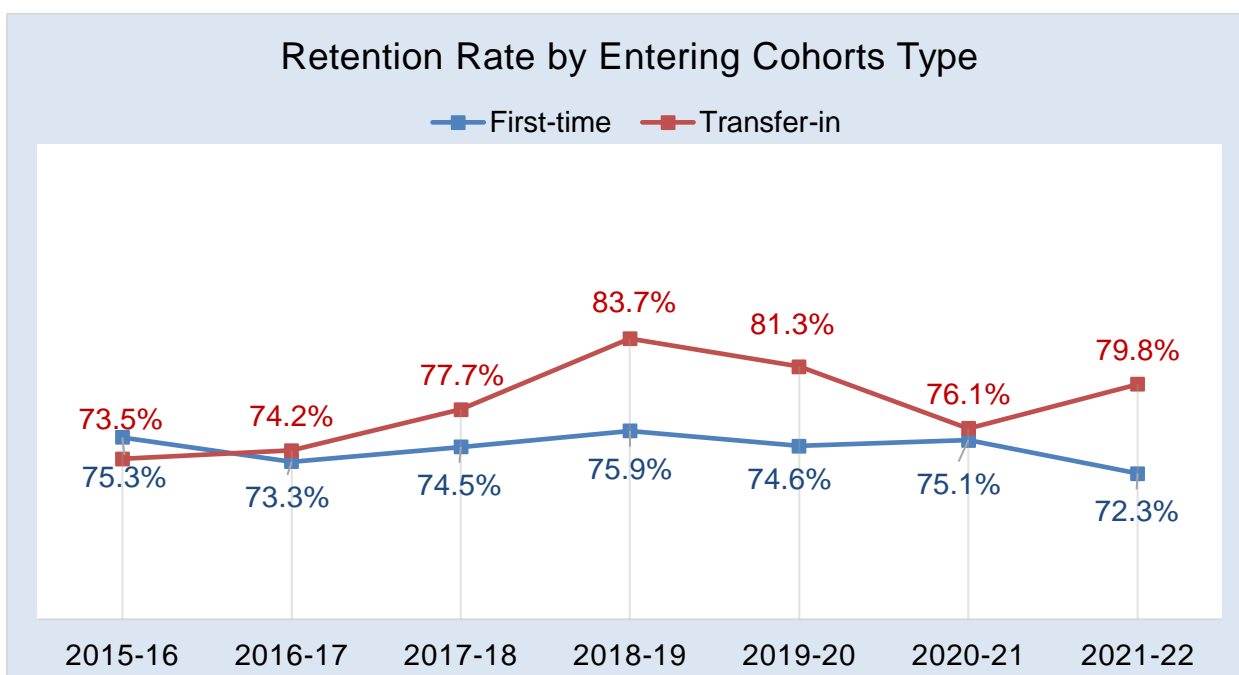
<i>School Year</i>	<i>Resident Status × Gender</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	Female-Resident	491	405	82.5%
	Male-Resident	248	209	84.3%
	Female-Commuter	205	167	81.5%
	Male-Commuter	153	116	75.8%
2016-2017	Female-Resident	507	423	83.4%
	Male-Resident	249	201	80.7%
	Female-Commuter	196	165	84.2%
	Male-Commuter	166	128	77.1%
2017-2018	Female-Resident	530	449	84.7%
	Male-Resident	236	187	79.2%
	Female-Commuter	240	184	76.7%
	Male-Commuter	170	140	82.4%
2018-2019	Female-Resident	549	453	82.5%
	Male-Resident	227	191	84.1%
	Female-Commuter	306	258	84.3%
	Male-Commuter	168	130	77.4%
2019-2020	Female-Resident	559	448	80.1%
	Male-Resident	274	225	82.1%
	Female-Commuter	322	273	84.8%
	Male-Commuter	159	125	78.6%
2020-2021	Female-Resident	268	205	76.5%
	Male-Resident	167	127	76.0%
	Female-Commuter	673	548	81.4%
	Male-Commuter	278	215	77.3%
2021-2022	Female-Resident	573	464	81.0%
	Male-Resident	241	194	80.5%
	Female-Commuter	383	303	79.1%
	Male-Commuter	188	149	79.3%

8) Entering Cohort Type (First-time, Transfer-in)

- **First-time:** A student who has no prior postsecondary experience attending any institution for the first time at the undergraduate level. It includes students enrolled in the fall term who attended college for the first time in the prior summer term, and students who entered with advanced standing, such as college credits or postsecondary formal award earned before graduation from high school (IPEDS definition).
- **Transfer-in:** A student entering for the first time but known to have previously attended a postsecondary institution at the same level (e.g., undergraduate). This includes new students enrolled in the fall term who transferred into the institution the prior summer term (IPEDS definition).
- This analysis included the **entering cohort of each year seeking a bachelor's degree only** following the IPEDS survey definition.
- The two cohorts include both full-time and part-time.

