

Analysis of Retention and Graduation Rates for 2011-2018

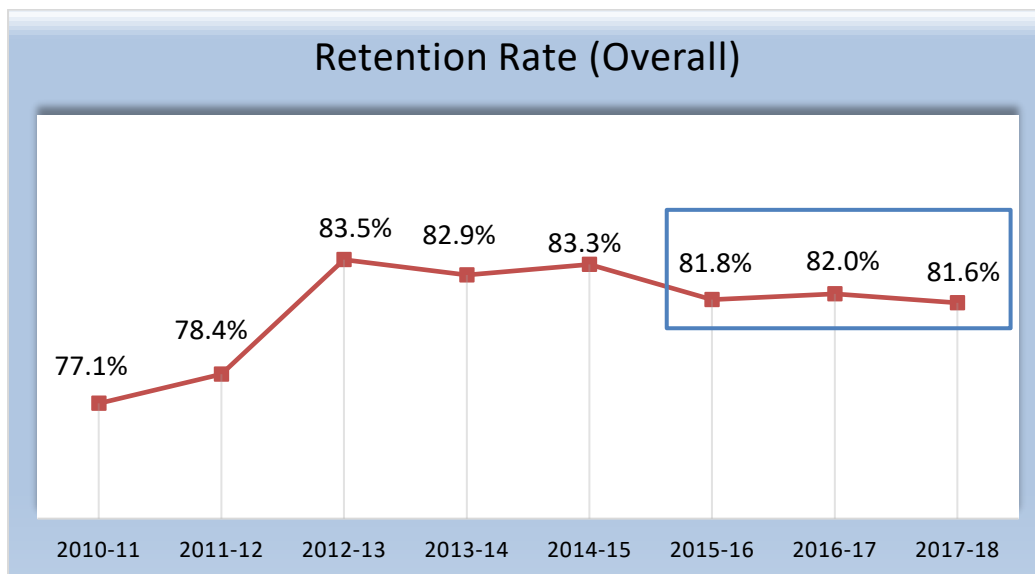
1. Retention Rates

The purpose of the following report is 1) to review and map trends in retention rates over the past seven years (2011- 2018), and 2) to identify “at-risk” student groups and significant factors affecting retention. This retention report is for the traditional undergraduate (TUG) students only. Retention rate was calculated for each school year from the Fall 15th day to the 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) Non-degree students. 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

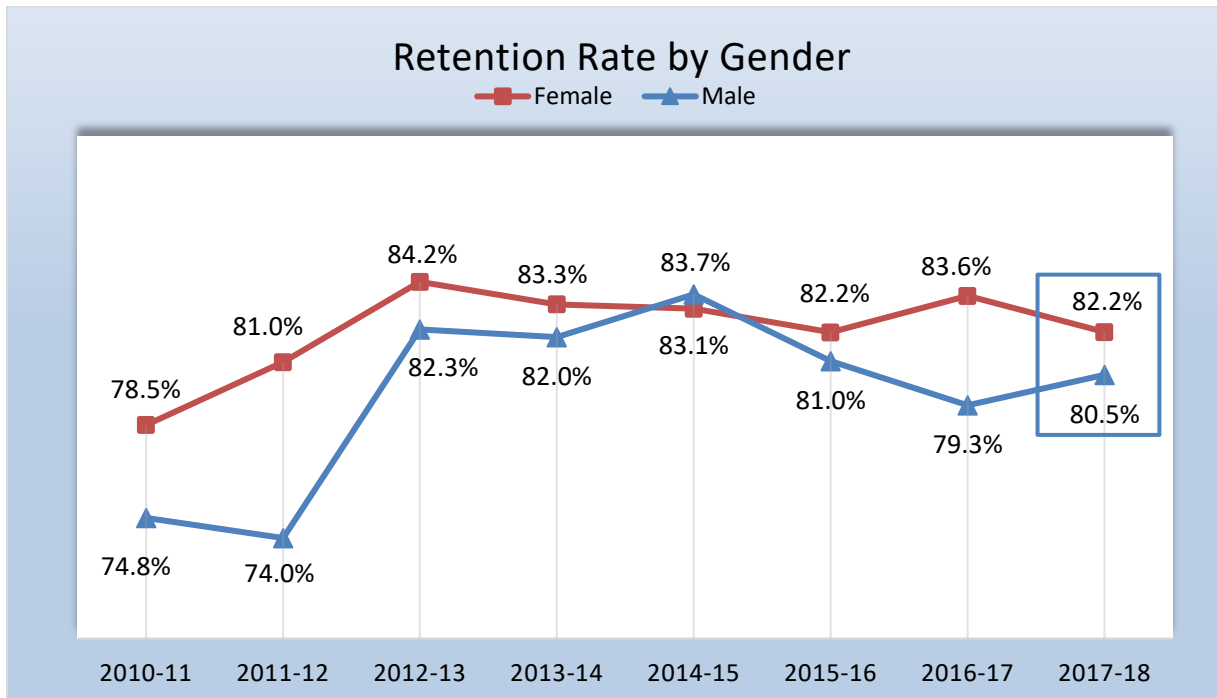
- Overall retention rate has remained stable at around 82% since 2016 and low 80’s since 2013 when it significantly increased in 2013 (from 78.4% to 83.5%).



<i>School Year</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2010-2011	1006	776	77.1%
2011-2012	1099	862	78.4%
2012-2013	1167	975	83.5%
2013-2014	1220	1011	82.9%
2014-2015	1128	940	83.3%
2015-2016	1097	897	81.8%
2016-2017	1118	917	82.0%
2017-2018	1176	960	81.6%

2) Gender

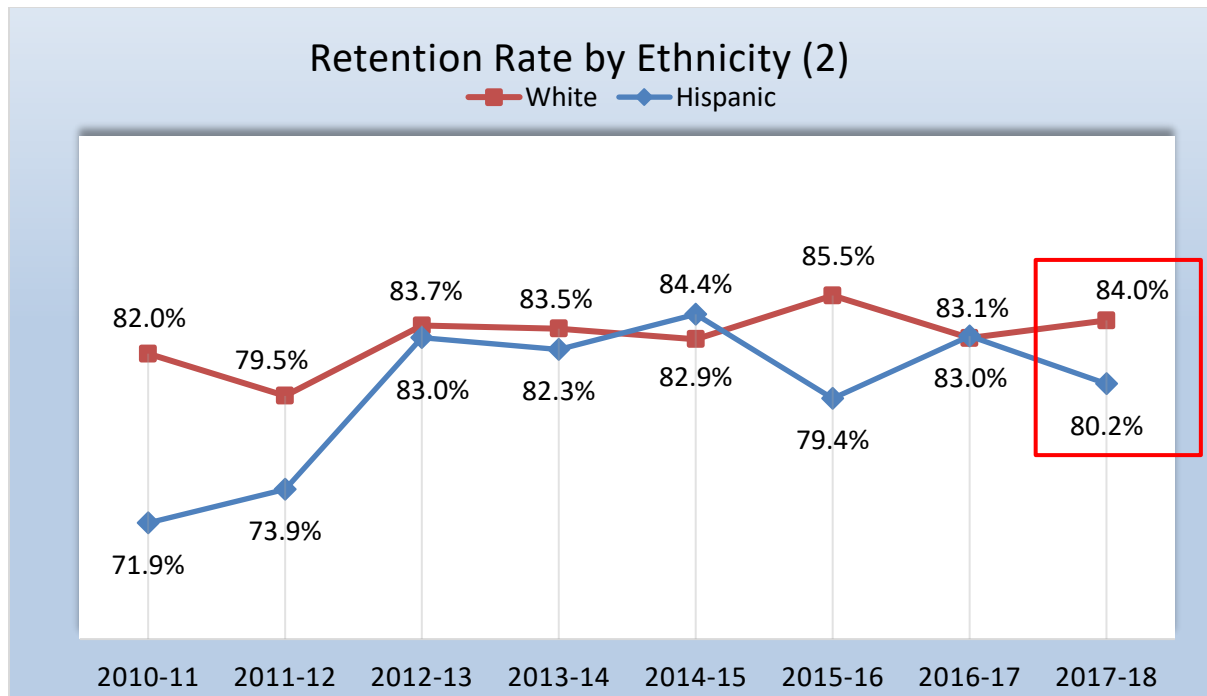
- Gender gap between the Female and Male retention has decreased this year from 4.3% (last year) to 1.7%; Male retention increased by 1.2% (from 79.3% to 80.5%) while female retention decreased by 1.4% (from 83.6% to 82.2%)



