PENNSTATE

Office of Planning and Institutional Assessment

Completion Rates by Academic Ability and Ability to Pay

June 2006

Executive Summary

This report examines academic ability, ability to pay, and degree completion for bachelor's degree students at Penn State. Much research suggests that many factors affect the likelihood that undergraduate students will complete their degrees, but financial considerations are consistently near the top of the list. Therefore, this study asks the question: *How does the path to a Penn State degree compare for low-income students and high-income students of similar academic ability?*

Table 1 summarizes Office of Student Aid family income data for all students in Penn State's fall 1999 entering cohort who completed the Free Application for Federal Student Aid. As shown (and realizing that many of the students who do not complete the FAFSA are probably from higher-income families), 20 percent of these Penn State freshmen came from families with incomes of about $32,000 or less; 20 percent came from families with incomes of about $98,000 or more.

	Family Income
Lowest Quintile	$0 - $32,454
2nd Lowest Quintile	$32,471 - $53,343
Middle Quintile	$53,350 - $72,427
4th Quintile	$72,431 - $98,009
Highest Quintile	$98,013 - $1,028,997

Table 1. Family Income (from FAFSA; N=9,326)

Table 2 shows fall grade point averages for the entering cohort (these are basically first-semester GPAs; some students who started in the summer are also included, as explained in the report).

	Fall 1999 GPA
Lowest Quintile	0.00 – 2.29
2nd Lowest Quintile	2.30 – 2.79
Middle Quintile	2.80 – 3.14
4th Quintile	3.15 – 3.50
Highest Quintile	3.51 – 4.00

Table 2. Fall 1999 Grade Point Averages (N= 11,930)

Figure 1 is the keystone of this report. It maps graduation rates onto the high and low family income quintiles from Table 1 and the high and low GPA quintiles from Table 2. The resulting contrasts are pronounced. As shown, 89 percent of high-income, high-GPA students graduate within six years. That contrasts with the 72 percent graduation rate for low-income students of similar academic ability.

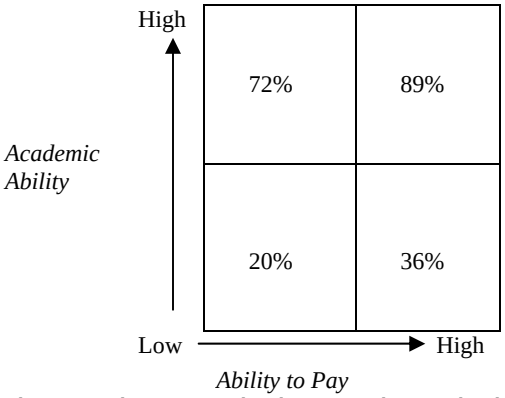

Figure 1. Six-Year Graduation Rates by Academic Ability and Ability to Pay

Similar patterns occur throughout the university, across levels of academic abilities and campus locations. The profile is more troubling at locations other than University Park; at the campuses, on average, 68 percent of high-GPA, low-income students – and only 13 percent of low-GPA, low-income students – completed degrees within six years.

Looking beyond graduation rates, we find that higher income students are not just more likely to graduate from Penn State; they tend to graduate more quickly. And we've looked at data from the National Student Clearinghouse showing that the majority of Penn State non-completers are not dropping out of higher education. The Clearinghouse database shows that 53 percent of Penn State's 3,306 non-completers from the 1999 entering cohort have enrolled in another college or university by spring 2006.

Analyses such as this can inform decisions about admissions, enrollments, financial aid, development, and the mix of need-based and merit-based aid – matters that are of great significance for higher education, for Penn State, and for the students and families we serve.

This report represents a cooperative effort. It would have been impossible without the support and active involvement of Anna Griswold, Penn State's Assistant Vice President for Undergraduate Education and Executive Director for Student Aid, and her staff. Questions about this analysis should be directed to Marianne Guidos or Michael J. Dooris in the Office of Planning and Institutional Assessment.