a) First-time entering vs. Transfer-in

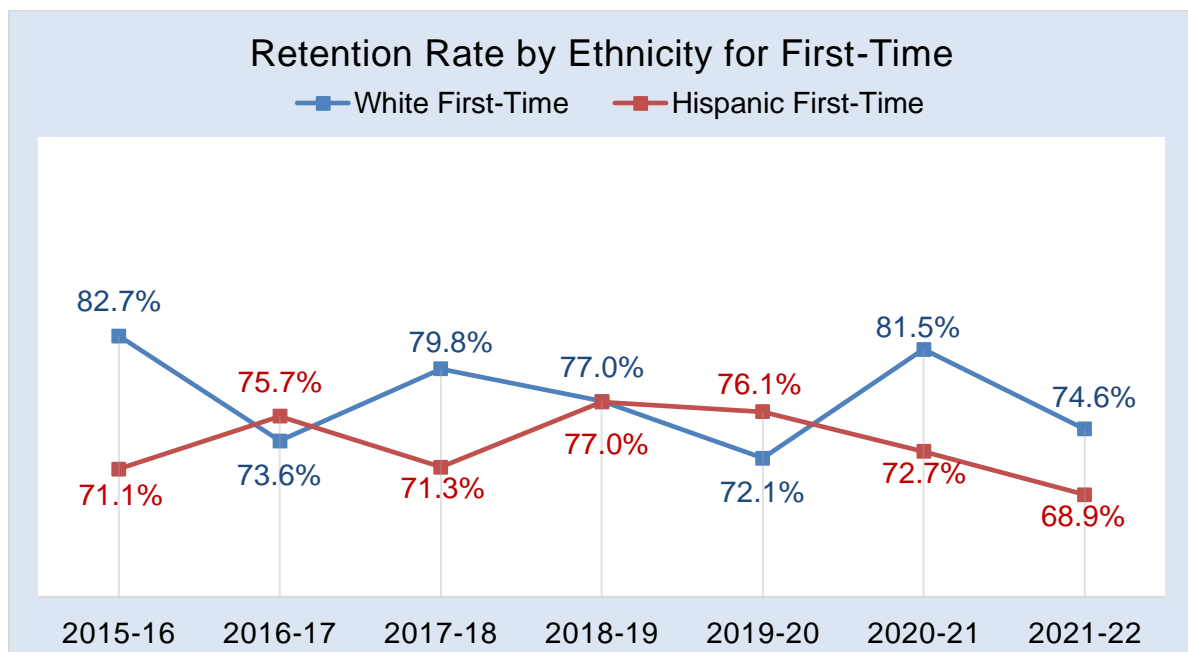
- The retention rate of the first-time entering cohort is particularly important because it is one of the primary indices measuring student success according to the National Center for Education Statistics (NCES).
- **The first-time entering cohort retention remained stable at around 75% during the pandemic, but decreased by 2.8% this year. Meanwhile, transfer-in cohort retention increased greatly, rising by 3.7%.**



<i>School Year</i>	<i>Cohort Type</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	First-time	373	281	75.3%
	Transfer-in	102	75	73.5%
2016-2017	First-time	408	299	73.3%
	Transfer-in	97	72	74.2%
2017-2018	First-time	432	322	74.5%
	Transfer-in	103	80	77.7%
2018-2019	First-time	460	349	75.9%
	Transfer-in	104	87	83.7%
2019-2020	First-time	481	359	74.6%
	Transfer-in	112	91	81.3%
2020-2021	First-time	551	414	75.1%
	Transfer-in	88	67	76.1%
2021-2022	First-time	494	357	72.3%
	Transfer-in	99	79	79.8%

b) White vs. Hispanic for First-Time Entering Cohort

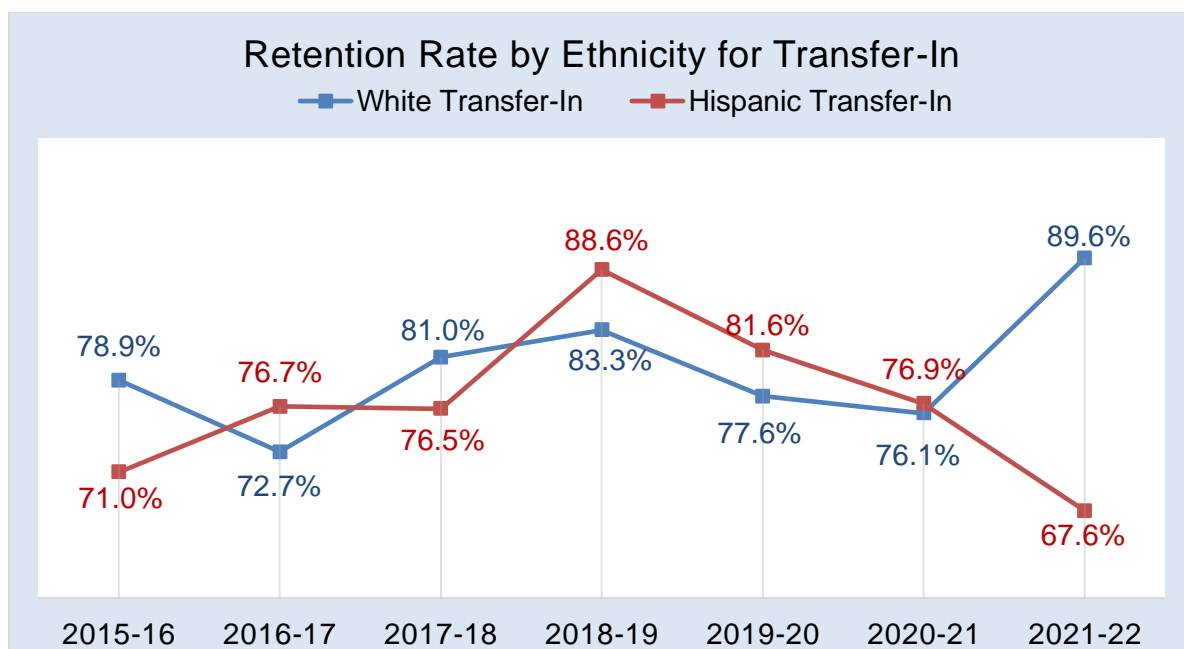
- It was observed that both White first-time and Hispanic first-time retention rates decreased by 6.9% and 3.8%, respectively.



