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The General College 2001 Cohort:
Persistence and Graduation Four Years After Entrance
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ABSTRACT

This report provides retention and graduation data on the fall 2001 NHS General College cohort, as well as predictors of retention. As of summer 2005, approximately 8% of the cohort had graduated and another 47% had enrolled in the 2004-2005 academic year. Differences in retention were examined based on gender and ethnicity. Gender differences were not observed, however there was a difference in retention based on ethnicity. High school rank and ACT composite scores were not significant predictors, but first term GPA was a significant predictor of later retention.

This report provides a profile of the New High School (NHS) students who entered General College in the Fall of 2001. We describe the gender, ethnicity, AAR, high school rank, ACT composite scores, retention and graduation rates of these students, and their academic performance at the University. We also compare admissions scores (AAR, ACT, high school rank) and GPA information amongst the students who have been retained, left, or graduated from the University.

General College enrolled 887 students for the Fall of 2001. Fifteen of those students never completed a term and were excluded from this report. Information was included for students who were admitted as new high school students despite having earned credits through prior registration in Continuing Education and Extension (CEE) or some other college, and students who attended part time in their first term. We also included students who did not enroll in any courses fall semester 2001 but subsequently enrolled. These students are excluded in some analyses conducted by U of M Institutional Research and Reporting (IRR). Therefore, this report describes 872 students.

Using our 872 student cohort we identified 66 students (8%) who had degree information posted to the U of M data warehouse as of August 2005, and have categorized these students as “graduates”. Another 406 (47%) had evidence of continuing enrollment, these students are categorized as “persisters”. Evidence of continuing enrollment was defined as enrollment sometime during the 2004-2005 academic year. Using this larger sample and a liberal definition of dropping out suggests a four-year leaver rate of 46%. Students who did not register at any time during the 2004-2005 academic year were categorized for this analysis as “leavers”.

A search was done in the national clearinghouse database to determine if leavers enrolled in another post-secondary institution after leaving the University of Minnesota. Out of the 400

leavers, records of enrollment were found for 183 students, indicating that 46% of the leavers had at least enrolled at another institution. The database also indicated that one of the 183 students had earned a degree from a local community college. The other students had no degree information posted.

Gender, Ethnicity and Persistence

Gender

This cohort contained 398 (46%) females, 468 (54%) males, and 6 students who did not indicate a gender (.7%). Table 1 displays the number of men and women in each of the persister categories. Chi-square analyses indicated that there was not a relationship between gender and persistence category.

Table 1: Leaver, persistence and graduation rates as of summer 2005 for males and females in the 2001 GC cohort

	Leaver		Persist		Graduate		Total
	N	%	N	%	N	%	N
Females	183	46	175	44	40	10.1	398
Males	214	45.7	228	48.7	26	5.6	468
Undeclared	3	50	3	50	0	0	6
Total	400	45.9	406	46.6	66	7.6	872

Ethnicity

The University of Minnesota database contains information regarding five ethnic groups. Students may choose to check what ethnicity they are upon applying to the University. Of the 2001 cohort, 63.4% of students indicated that they are White, 14.3% indicated that they are Black, 3.7% indicated that they are Hispanic, 15.3% indicated that they are Asian, 1% indicated that they are Native American, and 2.3% did not indicate an ethnicity.

Table 2 displays how many students from each ethnic group fell into leaver, persistence or graduate groups. Chi-square analyses indicated that ethnic groups do not have an equal

chance of being in each persistence category ($\chi^2 = 22.04, p = .015$). It would appear that White students are persisting and graduating at higher rates than other groups. The Native American group stands out as having a high percentage of leavers, which is consistent with the experience of earlier cohorts. Tables 3 and 4 provide information about each ethnic group, broken down by gender. Because these cells are so small, with few graduates in many cells, the persisters and graduates were combined. This provides two groups, the retained (persisters and graduates) and the not retained (leavers). Previous reports (Wambach, Franko, & Connor, 2005) have found that Asian males have left the University at a higher rate than Asian females. For the 2001 cohort, this appears to be the case as well. Another notable difference is that Black females appear to be leaving the University at a higher rate than Black males.