<i>School Year</i>	<i>Gender</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2010-2011	Female	633	497	78.5%
	Male	373	279	74.8%
2011-2012	Female	691	560	81.0%
	Male	408	302	74.0%
2012-2013	Female	771	649	84.2%
	Male	396	326	82.3%
2013-2014	Female	803	669	83.3%
	Male	417	342	82.0%
2014-2015	Female	723	601	83.1%
	Male	405	339	83.7%
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%

3) Ethnicity (White and Hispanic)

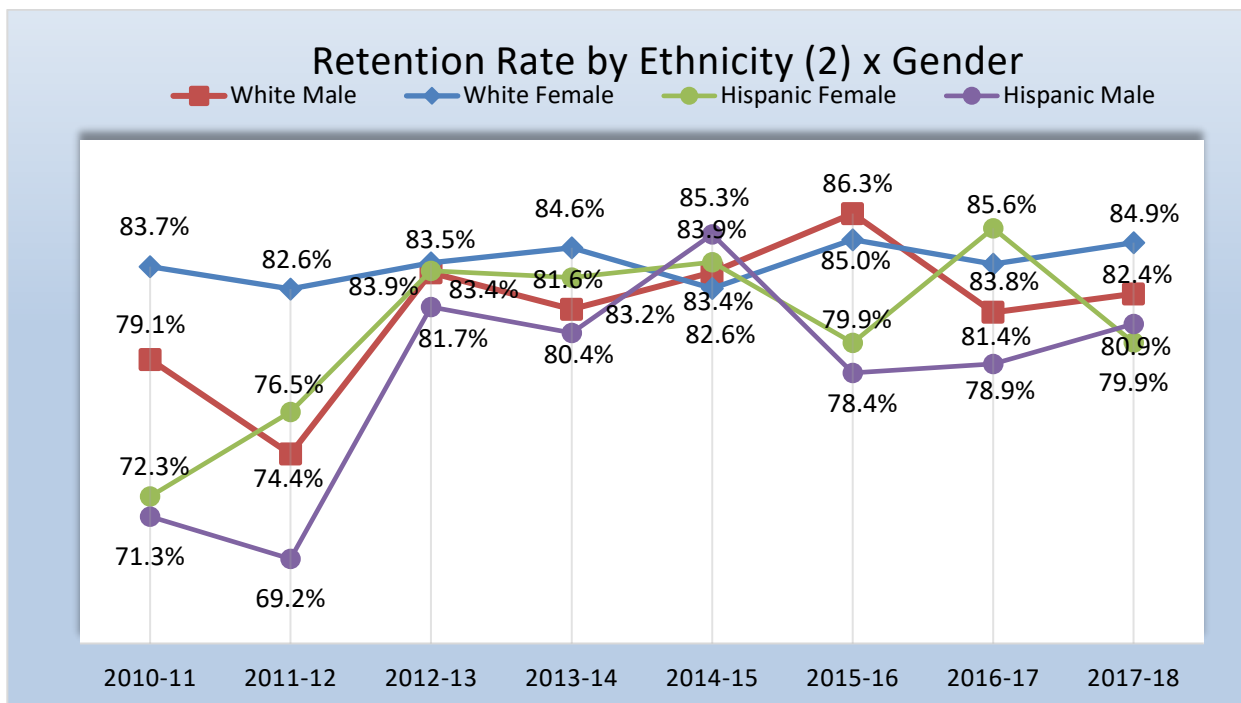
- Hispanic retention slightly decreased (from 83.1% to 80.2%) this year while White retention increased by 1% (from 83% to 84%).
- The retention gap between Whites and Hispanics has increased to 2.8% this year although it is **not statistically significant**. Hispanic retention has been fluctuating for the recent years



<i>School Year</i>	<i>Ethnicity (2)</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2010-2011	White	568	466	82.0%
	Hispanic	253	182	71.9%
2011-2012	White	591	470	79.5%
	Hispanic	307	227	73.9%
2012-2013	White	596	499	83.7%
	Hispanic	341	283	83.0%
2013-2014	White	559	467	83.5%
	Hispanic	446	367	82.3%
2014-2015	White	515	427	82.9%
	Hispanic	423	357	84.4%
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%

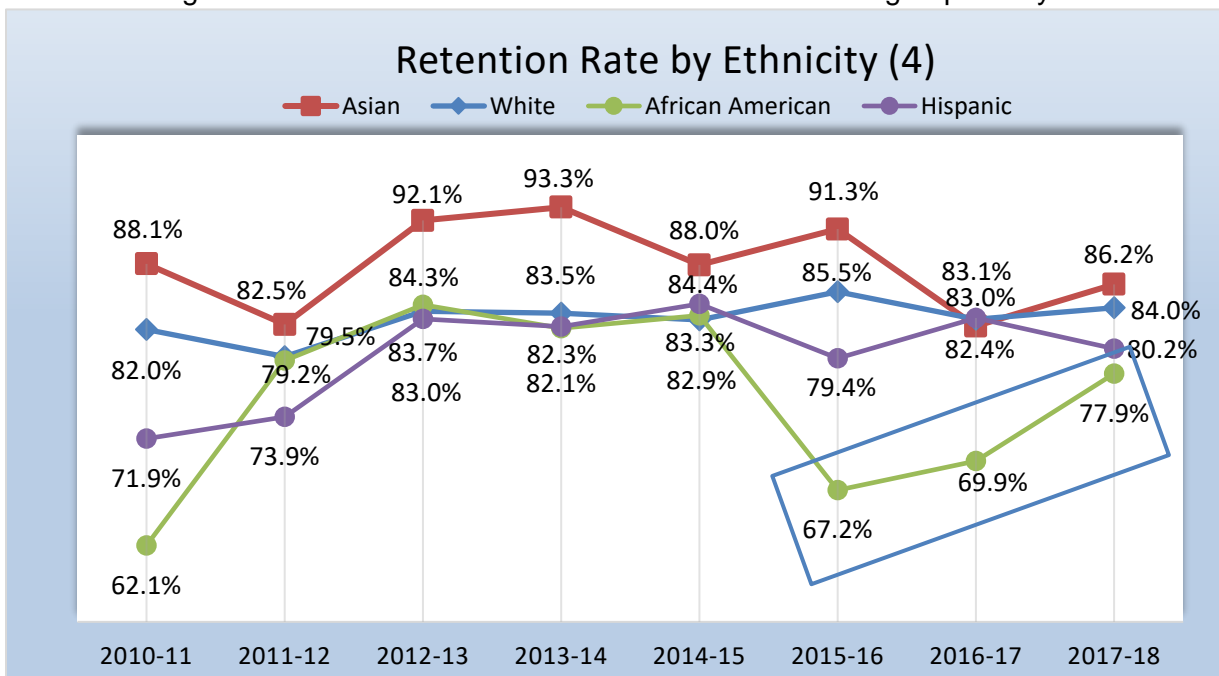
4) Ethnicity (Hispanic and White) x Gender

- **Hispanic female retention** decreased this year from 85.6% to 80.9% although this group's retention has been fluctuating for the past 3 years in a greater degree than other groups.