Completion Rates by Academic Ability and Ability to Pay

Introduction

In this report, we examine academic ability, ability to pay, and degree completion for Penn State's Fall 1999 entering cohort of 11,930 first-time, full-time baccalaureate students.

A considerable body of research suggests that many factors – high school GPA, standardized test scores, residence on- or off-campus, study skills, and so on – relate to the likelihood that undergraduate students will complete their degrees. Because financial considerations are consistently at or near the top of the list, this report focuses on the extent to which ability to pay relates to academic success. Plainly put, we are interested in questions such as: *How does the path to a Penn State degree compare for low-income students and high-income students of similar ability?*

The increasing focus at both the national and state levels on the affordability of higher education and how that relates to accessibility and degree completion[1] have put rising tuition costs at the forefront of student, parent and educator concerns. Although the level of student financial aid has risen, the changing mix of aid (grants versus loans, and merit-based versus need-based) along with inexorably rising tuition rates have forced many students to consider difficult alternatives for their college educations. A marker of this challenge is the debt our students incur. According to Penn State Office of Student Aid's estimates, 2004-05 graduating seniors carried an average student debt of $22,420; the average debt including parents' loans was $28,426 (Penn State Office of Student Aid, 2006).

This report explores how students' ability to pay connects to their paths toward a degree. We have chosen to focus on ability to pay, academic ability, and degree completion – and to structure the analysis in the way we have – for good reason.

It makes obvious sense to look hard at degree completion. As Bowen, Kurzweil, and Tobin (2005, p. 92) pointed out in their book *Equity and Excellence in American Higher Education*, "Policies that encourage enrollment ('access') for all but then fail to provide the guidance and resources that allow students to translate participation into timely attainment – especially students who come from lower-income families – are in many ways a waste of both public and personal resources."

Overall, in comparison to other research universities, Penn State enjoys strong completion rates. Penn State's six-year graduation rates of 66 percent for all locations and 84 percent for University Park compare favorably to the national average of 63 percent for peer universities (specifically for public doctoral research extensive universities, per U.S. Department of Education data cited in *The Chronicle Almanac*, 2005-06). However, overall averages for Penn State or any other large university can mask disparities among students from, for example, different racial, ethnic, or socioeconomic backgrounds. This report shows considerable variation in average attrition rates among Penn State locations; even at University Park, the overall high average graduation rate camouflages patterns that differ substantially for students from disparate socioeconomic strata.

This report examines degree completion in relation to academic ability and ability to pay because those dimensions are of great practical interest. We acknowledge that the interactions among family income, college attendance, choice, and completion are complex, and that they inter-relate with many other variables such as student motivation, parental education, ethnicity, and so on. For example, it is known that nationally Hispanic students generally have markedly lower graduation rates and take longer to graduate (*The Chronicle Almanac*, 2005-06) than students in general. In fact, if this study were focusing on Hispanic students, it would probably be more appropriate to use an eight- to ten-year graduation rate. In short, a research study of all of the potential influences on all aspects of student performance is beyond the scope of this report. In any case, there is a good argument to be made that such an analysis is not necessary to gain useful practical insight into the pragmatic questions in which we are interested.

William Bowen and his colleagues recently noted that economists and other social scientists have demonstrated the difficulty of empirically disentangling the direct effects of finances from the "myriad inter-connected, deep-seated,

[1] *A Rising Tide: The State of Higher Education in the Commonwealth of Pennsylvania* (The Learning Alliance for Higher Education at the University of Pennsylvania), reports from *A National Dialogue: The Secretary of Education's Commission on the Future of Higher Education* (http://www.ed.gov/about/bdscomm/list/hiedfuture/reports.html), and *Equity and Excellence in American Higher Education* (William G. Bowen, Martin A. Kurzweil, and Eugene M. Tobin).