Table 2: Leaver, persistence and graduation rates by ethnicity as of summer 2005 for the 2001 GC cohort

	Leaver		Persist		Graduate		Total
	N	%	N	%	N	%	N
White	229	41.4	275	49.7	49	8.9	553
Asian	77	57.9	46	34.6	10	7.5	133
Black	60	48	59	47.2	6	4.8	125
Hispanic	15	46.9	17	53.1	0	0	32
Native	6	66.7	3	33.3	0	0	9
Other	13	65	6	30	1	5	20
Total	400	45.9	406	46.6	66	7.6	872

Table 3: Retained and not retained rates by ethnicity as of summer 2005 for males in the 2001 GC cohort

	Not Retained		Retained		Total
	N	%	N	%	N
White males	129	41.6	181	58.4	310
Asian males	42	63.6	24	36.4	66
Black males	26	40	39	60	65
Hispanic males	6	50	6	50	12
American Indian males	2	66.7	1	33.3	3
Undeclared	9	75	3	25	12

Table 4: Retained and not retained rates by ethnicity as of summer 2005 for females in the 2001 GC cohort

	Not Retained		Retained		Total
	N	%	N	%	N
White females	100	41.5	141	58.5	241
Asian females	34	51.5	32	49.5	66
Black females	34	56.7	26	43.3	60
Hispanic females	9	45	11	55	20
American Indian females	4	66.7	2	33.3	6
Undeclared females	2	40	3	60	5

Retention and Academic Preparation

This section will describe the differences in high school rank, ACT composite scores, and AAR scores of students who were retained or not retained. These scores are used as part of the college admissions process.

Information about high school rank was available for 794 students. The average high school rank for the entire cohort was 48.56 (sd = 14.67), with a range of 2 to 96. Information about ACT scores was available for 836 students. The average composite ACT score for these students was 20.14 (sd = 3.59). The students' composite ACT scores ranged from 11 to 33. AAR scores were available for 777 students. The average AAR score for these students was 86.97 (sd = 14.52), with a range of 21 to 137.

Those who left the University did not differ significantly from those who were retained in regards to high school rank ($F=1.746, p = .187$). We also examined if there was a difference when testing only males, females, or each ethnic group large enough to run analyses (White, Black, Asian). For each of these groups, high school rank did not differ between retained and not retained students. Tables 5 and 6 display mean high school rank for the total cohort, as well as each gender and three ethnic groups.

Table 5: Average HSR for students by gender and retention

	Not Retained		Retained		Total	
	N	HSR	N	HSR	N	HSR
Females	169	49.53	202	49.6	371	49.57
Males	191	46.54	228	48.75	419	47.75
Total *	362	47.81	432	49.19	794	48.56

* includes students who did not identify their gender

Table 6: Mean HSR for students by ethnicity and retention

	Not Retained		Retained		Total	
	N	HSR	N	HSR	N	HSR
White	208	45.79	300	48.13	508	47.17
Asian	74	53.32	52	53.9	126	53.56
Black	52	49.88	56	51.77	108	50.86

Average ACT composite score also did not differentiate between retained and not retained students ($F=1.249, p = .264$). This finding held true for both genders, as well as White, Black and Asian students. Tables 7 and 8 provides the mean composite ACT scores for each of these groups, as well as the total cohort.

Table 7: Average ACT composite for students by gender and retention

	Not Retained		Retained		Total	
	N	ACT	N	ACT	N	ACT
Females	177	19.21	212	19.49	389	19.37
Males	199	20.68	244	20.95	443	20.83
Total *	378	19.99	458	20.27	836	20.14

* includes students who did not identify their gender

Table 8: Mean ACT composite score for students by ethnicity and retention

	Not Retained		Retained		Total	
	N	ACT	N	ACT	N	ACT
White	217	21.38	318	21.25	535	21.3
Asian	77	17.97	54	18.02	131	17.99
Black	54	17.46	60	17.43	114	17.45

The AAR score did differentiate between students who left the University and those who were retained ($F = 4.804, p=.029$). Male students who were not retained had a statistically significant lower AAR score than male students who were retained ($F = 5.410, p = .021$), and White students who were not retained had a statistically significant lower AAR score than White students who were retained ($F = 3.840, p = .051$). There was not a significant difference in AAR scores between retained and not retained students if the students were female, Black, or Asian.