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

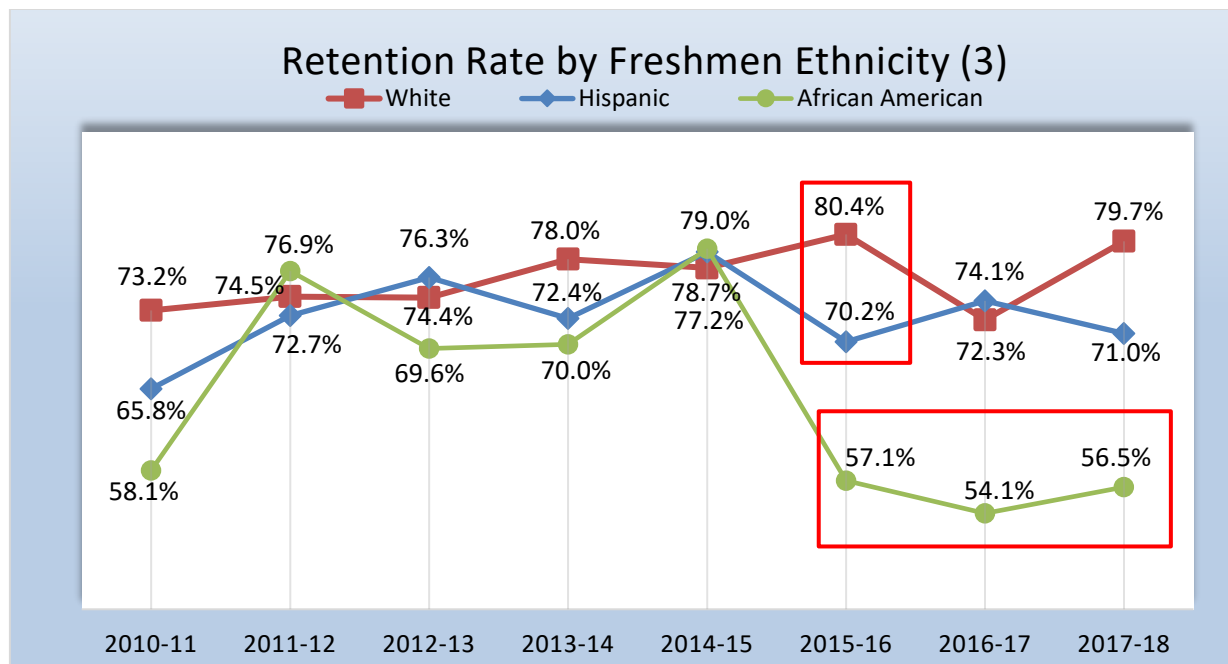
- The retention rate for African Americans (AA) has greatly increased this year (from 69.9% to 77.9%) although the retention pools of Asians and AA are small (<100), thus their retention fluctuate in general.
- There is no significant difference in retention rate for the four ethnic groups this year.



<i>School Year</i>	<i>Ethnicity</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2010-2011	Asian	42	37	88.1%
	White	568	466	82.0%
	African American	58	36	62.1%
	Hispanic	253	182	71.9%
2011-2012	Asian	40	33	82.5%
	White	591	470	79.5%
	African American	48	38	79.2%
	Hispanic	307	227	73.9%
2012-2013	Asian	38	35	92.1%
	White	596	499	83.7%
	African American	51	43	84.3%
	Hispanic	341	283	83.0%
2013-2014	Asian	30	28	93.3%
	White	559	467	83.5%
	African American	56	46	82.1%
	Hispanic	446	367	82.3%
2014-2015	Asian	25	22	88.0%
	White	515	427	82.9%
	African American	48	40	83.3%
	Hispanic	423	357	84.4%
2015-2016	Asian	23	21	91.3%
	White	504	431	85.5%
	African American	64	43	67.2%
	Hispanic	417	331	79.4%
2016-2017	Asian	34	28	82.35%
	White	470	390	82.98%
	African American	73	51	69.86%
	Hispanic	432	359	83.10%
2017-2018	Asian	29	25	86.21%
	White	432	363	84.03%
	African American	68	53	77.94%
	Hispanic	506	406	80.24%

6) Freshmen Ethnicity (Hispanic, African American, and White)

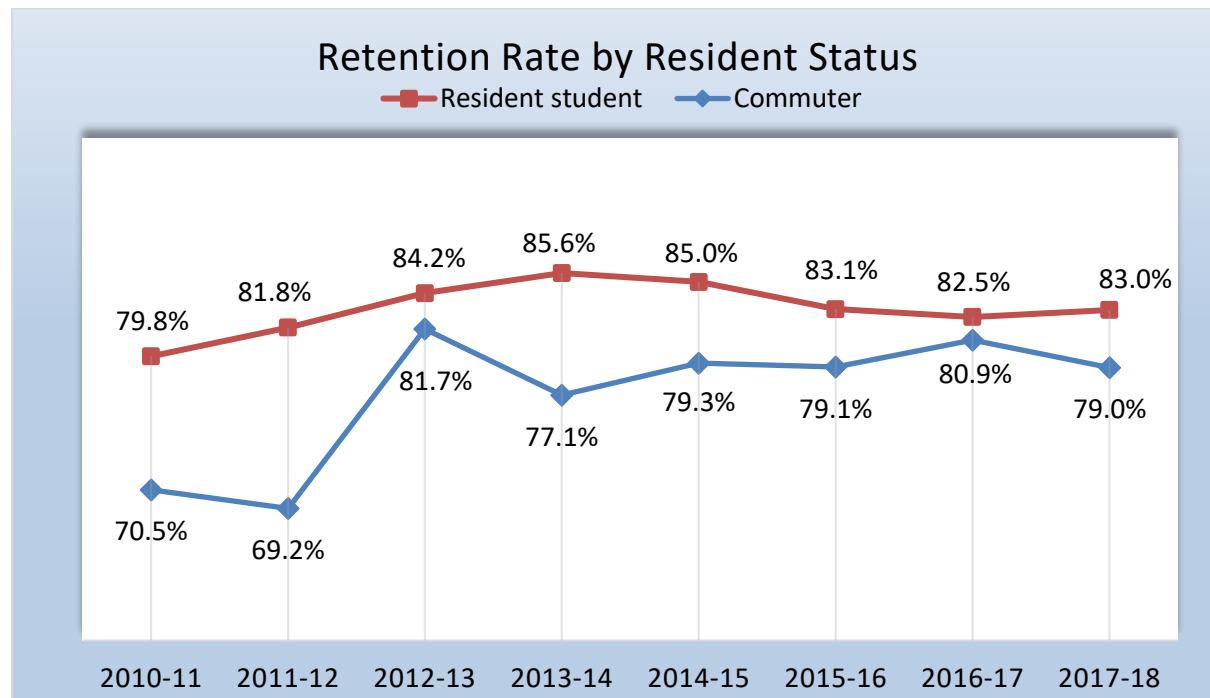
- Note that the retention rates for the **African American freshmen** has been **significantly lower** than their counterparts of other ethnicities (White, Hispanic, or both) for the last three years.
- **Hispanic freshmen retention** was lower than white freshmen this year and significantly lower in 2015-2016