and long-lasting effects of socioeconomic status" (Bowen, Kurzweil & Tobin, 2005, p. 91). The 2005 analysis by Bowen et al. of 19 of the nation's selective colleges and universities (including Penn State) returns repeatedly to the theme of how outcomes differ according to the academic ability and socioeconomic status of students. Those researchers found that in the selective institutions they studied, students from low-income families are disadvantaged, but only to a relatively small extent, in the various phases of higher education (that is, from application to admission to enrollment and through graduation). Those findings almost certainly reflect the fact that their 19-institution dataset included five Ivy League universities and ten top-tier private colleges such as Smith and Williams; those are institutions with unusually rich resources not available to most colleges and universities. In fact, the Bowen researchers did note that differences relating to family income are greater for students at public schools such as Penn State than at elite, wealthy private schools.

Bowen and his colleagues concluded that family income had less effect than they expected on admissions, academic performance and graduation rates, but that the "controlling reality" is that participation in the top rung of American higher education does depend partly on socioeconomic status (Bowen, Kurzweil & Tobin, 2005, pp. 135-136).

While the book by Bowen et al. deliberately focused on access and equity in selective institutions, Thomas Mortensen's *Postsecondary Education OPPORTUNITY* looks more broadly across American education in total. He does this mostly via comprehensive analyses of large national datasets compiled by the U.S. Census Bureau and the National Center for Education Statistics. Mortensen's results over many years have convincingly illustrated that at every stage along the track to a bachelor's degree, "family income plays a strong, positive role" (see, for example, "The Track to a Bachelor's Degree from College," 2001, p.1).

Likewise, the ACT has recently completed a major research project combining original research and meta-analyses of other studies; the goal was to identify the role of academic and non-academic factors in improving college retention. The ACT project drew on a large body of both qualitative and quantitative research – encompassing surveys of perceptions of students and administrators, and the analysis of objective data on the characteristics of applicants and college students – to identify the many important factors that relate to undergraduate student retention and graduation. Those studies found, as expected, a long list of relevant factors: high school GPA, high school class rank, standardized test scores, individual study skills, perceptions of the quality of teaching, remediation needed by students, remediation offered by institutions, willingness of students to participate in academic counseling, the availability of advising and counseling, participation in co-curricular activities, gender, race and ethnicity, residence on- or off-campus, and more. However, the ACT researchers state that in both their own research and in their analysis of the work of other researchers, "financial variables are consistently at or near the top of the list of factors" (Noble et al., 2006).

The linchpin of this report is our mapping of graduation rates against family income and first-semester GPA. If anything, our approach probably understates the extent to which lower income students are disadvantaged. To the degree that low-income students' first-semester GPAs suffer because of the need to work, their true academic ability is understated in comparison to equally talented high-income students who do not need to hold down jobs.

Much more could be said on the topic, but the point for this paper is actually pretty simple. There is little doubt that questions around affordability and ability to pay are critical, and the analysis presented here reflects important themes of broader national studies and conversations. These matters are of great significance for higher education, for Penn State, and for the students and families we serve.

Methodology

The cohort we studied includes 11,930 baccalaureate students who began at Penn State at any campus in the fall 1999 semester as full-time students. Included are 1,550 students who had enrolled for the first time in the summer 1999 semester and continued on as full-time students in fall 1999. The cohort was tracked through summer 2005 to determine six-year graduation rates. Only students who completed a bachelor's degree at Penn State, regardless of their initial or final campus, were counted as completers.

For the total cohort, the six-year graduation rate was 66 percent. But there was large variation by campus, ranging from 84 percent at University Park to 38 percent at Penn State Shenango, with a 54 percent average for locations other than University Park. Because they seem to fall into three natural clusters (rather than just University Park and other campuses), we present data for three groups: University Park; the five campuses with graduation rates greater than 54 percent, and the thirteen campuses with graduation rates below 54 percent. (Appendix A lists the campuses and six-year graduation rates for each campus.)