<i>School Year</i>	<i>Cohort Type</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	White First-time	162	134	82.7%
	Hispanic First-time	142	101	71.1%
2016-2017	White First-time	140	103	73.6%
	Hispanic First-time	177	134	75.7%
2017-2018	White First-time	129	103	79.8%
	Hispanic First-time	216	154	71.3%
2018-2019	White First-time	135	104	77.0%
	Hispanic First-time	243	187	77.0%
2019-2020	White First-time	154	111	72.1%
	Hispanic First-time	226	172	76.1%
2020-2021	White First-time	157	128	81.5%
	Hispanic First-time	300	218	72.7%
2021-2022	White First-time	122	91	74.6%
	Hispanic First-time	280	193	68.9%

c) White vs. Hispanic for Transfer-In Cohort

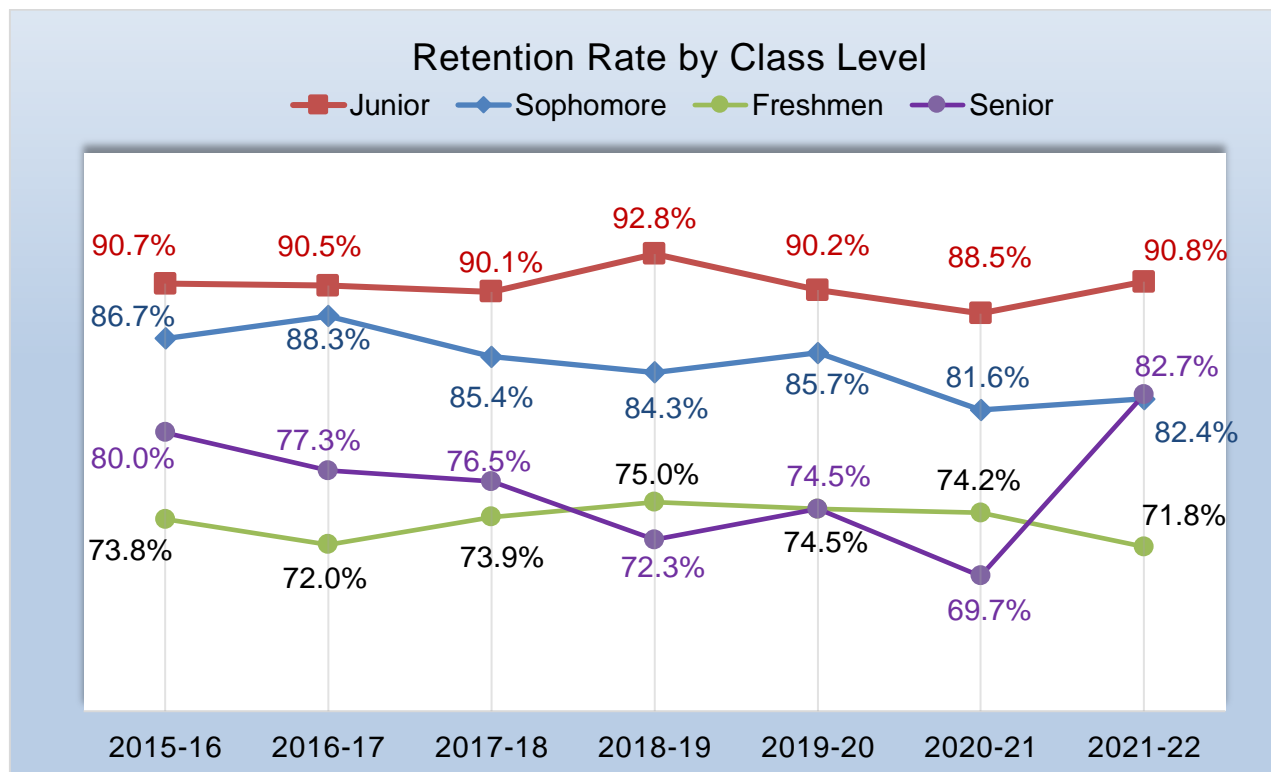
- White transfer-in retention increased greatly by 13.5%, while Hispanic transfer-in retention decreased greatly for the third year in a row, this time by 9.3%.
- This is the largest gap in retention rates for transfer-in students of different ethnicities in over 6 years although the sample sizes are relatively small (<50).