<i>School Year</i>	<i>Freshmen Ethnicity</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2010-2011	Hispanic	111	73	65.8%
	African American	31	18	58.1%
	White	190	139	73.2%
2011-2012	Hispanic	143	104	72.7%
	African American	13	10	76.9%
	White	231	172	74.5%
2012-2013	Hispanic	160	122	76.3%
	African American	23	16	69.6%
	White	207	154	74.4%
2013-2014	Hispanic	185	134	72.4%
	African American	20	14	70.0%
	White	173	135	78.0%
2014-2015	Hispanic	136	107	78.7%
	African American	19	15	79.0%
	White	157	121	77.2%
2015-2016	Hispanic	178	125	70.2%
	African American	35	20	57.1%
	White	219	176	80.4%
2016-2017	Hispanic	193	143	74.1%
	African American	37	20	54.1%
	White	148	107	72.3%
2017-2018	Hispanic	238	169	71.0%
	African American	23	13	56.5%
	White	143	114	79.7%

7) Resident Status

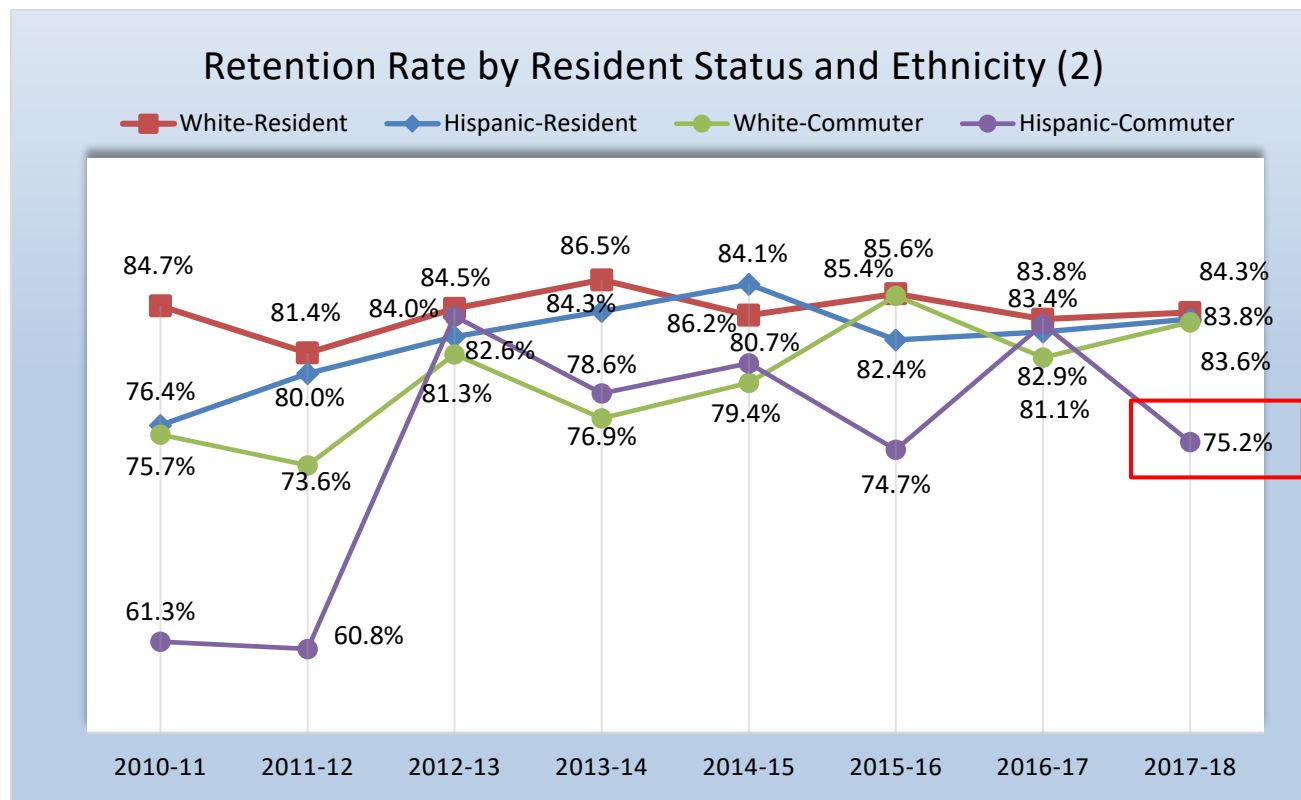
- Resident students historically showed higher retention rates than commuter students
- The gap between the residents and commuters slightly increased this year, as the commuter retention slightly decreased by 1.9% and the resident retention increased by 0.5%.



<i>School Year</i>	<i>Resident Status</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2010-2011	Commuter	288	203	70.5%
	Resident	718	573	79.8%
2011-2012	Commuter	292	202	69.2%
	Resident	807	660	81.8%
2012-2013	Commuter	317	259	81.7%
	Resident	850	716	84.2%
2013-2014	Commuter	398	307	77.1%
	Resident	822	704	85.6%
2014-2015	Commuter	329	261	79.3%
	Resident	799	679	85.0%
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%

8) Resident Status × Ethnicity (Hispanic and White)

- It should be noted that the **Hispanic commuter retention decreased** by 8.2% (from 83.4% to 75.2%) this year, thus it is **significantly lower** than the other groups.