The two dimensions of interest here are academic ability, as measured by fall 1999 semester cumulative grade point average, and ability to pay, measured by family income. Numerous retention and degree attainment studies in the past have found that first-semester and first-year grades play a significant part in explaining degree completion (Adelman, 2006; Desjardins, Kim & Rzonca, 2003; Reason, 2003). In this report, we use cumulative GPA from the fall 1999 semester rather than first-year grades because 589 students in the cohort did not return to Penn State for a second semester, and we did not want to lose their data. A disproportionate number of these non-returning students (N=303) were from the campuses with below-average graduation rates, making data on these students especially meaningful and valuable.

Table 3 shows Fall 1999 grade point average quintiles for each location. Overall, University Park students earned higher grades: the upper limit for the lowest grade point average quintile at University Park was 2.59, but less than 2.0 for the campuses with below average graduation rates.

	Total University	University Park	Non-University Park	Campus with Above Average Graduation Rate	Campus with Below Average Graduation Rate
Lowest GPA Quintile	0.00 – 2.29	0.00 – 2.59	0.00 – 2.07	0.00 – 2.16	0.00 – 1.98
2nd Lowest Quintile	2.30 – 2.79	2.60 – 2.97	2.08 – 2.63	2.17 – 2.67	2.00-2.59
Mid-GPA Quintile	2.80 – 3.14	2.98 – 3.26	2.64 – 3.03	2.68 – 3.06	2.60 – 3.00
2nd Highest Quintile	3.15 – 3.50	3.27 – 3.56	3.04 – 3.43	3.07 – 3.45	3.01 – 3.41
Highest Quintile	3.51 – 4.00	3.57 – 4.00	3.44 – 4.00	3.46 – 4.00	3.42 – 4.00

Table 3. Grade Point Averages for Summer-Fall 1999 Entering Cohorts.

Table 4 summarizes family income data from Penn State's Office of Student Aid, based on the processing results of the Free Application for Federal Student Aid (FAFSA) used to determine eligibility for federal student aid during one school year. Income quintiles were derived for each location cluster.

	Total University	University Park	Non-University Park	Campus with Above Average Graduation Rate	Campus with Below Average Graduation Rate
Lowest Income Quintile	$0 - $32,454	$0 - $40,453	$0 - $28,230	$0 - $31,611	$0 - $26,630
2nd Lowest Income	$32,471 - $53,343	$40,486 - $66,409	$28,838 - $47,667	$31,648 - $49,638	$26,654 - $45,291
Middle Income Quintile	$53,350 - $72,427	$66,451 - $88,493	$47,671 - $ 63,814	$49,657 - $66,151	$45,299 - $61,327
2nd Highest Income	$72,431 - $98,009	$88,589 - $115,800	$63,837 - $84, 208	$66,212 - $87,093	$61,342 - $80,978
Highest Income Quintile	$98,013 - $1,028,997	$116,000 - $771,170	$84,226 - $1,028,997	$87,293 - $1,028,997	$81,000 - $551,261

Table 4. Family Income (from FAFSA; N=9,326)

Income levels were generally higher at University Park, with the lowest income levels at the thirteen campuses with below-average graduation rates. The Office of Student Aid was able to provide income data for the 9,326 students who completed the FAFSA form. As shown in Table 4 (and realizing that many of the students who do not complete the FAFSA are probably from higher-income families), the lowest 20 percent of these Penn State freshmen came from families with incomes of about $32,000 or less; the highest 20 percent came from families with incomes of about $98,000 or more.

Degree Completion

As shown in Figure 2, by the beginning of the fall 2005 semester, 66 percent of the 11,930 students in the 1999 entering cohort had graduated with a baccalaureate degree from Penn State. Students who started at University Park had the highest completion rate at 84 percent. Students starting at campuses other than University Park graduated at an average rate of 54 percent. Completion rates varied widely at these other eighteen campuses: the lowest rate of completion was 38 percent and the highest was 67 percent. As already noted, for the campus data we analyzed the campuses seemed to fall into three natural clusters (rather than just University Park and other campuses), so Figure 2 groups campus degree completion rates as follows: 1) University Park; 2) the five campuses with above average graduation rates (Altoona, Behrend, Berks, Hazelton and Schuylkill); and 3) the thirteen campuses with below

average graduation rates (Abington, Beaver, Delaware County, Dubois, Fayette, Lehigh Valley, McKeesport, Mont Alto, New Kensington, Shenango, Wilkes-Barre, Worthington Scranton, and York).