Tables 9 and 10 display the mean AAR scores for each group as well as totals.

Table 9: Average AAR for students by gender and retention

	Not Retained		Retained		Total	
	N	AAR	N	AAR	N	AAR
Females	165	88.1	201	88.8	366	88.49
Males	185	87.64	222	91.04	407	89.5
Total *	352	87.72	425	90.01	777	88.97

* includes students who did not identify their gender

Table 10: AARs for students by ethnicity and retention

	Not Retained		Retained		Total	
	N	AAR	N	AAR	N	AAR
White	202	88.2	296	90.69	498	89.68
Asian	48	85.19	55	86.55	103	85.91
Black	74	89.53	51	91.31	125	90.26

Retention and GPA

This section presents differences in first term GPA and transfer term GPA amongst retained and not retained students. The average first term GPA for the entire cohort was 2.82 (sd = .90). Students in the retained group earned a significantly higher first term GPA than students in the not retained group ($F = 155.418, p < .001$). Figures 1 and 2 display first term GPA for each group. The line in the middle of each plot indicates where the mean for the group lies. The arms of the boxplot indicate the range. Table 11 displays the average first term GPA for each

retention group. Table 12 displays the number of students who earned a specific GPA for each retention group.

Figure 1: First term GPA by retention group

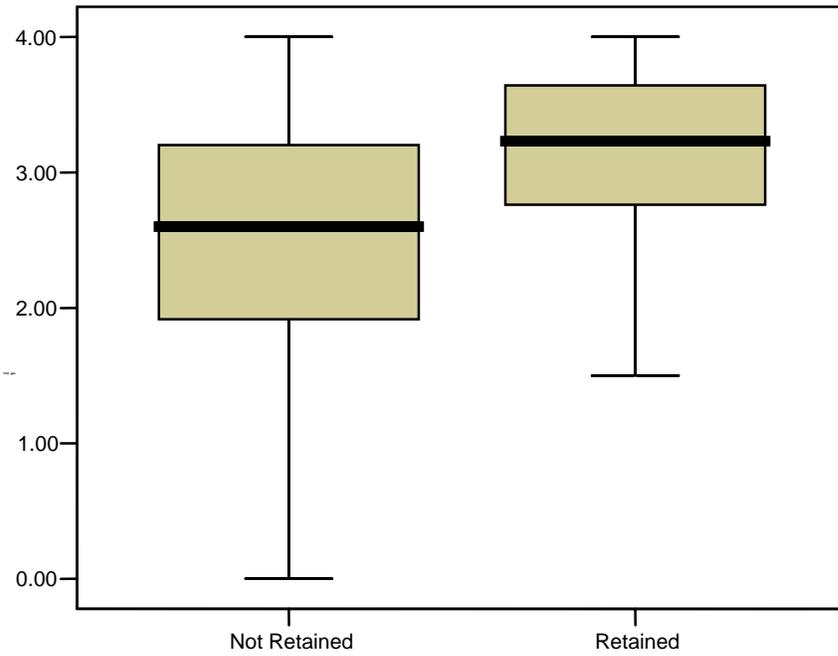


Figure 2: First term GPA by three persister groups

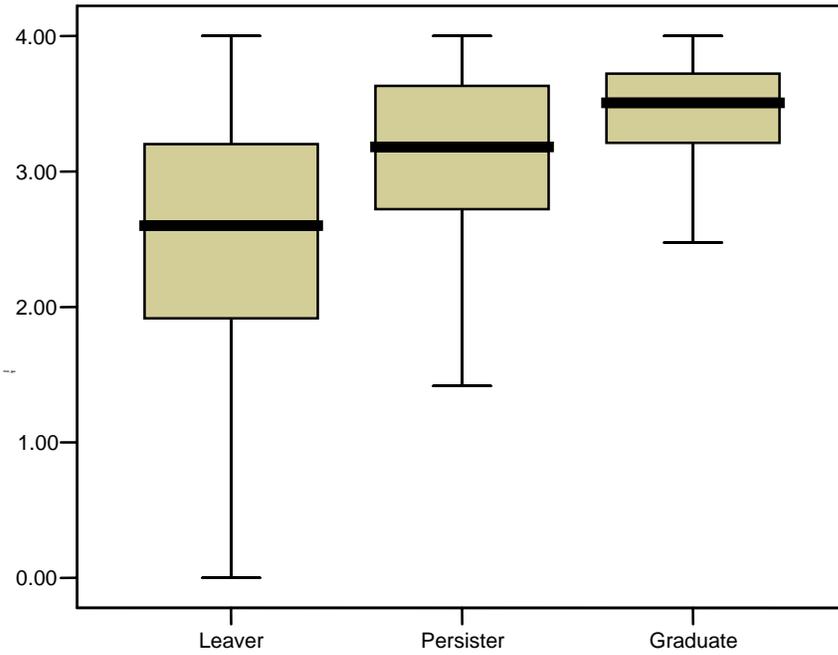


Table 11: First term GPA by retention group

	N	GPA	Std Dev
Not Retained	400	2.44	1.03
Retained	472	3.144	0.618
Total	872	2.82	0.904

Table 12: Frequency of first term GPA for not retained and retained students

GPA	Not Retained Students	Retained Students
0 – 0.5	34 (8.5%)	2 (.4%)
.51-1.0	12 (3%)	1 (.2%)
1.10 – 1.5	19 (4.8%)	4 (.8%)
1.51 – 2.0	47 (11.8%)	14 (3%)
2.1-2.5	70 (17.5%)	48 (10.2%)
2.51-3.0	91 (22.8%)	106 (22.5%)
3.10-3.5	67 (16.8%)	141 (30%)
3.51-4.0	60 (15%)	156 (33%)
Total	400	472

The average transfer term GPA for the entire cohort was 2.90 (sd = .47). The earned cumulative GPA the semester previous to transferring out of GC differed significantly between those students who left the University and those who were retained ($F = 8.323, p = .004$). Table 13 displays the mean transfer GPA by retention group. This includes only students who had transferred out of GC.