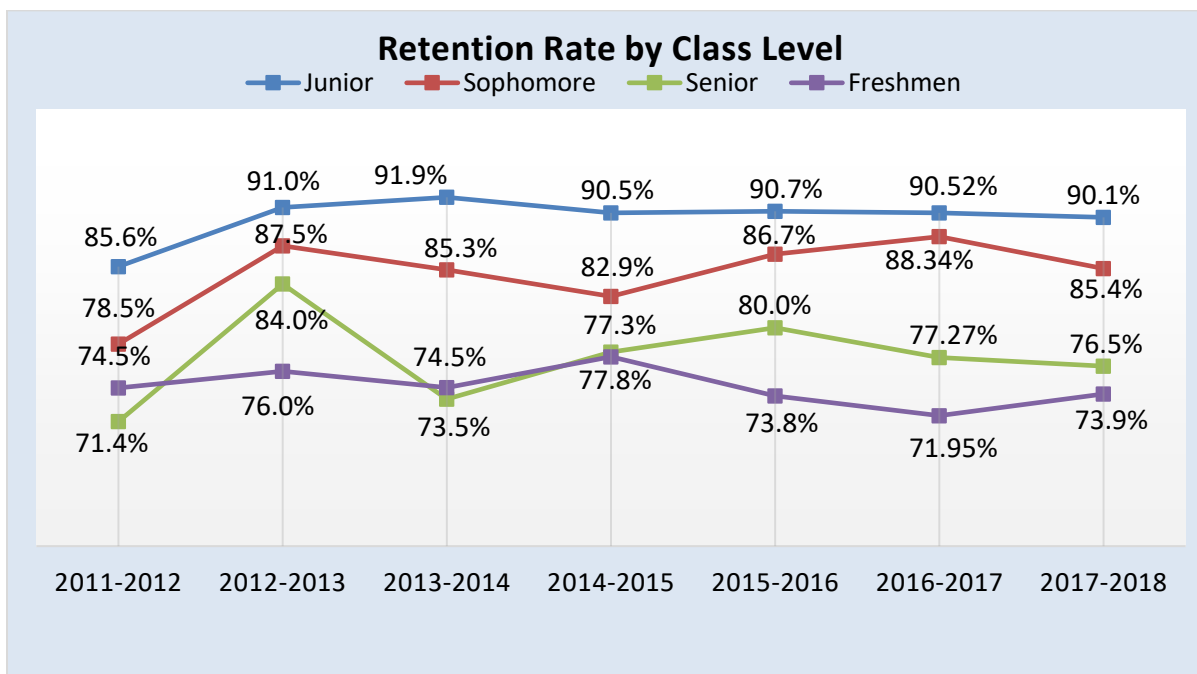


<i>School Year</i>	<i>Ethnicity</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2010-2011	White-Resident	399	338	84.7%
	Hispanic-Resident	178	136	76.4%
	White-Commuter	169	128	75.7%
	Hispanic-Commuter	75	46	61.3%
2011-2012	White-Resident	447	364	81.4%
	Hispanic-Resident	210	168	80.0%
	White-Commuter	144	106	73.6%
	Hispanic-Commuter	97	59	60.8%
2012-2013	White-Resident	446	377	84.5%
	Hispanic-Resident	241	199	82.6%
	White-Commuter	150	122	81.3%
	Hispanic-Commuter	100	84	84.0%
2013-2014	White-Resident	386	334	86.5%
	Hispanic-Resident	287	242	84.3%
	White-Commuter	173	133	76.9%
	Hispanic-Commuter	159	125	78.6%
2014-2015	White-Resident	389	327	84.1%

2015-2016	Hispanic-Resident	283	244	86.2%
	White-Commuter	126	100	79.4%
	Hispanic-Commuter	140	113	80.7%
	White-Resident	360	308	85.6%
2016-2017	Hispanic-Resident	255	210	82.4%
	White-Commuter	144	123	85.4%
	Hispanic-Commuter	162	121	74.7%
	White-Resident	327	274	83.8%
2017-2018	Hispanic-Resident	269	223	82.9%
	White-Commuter	143	116	81.1%
	Hispanic-Commuter	163	136	83.4%
	White-Resident	292	246	84.3%
2017-2018	Hispanic-Resident	296	248	83.8%
	White-Commuter	140	117	83.6%
	Hispanic-Commuter	210	158	75.2%
	White-Resident	292	246	84.3%

9) Class Level

- Freshman retention increased slightly from 72% to 74% and Sophomore retention decreased by almost 3%. Changes in retention were not statistically significant.

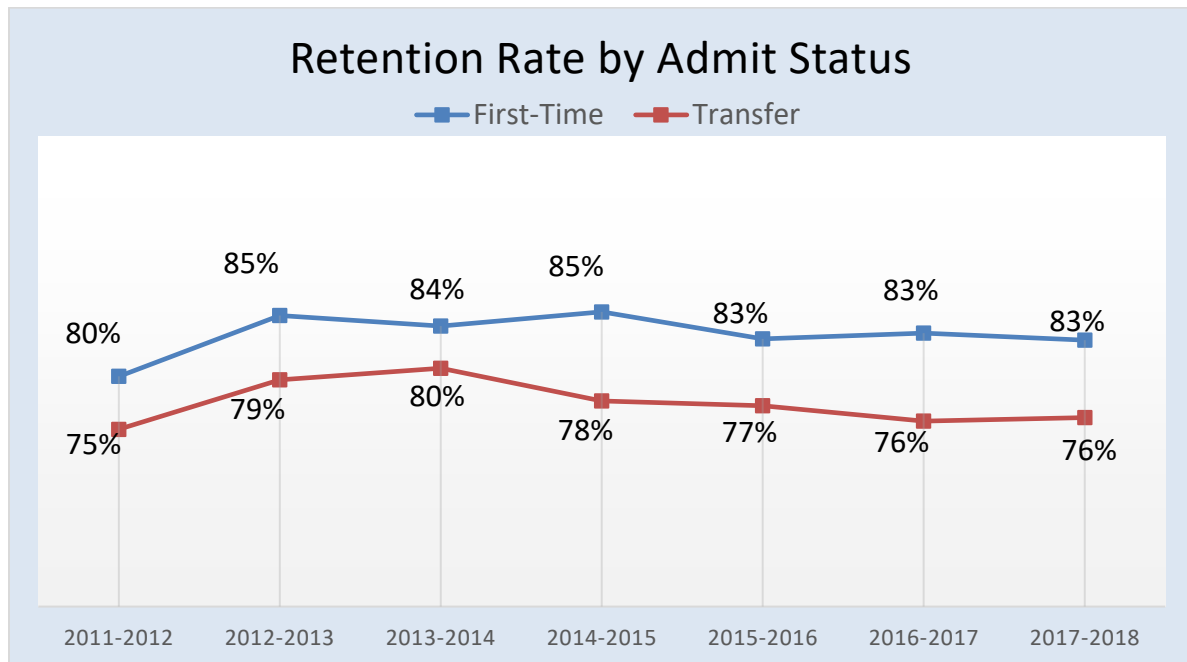


	<i>Ethnicity</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2010-2011	Freshman	376	255	67.8%
	Sophomore	296	248	83.8%
	Junior	277	239	86.3%
	Senior	57	34	59.6%
2011-2012	Freshman	447	333	74.5%
	Sophomore	340	267	78.5%
	Junior	277	237	85.6%
	Senior	35	25	71.4%
2012-2013	Freshman	470	357	76.0%
	Sophomore	368	322	87.5%
	Junior	279	254	91.0%
	Senior	50	42	84.0%
2013-2014	Freshman	428	319	74.5%
	Sophomore	408	348	85.3%
	Junior	335	308	91.9%
	Senior	49	36	73.5%
2014-2015	Freshman	353	273	77.3%
	Sophomore	362	300	82.9%
	Junior	359	325	90.5%
	Senior	54	42	77.8%
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%

10) Application Admit Status (AAS)

- **First-Time (FT)**: students who have no prior postsecondary experience attending any other institution for the first time at the undergraduate level (IPEDS definition)