<i>School Year</i>	<i>Cohort Type</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	White Transfer-In	57	45	78.9%
	Hispanic Transfer-In	31	22	71.0%
2016-2017	White Transfer-In	44	32	72.7%
	Hispanic Transfer-In	30	23	76.7%
2017-2018	White Transfer-In	42	34	81.0%
	Hispanic Transfer-In	34	26	76.5%
2018-2019	White Transfer-In	42	35	83.3%
	Hispanic Transfer-In	35	31	88.6%
2019-2020	White Transfer-In	49	38	77.6%
	Hispanic Transfer-In	38	31	81.6%
2020-2021	White Transfer-In	46	35	76.1%
	Hispanic Transfer-In	26	20	76.9%
2021-2022	White Transfer-In	48	43	89.6%
	Hispanic Transfer-In	34	23	67.6%

9) Class Level

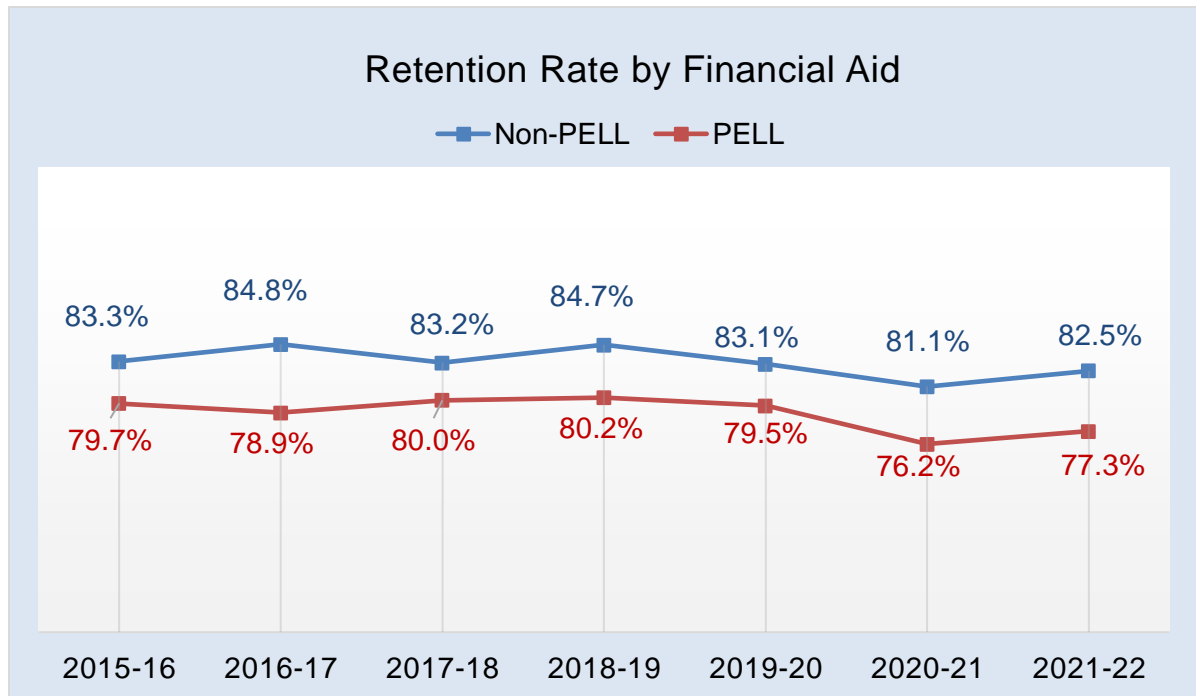
- This year, sophomore and junior retention increased slightly by 1.1% and 2.3%, respectively, while freshman retention slightly decreased by 2.4%



<i>School Year</i>	<i>Class Level</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	Freshman	484	357	73.8%
	Sophomore	279	242	86.7%
	Junior	289	262	90.7%
	Senior	45	36	80.0%
2016-2017	Freshman	442	318	72.0%
	Sophomore	326	288	88.3%
	Junior	306	277	90.5%
	Senior	44	34	77.3%
2017-2018	Freshman	472	349	73.9%
	Sophomore	350	299	85.4%
	Junior	303	273	90.1%
	Senior	51	39	76.5%
2018-2019	Freshman	480	360	75.0%
	Sophomore	389	328	84.3%
	Junior	334	310	92.8%
	Senior	47	34	72.3%
2019-2020	Freshman	569	424	74.5%
	Sophomore	392	336	85.7%
	Junior	306	276	90.2%
	Senior	47	35	74.5%
2020-2021	Freshman	706	524	74.2%
	Sophomore	359	293	81.6%
	Junior	288	255	88.5%
	Senior	33	23	69.7%
2021-2022	Freshman	550	395	71.8%
	Sophomore	467	385	82.4%
	Junior	316	287	90.8%
	Senior	52	43	82.7%

