UK Institutional Research Brief:
Characteristics of "High ACT-Low HS GPA" Students Based on Freshman Survey Data

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Most of our efforts to understand why students do not return for a second year of college have examined general characteristics of the entire freshman cohort or focused on students who are at-risk by virtue of their low standardized test scores. Relatively little attention has been given to students with average-to-high ACT scores who earn lackluster high school grades. To study students who meet this particular admission profile, the Office of Institutional Research assembled a data set that combined responses from Freshman Surveys for the past three cohorts and matched these against information contained in enrollment files for Fall 2007, Fall 2008, Fall 2009 and (preliminary) Fall 2010. Students were excluded from the analysis if they missed both ACT or SAT scores or presented ACT-HS GPA scores outside the selective admission requirements. Students in the selective admissions pool were divided into four groups based on their ACT and HS GPA scores: ACT 22 & above/HS GPA below 2.75; ACT 22 & above/HS GPA 2.76 - 2.99; ACT 20-21 /HS GPA above 3.0; and ACT 22 and above/HS GPA above 3.0.

Table 1: Retention Rates of Selected Freshman Groups

Freshman Groups from Cohorts 2007-2009	Frequency	Percent	Retention Rate
1- ACT 22 & above/GPA below 2.75 (Red)	116	2.98	75.0%
2 ACT 22 & above/GPA 2.76 - 2.99 (Yellow)	215	5.52	74.9%
3 ACT 20-21 /GPA above 3.0 (Green)	329	8.45	82.1%
4 ACT 22 and above/GPA above 3.0 (Green)	3232	83.04	88.7%

Note: Group colors correspond to selected cells from the admissions matrix in the appendix.

Table 1 reveals that Groups 1 (Red) and 2 (Yellow) constitute less than nine percent of the first-year cohort group *assembled on the basis of their Freshman Survey data*. Students in Group 1 achieved a high school GPA below 2.75, and freshmen in Group 2 presented a high school GPA between 2.76 and 2.99. The retention rates for these two groups, about 75%, are seven percentage-points lower than the rate for students in Group 3 who scored relatively low on the ACT, but earned high school GPAs above 3.0. Students in Groups 1 and 2 also have retention rates nearly 14 percentage-points below students with average-to-high ACT scores and high school GPAs above 3.0. These statistics reflect the fact that high school grades are a significantly better predictor of fall-to-fall retention rates than standardized test scores.   High school grades are based on academic achievement over four years rather than knowledge and skills displayed one morning on a standardized test. In addition, high school grades reflect students' motivation and discipline, qualities associated with collegiate success.

Differences in Student Characteristics by Group

In the following analyses, the four groups were compared in terms of their demographic backgrounds, high school experiences, selected personal information, and level of procrastination. Statistical analyses compared Group 1 (red) to Groups 3 and 4. Only those characteristics that are significantly different (p-value <0.05) are presented below.

Table 2: Demographic Information

	Group 1	Group 2	Group 3	Group 4
Percent Male	66%	66%	36%	48%
Percent KY Resident	60%	64%	77%	81%
Percent Non-White	14%	12%	15%	9%
Percent with at least one parent with a Master's, Ph.D, Ed.D M.D. or J.D.	41%	33%	26%	36%
Percent with Family Income>$100,000	56%	53%	38%	40%

Compared to Group 4 and Group 3, students from Group 1 (Red) were more likely to:

- be male
- be white
- be out-of-state residents
- have at least one parent with a Master's, Ph.D., Ed.D., M.D., or J.D.
- report a family income greater than $100,000

Table 3: High School Experiences

Question	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean
Q7b: Socializing/Partying	4.21	4.21	3.59	3.76
Q7i: Working for pay	4.16	3.93	3.80	3.35
Q8c: Came to class without completing assignments	2.21	2.10	1.74	1.77
Q8h: Turned in assignment late	2.07	1.94	1.52	1.55
Q8j: Felt bored in class	3.00	2.91	2.71	2.76
Q8o: Turned in assignment that did not reflect your best work	2.30	2.29	2.02	2.05

Q7 scale: 0-None to 7-over 20 hours; Q8 scale: 1-Never to 4-Very Often

Compared to Group 4 and Group 3, students from Group 1 (Red) were more likely to report:

- spending more time socializing/partying during a typical week
- working more hours for pay during a typical week

- being more disengaged in and out of the classroom (came to class without completing assignments, turning in assignments late, turning in assignments that did not reflect their best work)

Table 4: Selected Personal Information

Question	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean
Q6b: Drive to achieve	3.57	3.59	4.07	4.03
Q11f: Felt Unmotivated	2.71	2.72	2.28	2.50
Q11i: Felt out of control	2.02	1.95	1.65	1.69
Q9d: Serious illness or injury	23%	14%	18%	12%

Note: Note: Q6b scale: 1-Lowest 10% to 5-Highest 10%; Q9 format is 'Mark all that apply';
Q11 scale: 1-Never to 5-Always

Compared to Group 4 and Group 3, students from Group 1 (Red) were more likely to report:

- a lower need to achieve
- feeling unmotivated
- feeling out of control
- having a serious illness or injury during the past year

Table 5: Items from the Procrastination Scale

Question	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean
Q12b: Delay finishing jobs	2.96	2.97	2.47	2.73
q12f: When I have a deadline I wait until last minute	3.32	3.16	2.72	2.88
q12h: Keep putting off improving work habits	3.00	3.10	2.55	2.73
q12k: I promise myself I'll do something and then I drag my feet	3.06	3.04	2.58	2.73

Note: Likert Scale: 1-strongly disagree to 5-strongly agree

Compared to Group 4 and Group 3, students from Group 1 (Red) were more likely to report procrastination. They agreed more strongly with the following statements:

- 'When I have a deadline I wait until the last minute',
- 'I keep putting off improving my work habits'
- 'I promise myself I'll do something and then drag my feet'

Appendix: Admissions Matrix: Retention Rates by ACT Score and High School GPA

Table of RETENTION by OHSGPA and ACT/SAT for cohorts 2006 and 2007combined										
Official HS GPA	**Highest True Composite ACT/SAT**									
Enrolled Retention rate	missing	<=19	20	21	22	23-24	25-27	28-30	>=31	Total
missing	3	2	2	3	4	0	3	0	0	17
	100%	100%	50.00%	66.67%	50.00%		66.67%			
GPA<2.00	0	4	0	1	0	1	0	1	0	7
		50.00%		100%			100%	100%		
2.0<=GPS<2.25	1	17	9	15	9	13	10	2	0	76
	100%	35.29%	55.56%	46.67%	33.33%	30.77%	40%	100%		
2.25<=GPA<2.50	0	56	27	25	26	31	16	8	2	191
		44.64%	51.85%	44.00%	69.23%	58.06%	68.75%	62.50%	100%	
2.50<=GPA<2.75	1	105	52	62	65	86	50	16	1	438
	100%	66.67%	51.92%	62.90%	66.15%	63.95%	64.00%	75.00%	100%	
2.75<=GPA<3.00	1	135	72	85	97	145	94	34	3	666
	100%	62.96%	72.22%	64.71%	61.86%	70.34%	76.60%	64.71%	66.67%	
3.00<=GPA<3.25	0	175	97	133	134	232	167	49	8	995
		65.14%	69.07%	66.17%	76.12%	71.55%	74.85%	69.39%	62.50%	
3.25<=GPA<3.50	1	119	108	156	159	285	243	101	14	1186
	100%	62.18%	73.15%	71.15%	77.99%	76.49%	78.60%	75.25%	92.86%	
3.50<=GPA<3.75	1	96	102	156	168	318	335	180	52	1408
	100%	80.21%	75.49%	80.13%	85.12%	81.13%	84.18%	84.44%	82.69%	
3.75<=GPA<4.00	2	51	63	114	133	305	422	286	116	1492
	50%	76.47%	77.78%	78.07%	85.71%	85.90%	87.68%	89.51%	87.07%	
GPA>=4.00	1	18	20	34	57	190	370	470	317	1477
	100%	77.78%	85.00%	88.20%	87.70%	85.80%	87.80%	92.80%	96.20%	
Total	11	778	552	784	852	1606	1710	1147	513	7953