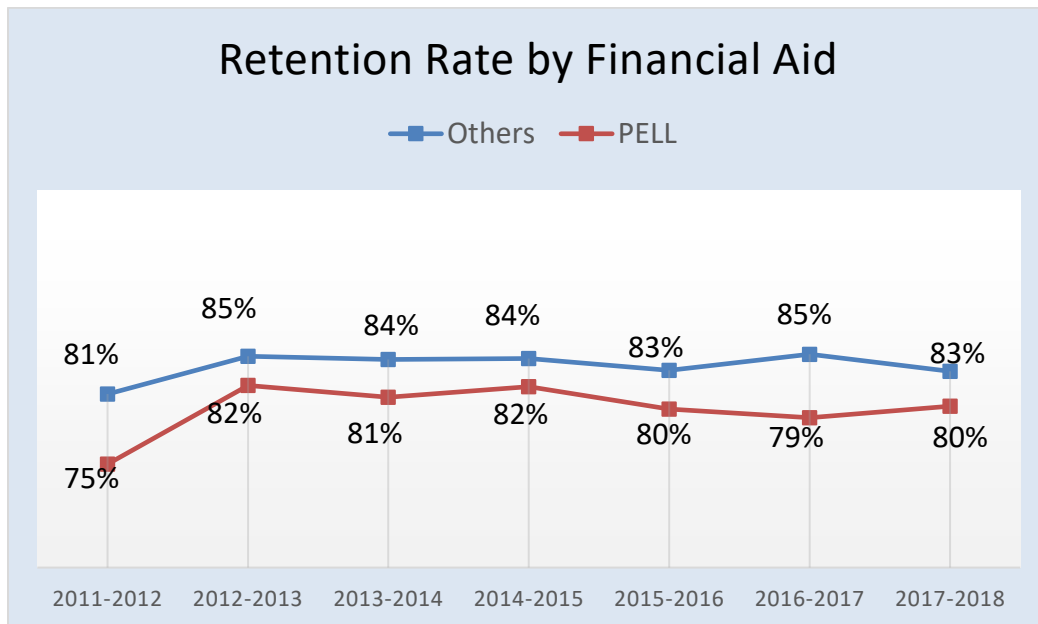
- **Transfer (TR):** students entering Vanguard for the first time (= not Readmit), but are known to have previously attended a postsecondary institution at the undergraduate level (IPEDS definition)
- FT and TR retention remained constant from 2017 to 2018, at approximately 83% and 76%, respectively.



<i>School Year</i>	<i>FT Status</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2011-2012	First-Time	824	656	79.6%
	Transfer	253	190	75.1%
2012-2013	First-Time	925	784	84.8%
	Transfer	222	176	79.3%
2013-2014	First-Time	1000	839	83.9%
	Transfer	203	163	80.3%
2014-2015	First-Time	934	795	85.1%
	Transfer	182	141	77.5%
2015-2016	First-Time	890	737	82.8%
	Transfer	201	155	77.1%
2016-2017	First-Time	923	769	83.3%
	Transfer	194	147	75.8%
2017-2018	First-Time	991	820	82.7%
	Transfer	184	140	76.1%

11) PELL Grant

- PELL grant recipients historically tend to have a lower rate of retention than non-recipients. The retention gap between the PELL recipients and others slightly decreased this year, as retention of Pell recipients slightly increased from 79% to 80% and non-Pell recipients slightly decreased from 85% to 83%.
- There was no significant difference between ethnic groups (White and Hispanic) within the Pell group.



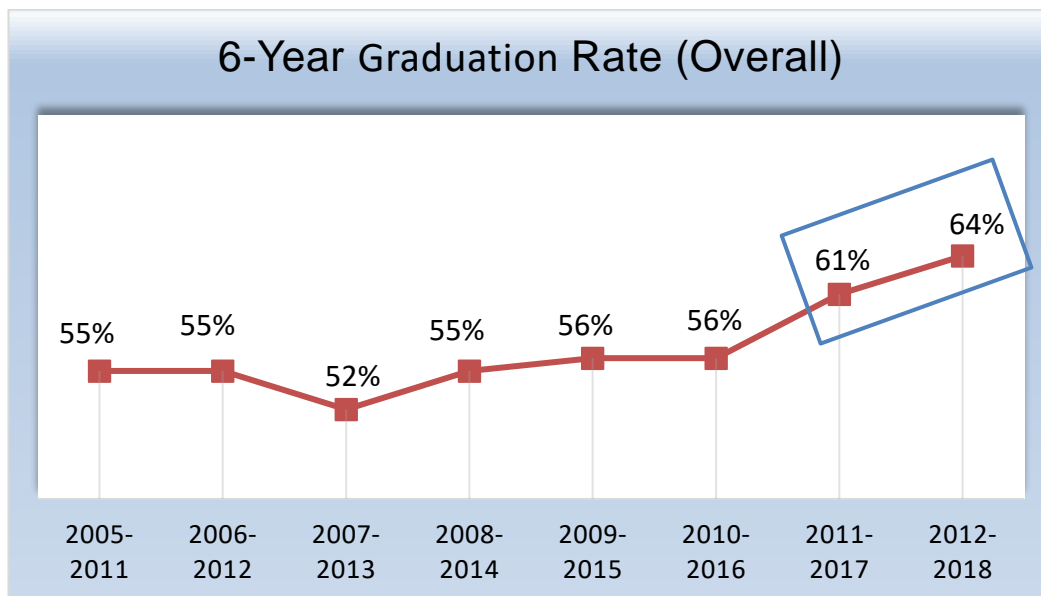
<i>School Year</i>	<i>Low Income Status</i>	<i>Retention Pool</i>	<i>Returned</i>	<i>Retention %</i>
2011-2012	Others	646	524	81.1%
	PELL	453	338	74.6%
2012-2013	Others	702	594	84.6%
	PELL	465	381	81.9%
2013-2014	Others	725	611	84.3%
	PELL	495	400	80.8%
2014-2015	Others	672	567	84.4%
	PELL	456	373	81.8%
2015-2016	Others	618	515	83.3%
	PELL	479	382	79.7%
2016-2017	Others	592	502	84.8%
	PELL	526	415	78.9%
2017-2018	Others	631	525	80.0%
	PELL	544	435	83.2%

2. Graduation Rates

- 6-year graduation rates were analyzed for the **first-time, full-time, degree/certificate seeking undergraduate cohort (Federal cohort) only** based on the IPEDS definition.
- The graduation rates in this report were reported or will be reported to the IPEDS annual survey (<https://surveys.nces.ed.gov/ipeds/>).