10) PELL Grant

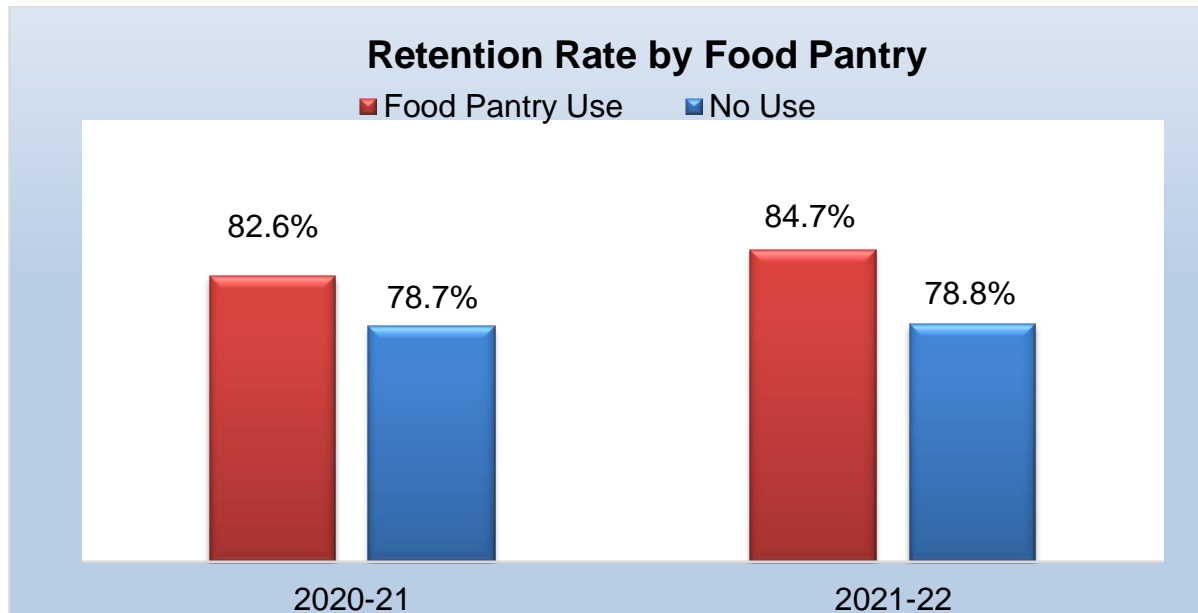
- PELL grant is one of the most widely used indicators of socio-economic status.
- PELL recipients have maintained lower retention rates than Non-PELL recipients. The gap between the two groups slightly increased this year to 5.2%, 82.5% (Non-PELL) vs. 77.3% (PELL)



<i>School Year</i>	<i>Cohort Type</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2015-2016	Non-PELL	618	515	83.3%
	PELL	479	382	79.7%
2016-2017	Non-PELL	592	502	84.8%
	PELL	526	415	78.9%
2017-2018	Non-PELL	631	525	83.2%
	PELL	544	435	80.0%
2018-2019	Non-PELL	649	550	84.7%
	PELL	601	482	80.2%
2019-2020	Non-PELL	724	602	83.1%
	PELL	590	469	79.5%
2020-2021	Non-PELL	785	637	81.1%
	PELL	601	458	76.2%
2021-2022	Non-PELL	764	630	82.5%
	PELL	621	480	77.3%

11) Food Pantry

- Vanguard University has operated the food pantry since January 2020.
- **Again this year, the food pantry users (FA21 or SP22) showed a higher retention rate than non-users: 84.7% vs 78.8%, respectively.**



<i>School Year</i>	<i>Cohort Type</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2020-2021	Food Pantry Use	115	95	82.6%
	No Use	1271	1000	78.7%
2021-2022	Food Pantry Use	314	266	84.7%
	No Use	1071	844	78.8%

12) Significant Factors Affecting 2021-22 Retention:

- Significant factors on the 2021-22 retention during the pandemic were found using a binary logistic regression analysis
- In the initial step, a stepwise regression was used to explore relative contribution of each of the following nine variables to predicting the retention:
 - Commuter (1=Commuter; 2=Resident)
 - DISQ_PROB (1=Disqualification/Probation; 2= No)
 - Ethnic_Race (1=Hispanic; 2=White; 3=others)

- iv. First_Generation (1=Yes; 2=No)
- v. Food_Pantry_Use (1= No; 2=Yes)
- vi. Gender (1=Male; 2=Female)
- vii. GPA
- viii. Load (1=Part-time; 2=Full-time)
- ix. Pell_Grant (1=Yes; 2=No)

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	370.114 ^a	.113	.208

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Commuter(1)	-.241	.288	.699	1	.403	.786
	DISQ_PROB(1)	-1.322	.350	14.306	1	.000	.266
	Ethnic_Race			4.190	2	.123	
	Ethnic_Race(1)	.483	.411	1.382	1	.240	1.621
	Ethnic_Race(2)	-.171	.409	.174	1	.676	.843
	First_Generation(1)	-.473	.315	2.252	1	.133	.623
	Food_Pantry_Use(1)	-.262	.383	.467	1	.494	.770
	Gender(1)	.476	.305	2.431	1	.119	1.609
	GPA	.778	.264	8.669	1	.003	2.176
	Load(1)	-1.742	1.126	2.395	1	.122	.175
	PELL_Grant(1)	.142	.311	.209	1	.648	1.153
	Constant	-.088	1.059	.007	1	.934	.916

a. Variable(s) entered on step 1: Commuter, DISQ_PROB, Ethnic_Race, First_Generation, Food_Pantry_Use, Gender, GPA, Load, PELL_Grant.