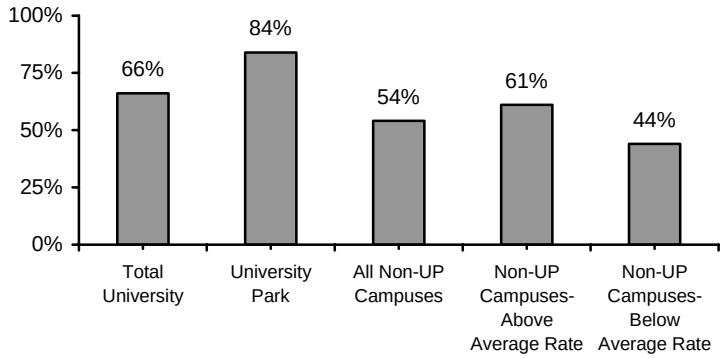

Figure 2. Six-Year Graduation Rates, Fall 1999 Entering Cohort

Degree Completion by Income

Are income levels related to completion? A cursory look shows that a greater proportion of higher income students graduate within six years. As shown in Table 5, just over half of the students in the lowest income quintile graduated within six years compared to 71 percent of students in the highest quintile.

INCOME LEVEL	# Students	% Graduating
Income Not Reported	2,604	73.1%
Lowest Quintile	1,864	54.4%
Second Lowest Quintile	1,866	63.8%
Middle Quintile	1,865	65.7%
Second Highest Quintile	1,866	67.9%
Highest Quintile	1,865	71.0%
Total	11,930	66.4%

Table 5. Six-Year Degree Completion by Household Income, Fall 1999 Cohort (all locations)

Degree Completion, Academic Ability, and Ability to Pay

Figure 3 is the keystone of this report. It maps graduation rates onto the high and low family income quintiles from Table 3 and the high and low GPA quintiles from Table 4. The resulting contrasts are pronounced. As shown, 89 percent of high-income, high-GPA students graduate within six years. That contrasts with the 72 percent graduation rate for low-income students of similarly high academic ability.

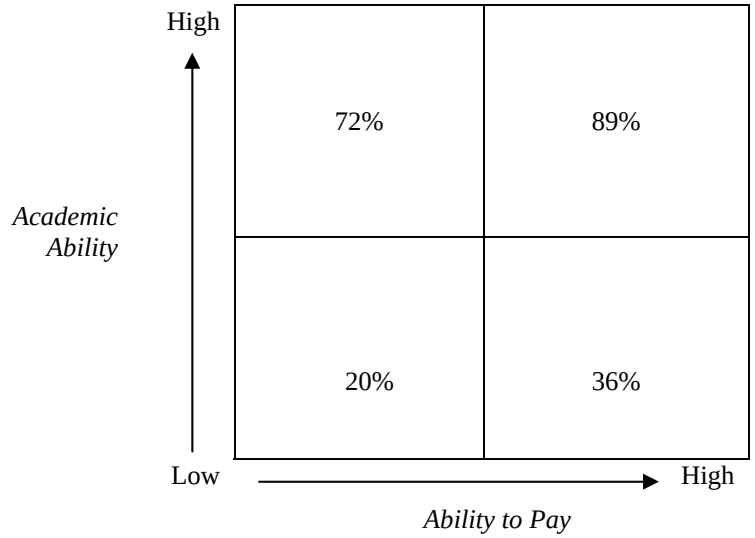

Figure 3. Six-Year Graduation Rates by Academic Ability and Ability to Pay

Table 6, which breaks out the detail highlighted in Figure 3, shows that lower-income students consistently trail higher-income students. Across Penn State, low-income students are typically about 10 to 20 percent less likely to earn a degree than high-income students of similar academic ability.