1) Overall

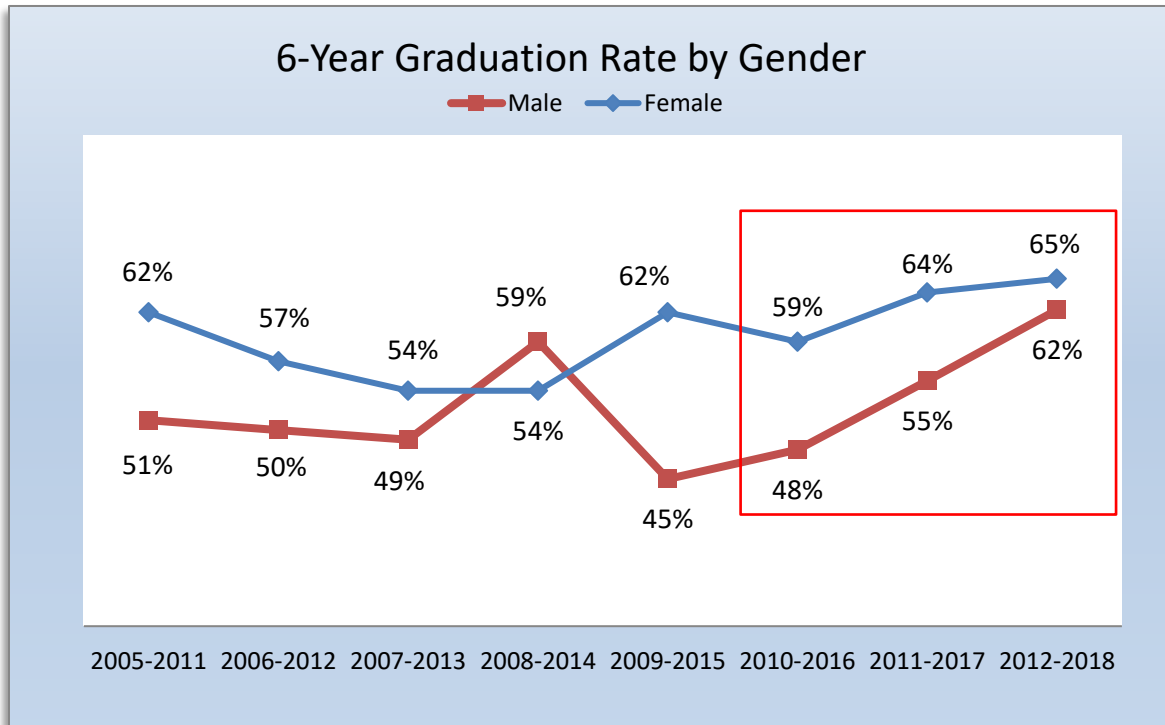
- Vanguard has maintained an average 6-year graduation rate between 50 and 60 percent in the past, but the rate increased to over 60% for the first time in 2017 and rose again to 64% this year.
- This year represents a statistically significant increase over the previous baseline of 55% ($p < .05$)



<i>Entering- Graduation</i>	<i>Federal Cohort total</i>	<i>Graduated</i>	<i>Graduation %</i>
2005-2011	397	220	55%
2006-2012	390	213	55%
2007-2013	367	192	52%
2008-2014	299	164	55%
2009-2015	261	146	56%
2010-2016	334	186	56%
2011-2017	397	242	61%
2012-2018	435	280	64%

2) Gender

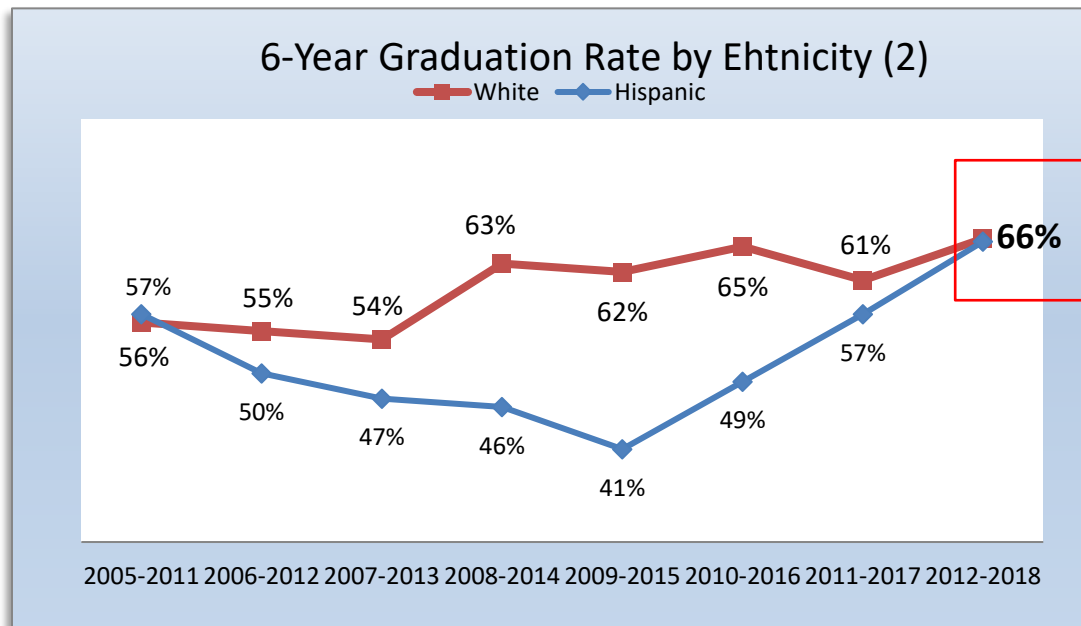
- Female graduation rates have been higher in comparison to male's rates in general.
- Graduation rates of both genders have been increasing since 2015 and the gap between the two genders slightly keep decreasing. Both genders reached the highest graduation rates this year, 65% for female and 62% for male.



Entering-Graduation	Gender	Federal Cohort total	Graduated	Graduation %
2005-2011	Female	262	144	55%
	Male	135	76	56%
2006-2012	Female	252	145	58%
	Male	138	68	49%
2007-2013	Female	232	126	54%
	Male	135	66	49%
2008-2014	Female	205	109	53%
	Male	94	55	59%
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%