Figure 3: Transfer GPA by retention group

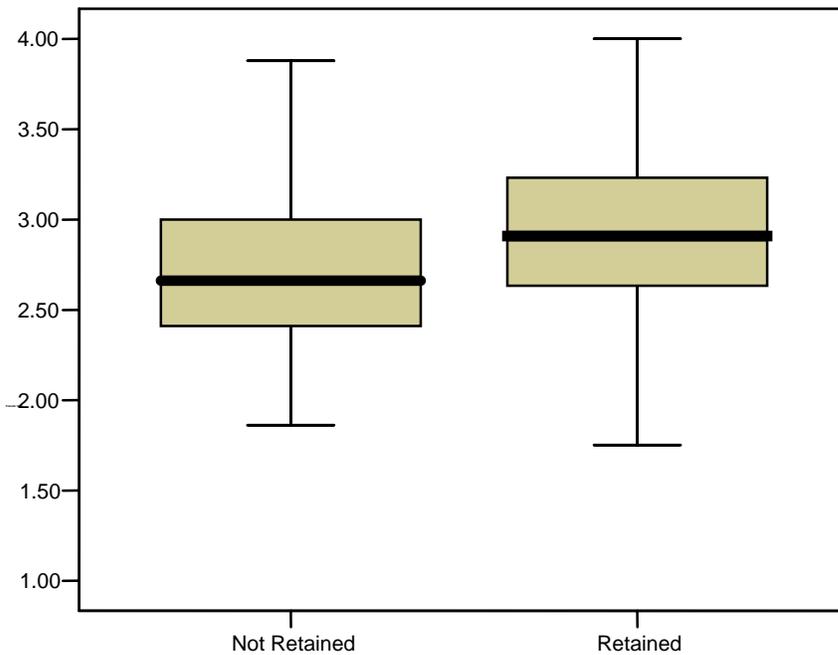


Figure 4: Transfer GPA by three persister groups

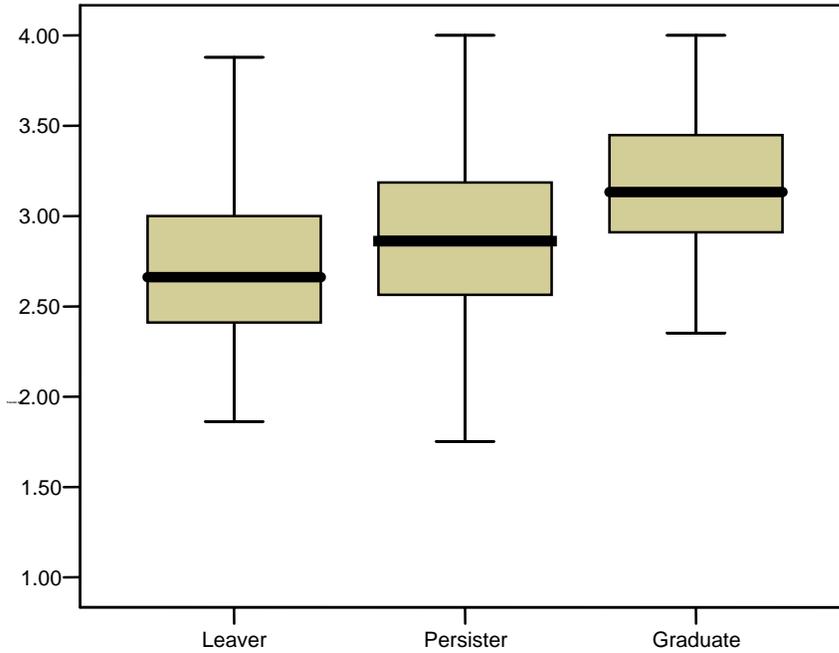


Table 13: Transfer term GPA by retention group

	N	GPA	Std Dev
Not Retained	69	2.75	0.46
Retained	442	2.92	0.46
Total	511	2.9	0.47

Because first term GPA is strongly associated with the retention group, we examined whether or not high school rank and composite ACT score would predict first term GPA. Table 14 displays the results of this analysis. Both predictors were significant, however the adjusted R squared was only .022, indicating that these variables do not predict a large portion of first term GPA.

Table 14: Relationships between high school rank, composite ACT, and first term GPA

	Unstandardized Coefficients		Standardized Coefficients	t-value	p-value
	B	Std. Error	Beta		
Constant	1.880	0.244		7.707	<.001
Composite ACT	0.026	0.009	0.101	2.748	0.006
High School Rank	0.009	0.002	0.140	3.784	<.001

Discussion

This report examined the rates of leavers, persisters, and graduates across various groups, and explored potential predictors of retention. The results found here are quite similar to previous cohorts.

For this cohort, retention did not differ significantly across gender. However, there was a difference for ethnic groups. An examination of the observed frequencies indicates that White students are leaving at a lower rate and graduating at a higher rate than the other ethnic groups. When broken down by gender and ethnicity, Asian males, Black females, American Indian males, and American Indian females stand out as groups who are at risk for leaving the University. Asian males appear to be leaving more often than the Asian females, and Black female are leaving more frequently than Black males. In a previous report we also found that Asian males from the 1999 cohort were more likely to leave than Asian females (Wambach et al., 2005). The higher rate of Black females leaving is a new finding. This should be examined in future cohorts to determine if this is an emerging trend.

Both ACT composite score and high school rank did not differ between students who were retained and not retained. However, the GPA earned in the first semester did differ for these two groups. This finding has been found in multiple studies (e.g. Wambach et al., 2005; Connor et al., 2005). Students who were retained tended to do quite well during their first semester, a small percentage earning less than 2.5. The GPA students earned prior to transferring also differed between the groups. This indicates that the academic performance of the student after they enter college may be more important in predicting who will leave the University than their academic performance previous to arrival. However, both ACT scores and high school rank did predict first term GPA.

References

Wambach, C., Franko, J., & Connor, J. (2005). *The General College 1999 cohort: Persistence and graduation five years after entrance*. Minneapolis, MN: General College University Of Minnesota.

Connor, J, Franko, J., and Wambach, C. (2005). *The General College 2000 cohort: Persistence and graduation four years after entrance*. Minneapolis, MN: General College University Of Minnesota.