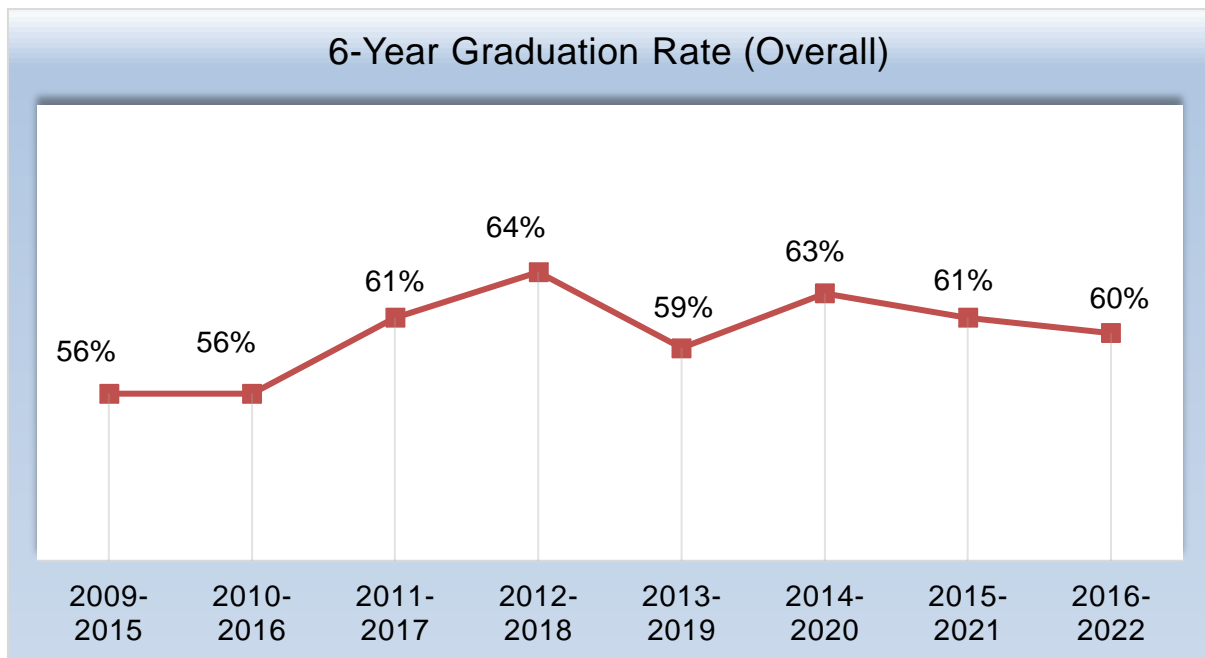
- It was found that **Disqualification and Probation (DISQ_PROB)** and **GPA** are **very significant predictors of retention**, $p = .000$ and $p = .003$, respectively.
- However, each of the other factors did not show significant effect on retention after controlling for all other factors.

II. Graduation Rates

6-year graduation rates were analyzed for the **full-time, first-time entering cohorts seeking a bachelor's degree only** (IPEDS definition).

1) Overall

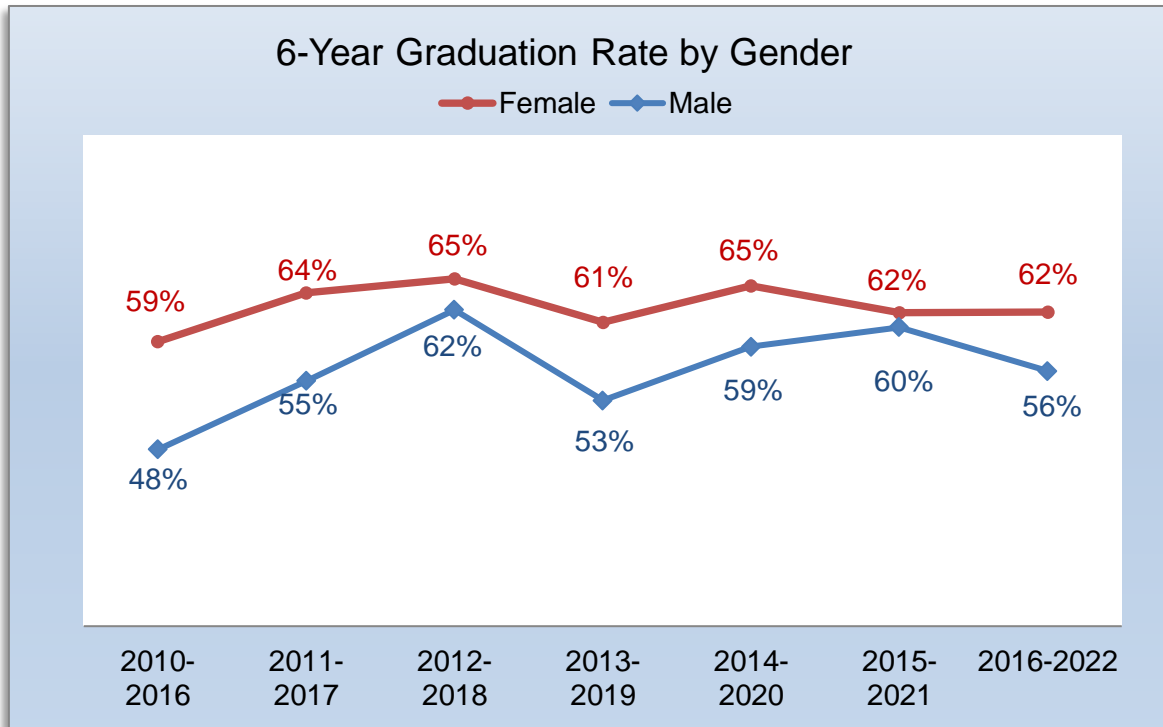
- **Six-year graduation rate of the 2016 entering cohort is 60%. Vanguard graduation rate has remained at or over 60% for the past five years, except in 2019.**