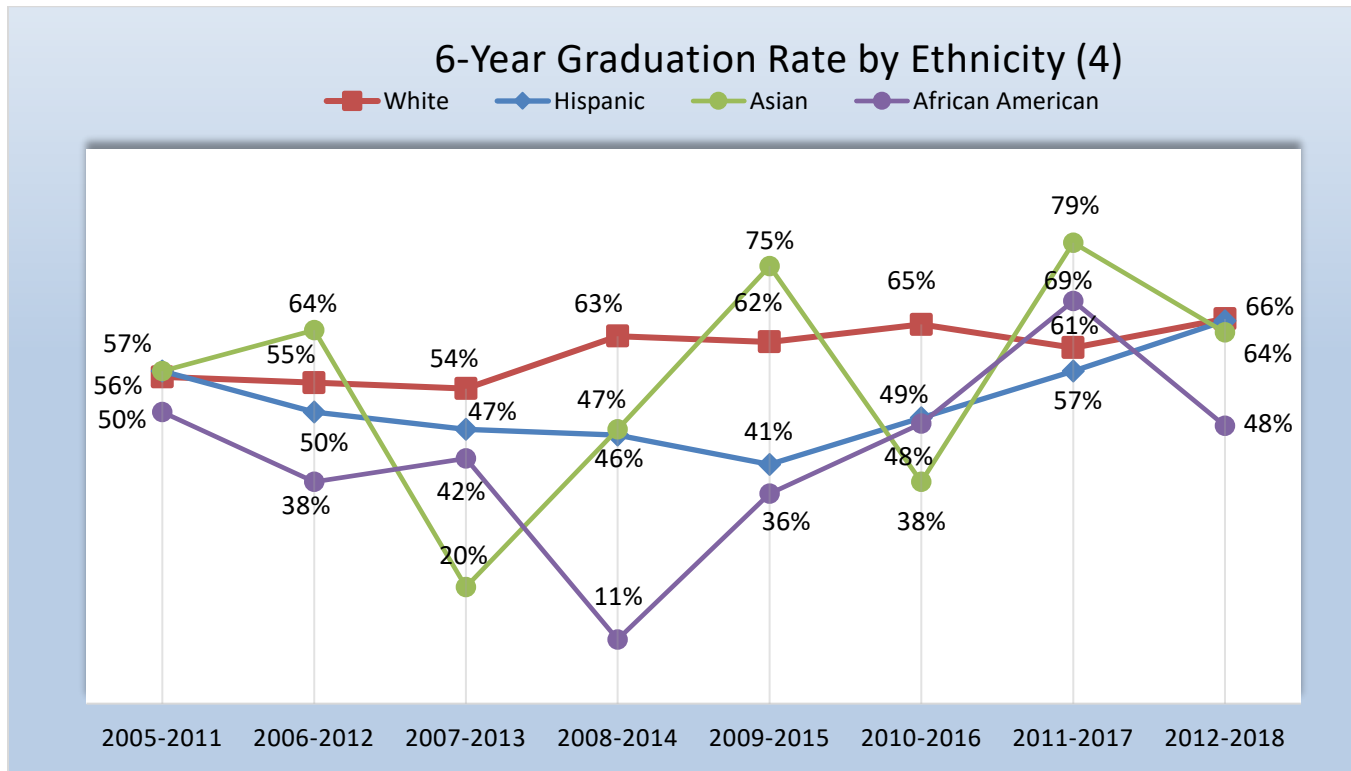
3) Ethnicity

- Hispanic graduation rates kept increasing in recent years and the gap between Whites and Hispanics disappeared this year. Both graduation rates reached the highest point (66%) this year.



Entering-Graduation	Ethnicity (2)	Federal Cohort total	Graduated	Graduation %
2005-2011	Hispanic	56	32	57%
	White	285	161	56%
2006-2012	Hispanic	58	29	50%
	White	269	147	55%
2007-2013	Hispanic	55	26	47%
	White	256	137	54%
2008-2014	Hispanic	57	26	46%
	White	188	118	63%
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%

- Graduation rates of African Americans and Asians decreased this year although they fluctuate every year in genera since the cohorts are of small size (< 35).



Entering-Graduation	Ethnicity (2)	Federal Cohort total	Graduated	Graduation %
2005-2011	Hispanic	56	32	57%
	White	285	161	56%
	Asian	14	8	57%
	African American	17	4	24%
2006-2012	Hispanic	58	29	50%
	White	269	147	55%
	Asian	25	16	64%
	African American	16	6	38%
2007-2013	Hispanic	55	26	47%
	White	256	137	54%
	Asian	10	2	20%
	African American	12	5	42%
2008-2014	Hispanic	57	26	46%
	White	188	118	63%
	Asian	17	8	47%
	African American	18	2	11%
2009-2015	Hispanic	58	24	41%
	White	159	98	62%

	Asian	16	12	75%
	African American	14	5	36%
2010-2016	Hispanic	101	49	49%
	White	165	108	65%
	Asian	8	3	38%
	African American	31	15	48%
2011-2017	Hispanic	122	69	57%
	White	215	132	61%
	Asian	14	11	79%
	African American	13	9	69%
2012-2018	Hispanic	157	103	66%
	White	185	122	66%
	Asian	11	7	64%
	African American	21	10	48%

3. Conclusion

Retention by Gender

- Overall, the traditional undergraduate retention rate has remained stable in the low 80's for the past five years (81.6%). The gap between Female (82.2%) and Male (80.5%) decreased substantially compared to last year.

Retention by Ethnicity

- There was no statistically significant difference between ethnic groups in 2018. Hispanic retention continues to fluctuate and decreased from 83% in 2017 to 80.2% this year. Retention of white students increased slightly to 84% this year, widening the gap between White and Hispanic students to almost 3%. **African American retention greatly increased from last year to 77.9%**, however it should be noted that African American retention is expected to fluctuate due to the consistently small retention pool (<100).

Retention by Freshmen

- **African American freshmen** has been **significantly lower** than their counterparts of other ethnicities (White, Hispanic, or both) for the last three years, 2016-2018. **Hispanic freshmen retention** is lower than white freshmen this year, but the difference is not significant.

Retention by Commuter/Resident

- The gap between resident and commuter students increased from 1.4% to 4% this year, as commuter retention decreased by 1.9% and resident retention increased by 0.5%. **Hispanic commuter retention greatly decreased** from 83.4% to 75.2% this year, and Hispanic commuter students were retained at a significantly lower rate than Hispanic residents and white non-Hispanic commuters and residents. The dramatic decrease in Hispanic commuter retention warrants further exploration, especially considering the targeted interventions for this student population.

Retention by Admit Status

- Retention rate of transfer students is historically lower than first time students and has remained constant from 2017 to 2018 (76% and 83%, respectively).

Retention by Financial Aid

- Pell grant recipients (low income students) are retained at a consistently lower rate than non-Pell recipients. The gap between non-Pell recipients and Pell recipients decreased slightly this year from 6% to 3%.

Graduation Rate

- The Vanguard graduation rate (6-year, First-time, Full-time, degree/cert seeking cohort) **increased again over last year to a new high of 64%. Hispanic graduation rate increased by 8%, closing the gap between the Hispanic and White cohorts (66%).**
- The graduation rates of Asian and African American students significantly decreased this year (64% and 48%), however due to the small size of the cohorts, the change was not statistically significant.
- **The gap in graduation rate by gender reached a historic low this year at 3%**, and both female (65%) and male (62%) graduation rates increased.

Prediction Modeling for Retention Rate

- A binary logistic regression analysis was conducted to develop a prediction model for retention rate using the retention data of the eight school years (2010-2011 through 2017-2018).
- In the initial step, six student characteristic variables were entered as predictors: Commuter, Ethnicity (Hispanic, White, African American, Asian, and others), Class Level, Gender, Application Admit Status (First-time, Transfer), Financial Aid (Pell, No Pell).
- In the final model, **Gender** was removed in the stepwise regression procedure due to the lack of significance ($p = .192$).
- Following table shows the significant predictors of the final model with their significance.

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Commuter	-.577	.085	46.616	1	.000	.562
	AA vs White	.300	.165	3.318	1	.069	1.350
	Hisp vs White	.042	.083	.255	1	.613	1.043
	Asian vs White	-.497	.253	3.854	1	.050	.608
	Others vs White	.133	.138	.927	1	.336	1.142
	FR vs JR	1.448	.113	165.236	1	.000	4.254
	SO vs JR	.734	.114	41.542	1	.000	2.083
	SR vs JR	.736	.190	14.949	1	.000	2.087
	PELL	-.174	.075	5.301	1	.021	.841
	Application Admit Status	-.556	.099	31.518	1	.000	.573
	Constant	-.097	.447	.047	1	.828	.907

a. Variable(s) entered on step 1: Commuter (1=Commuter; 2=Resident), AA vs White, Hisp vs White, Asian vs White, Others vs White, FR vs JR, SO vs JR, SR vs JR, PELL_Num, Application Admit Status (1=TR; 2=FT).

- **Resident students, Juniors, Non-Pell grant recipients, and First-time students** showed higher retention than their counterparts for the past eight years in Vanguard traditional undergraduate programs.
- More factors should be explored to predict the retention in the future, since this prediction model explains only 4.6% of variance in retention (*Cox & Snell R²* =.043).