<i>Entering- Graduating</i>	<i>Cohort total</i>	<i>Graduated</i>	<i>Graduation Rate</i>
2009-2015	261	146	56%
2010-2016	334	186	56%
2011-2017	397	242	61%
2012-2018	435	280	64%
2013-2019	390	229	59%
2014-2020	313	196	63%
2015-2021	371	228	61%
2016-2022	410	244	60%

2) Gender

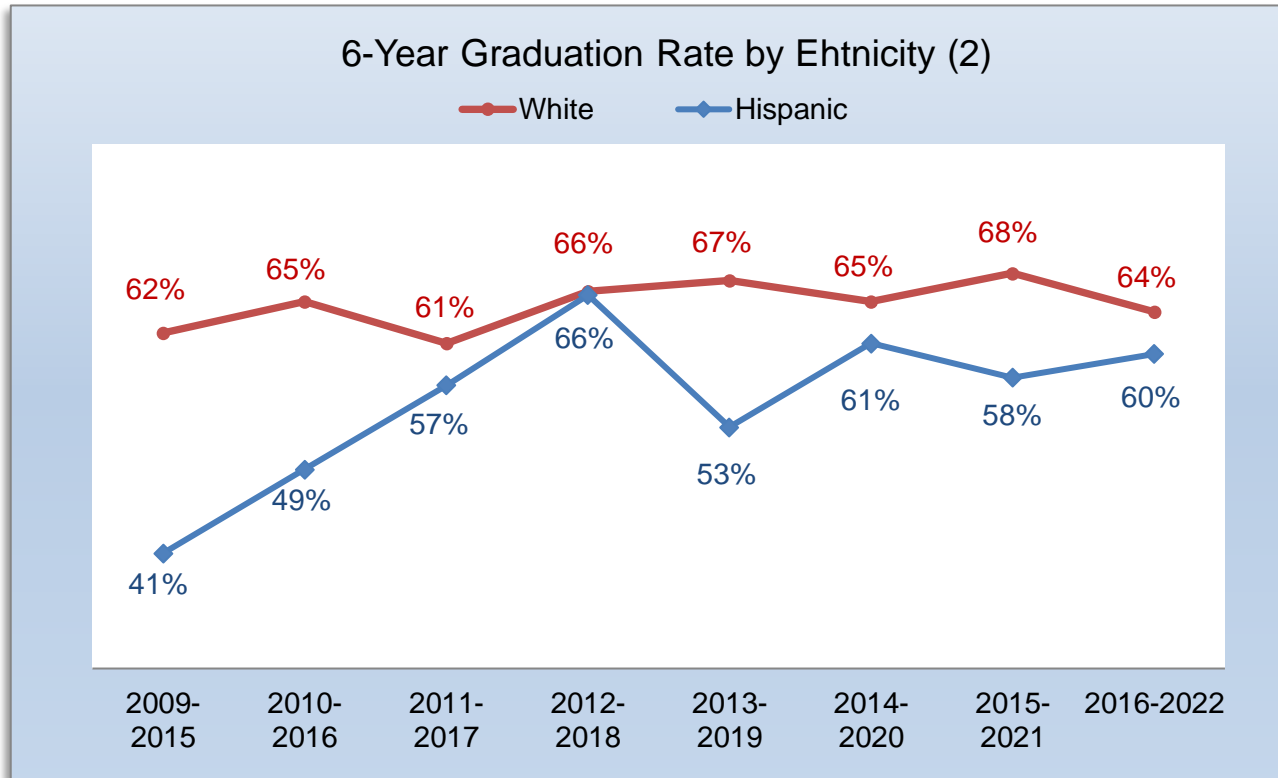
- Female graduation rate of the 2016 cohort had no change from that of the 2015 cohort, while male graduation rates decreased by 4% this year compared to the 2015 cohort.
- This is consistent with historical data, in which the male graduation rate has been consistently lower than the female.



Entering-Graduating	Gender	Cohort total	Graduated	%
2009-2015	Female	162	101	62%
	Male	99	45	45%
2010-2016	Female	234	138	59%
	Male	100	48	48%
2011-2017	Female	271	173	64%
	Male	126	69	55%
2012-2018	Female	292	191	65%
	Male	143	89	62%
2013-2019	Female	273	167	61%
	Male	117	62	53%
2014-2020	Female	207	134	65%
	Male	106	62	59%
2015-2021	Female	247	153	62%
	Male	124	75	60%
2016-2022	Female	274	169	62%
	Male	135	75	56%

3) Ethnicity (White and Hispanic)

- The Hispanic graduation rate slightly increased by 2% while the White graduation rate decreased by 4% this year for the 2016 entering cohort.

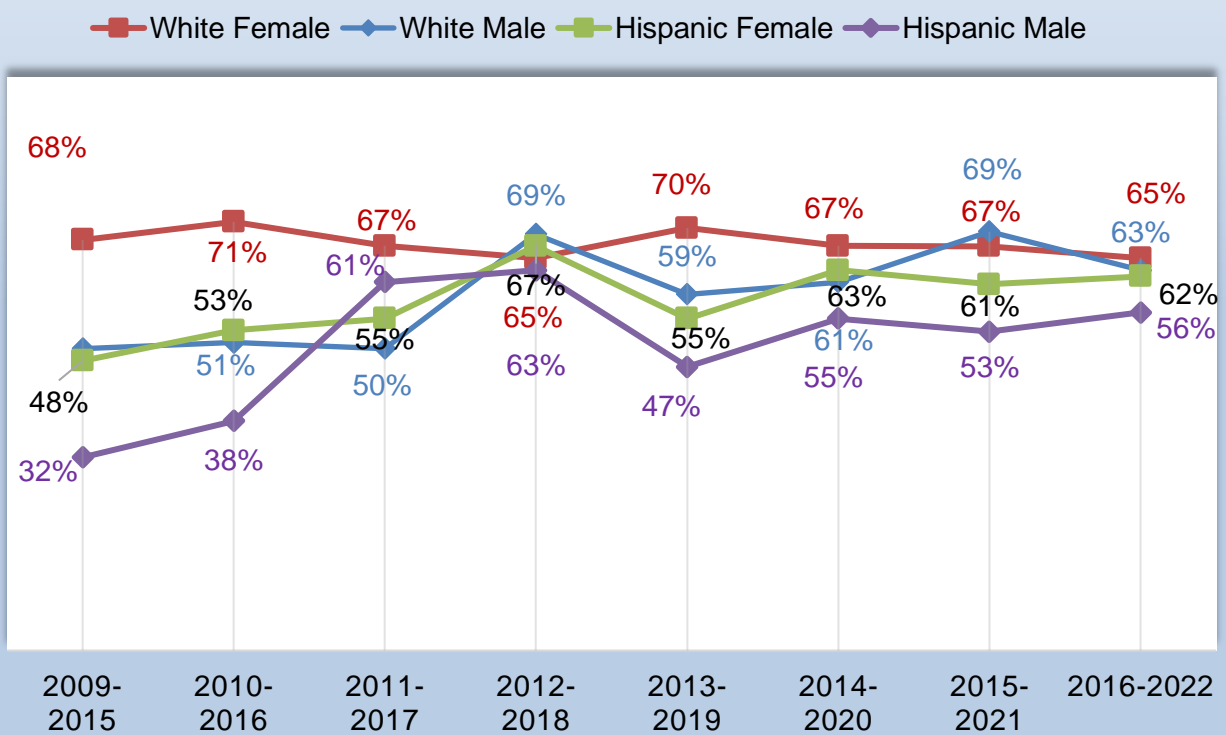


<i>Entering-Graduating</i>	<i>Ethnicity (2)</i>	<i>Cohort total</i>	<i>Graduated</i>	<i>%</i>
2009-2015	Hispanic	58	24	41%
	White	159	98	62%
2010-2016	Hispanic	101	49	49%
	White	165	108	65%
2011-2017	Hispanic	122	69	57%
	White	215	132	61%
2012-2018	Hispanic	157	103	66%
	White	185	122	66%
2013-2019	Hispanic	172	91	53%
	White	162	108	67%
2014-2020	Hispanic	120	73	61%
	White	162	105	65%
2015-2021	Hispanic	142	82	58%
	White	161	109	68%
2016-2022	Hispanic	178	107	60%
	White	140	90	64%

4) Gender x Ethnicity (White and Hispanic)

- The White male graduation rate decreased by 6% for the 2016 cohort, after surpassing the white female graduation rate for the 2015 cohort. The rest of the groups largely remained the same, though Hispanic male graduation increased by 3% for the 2016 cohort.

6-Year Graduation Rate by Gender x Ethnicity (2)



<i>Entering-Graduating</i>	<i>Ethnicity (2) x Gender</i>	<i>Cohort total</i>	<i>Graduated</i>	<i>%</i>
2009-2015	White Female	103	70	68%
	White Male	56	28	50%
	Hispanic Female	33	16	48%
	Hispanic Male	25	8	32%
2010-2016	White Female	118	84	71%
	White Male	47	24	51%
	Hispanic Female	72	38	53%
	Hispanic Male	29	11	38%
2011-2017	White Female	141	95	67%
	White Male	74	37	50%
	Hispanic Female	89	49	55%
	Hispanic Male	33	20	61%

2012-2018	White Female	127	82	65%
	White Male	58	40	69%
	Hispanic Female	109	73	67%
	Hispanic Male	48	30	63%
2013-2019	White Female	111	78	70%
	White Male	51	30	59%
	Hispanic Female	121	67	55%
	Hispanic Male	51	24	47%
2014-2020	White Female	105	70	67%
	White Male	57	35	61%
	Hispanic Female	82	52	63%
	Hispanic Male	38	21	55%
2015-2021	White Female	112	75	67%
	White Male	49	34	69%
	Hispanic Female	89	54	61%
	Hispanic Male	53	28	53%
2016-2022	White Female	100	65	65%
	White Male	40	25	63%
	Hispanic Female	123	76	62%
	Hispanic Male	55	31	56%

References:

- Camelo, K. & Elliott, M. (2019). Food insecurity and academic achievement among college students at a public university in the United States, *Journal of College Student Development* 60 (3), 307-318.
- Love, D. (2009). Student retention through the lens of campus climate, racial stereotypes, and faculty relationships. *Journal of Diversity Management*, 4(3), 21-26
- Ziegler, P., Kim, J., Lebrecht, A., & Winkle, J. V. (2022). *Exploring food insecurity and student success among college students*, 2022 WASC Academic Resource Conference.