These figures probably under-estimate the difficulties that low-income students face. For example, if low-income students' first-semester GPAs suffer because those students need to work long hours, this methodology understates their true academic potential relative to equally talented students who do *not* need to hold down jobs.

Within each GPA quintile, students at the lowest income level were less likely to graduate within six years than students at higher income levels. In many instances, the difference by income level is striking. For example, for students in the lowest GPA quintile at University Park (earning a GPA of 2.59 or below), 45 percent of those from low-income families graduated within six years compared to 72 percent of those from high-income families.

Table 6 shows that the situation for low-income students is even tougher at locations other than University Park. At the campuses, on average, 68 percent of high-GPA, low-income students – and only 13 percent of low-GPA, low-income students – completed a baccalaureate degree within six years.

As noted above, in the data we analyzed, the campuses seemed to fall into three natural groupings. So again, rather than just presenting information for University Park and all other campuses, Table 6 clusters five campuses with graduation rates above the average for all campuses and 13 campuses with graduation rates below the average for all campuses. For the latter 13 campuses in particular, the odds are against students of moderate to low GPAs who come from lower-income families.

Location	Fall 99 GPA Quintile Within Location Type	Lowest Income Quintile	2nd Lowest Income	Mid Income Quintile	2nd Highest Income	Highest Income Quintile	#[a] of Students
University Park	Lowest GPA Quintile (0 – 2.59)	45%	60%	64%	66%	72%	778
	2nd Lowest GPA (2.60 – 2.97)	77%	85%	88%	90%	90%	740
	Mid-GPA Quintile (2.98 – 3.26)	79%	89%	94%	91%	93%	729
	2nd Highest GPA (3.27 – 3.56)	89%	92%	95%	88%	92%	718
	Highest GPA (3.57 and higher)	84%	91%	93%	92%	95%	717
	TOTAL	736	737	736	737	736	3,682
Non-University Park	Lowest GPA Quintile (0 – 2.07)	13%	18%	17%	18%	24%	1,144
	2nd Lowest GPA (2.08 – 2.63)	33%	46%	46%	46%	50%	1,118
	Mid-GPA Quintile (2.64 – 3.03)	57%	56%	59%	61%	67%	1,138
	2nd Highest GPA (3.04 – 3.43)	58%	66%	60%	69%	74%	1,110
	Highest GPA (3.44 and higher)	68%	71%	77%	79%	80%	1,134
	TOTAL	1,128	1,129	1,129	1,129	1,129	5,644
Campus with Above Average Graduation Rate[b]	Lowest GPA Quintile (0 – 2.16)	14%	29%	27%	24%	38%	555
	2nd Lowest GPA (2.17 – 2.67)	45%	53%	57%	52%	60%	561
	Mid-GPA Quintile (2.68 – 3.06)	64%	67%	68%	68%	77%	578
	2nd Highest GPA (3.07 – 3.45)	71%	72%	68%	80%	80%	560
	Highest GPA (3.46 and higher)	80%	77%	83%	83%	87%	556
	TOTAL	562	562	562	562	562	2,810
Campus with Below Average Graduation Rate[c]	Lowest GPA Quintile (0 – 1.98)	10%	13%	8%	12%	13%	575
	2nd Lowest GPA (2.00-2.59)	28%	32%	32%	41%	37%	585
	Mid-GPA Quintile (2.60 – 3.00)	53%	46%	49%	54%	56%	574
	2nd Highest GPA (3.01 – 3.41)	48%	57%	54%	56%	69%	537
	Highest GPA (3.42 and higher)	55%	64%	70%	77%	70%	563
	TOTAL	566	567	567	567	567	2,834
Total	Lowest GPA Quintile (0 – 2.29)	20%	29%	26%	32%	36%	1,941
	2nd Lowest GPA (2.30 – 2.79)	54%	56%	57%	70%	74%	1,874
	Mid-GPA Quintile (2.80 – 3.14)	65%	69%	69%	77%	85%	1,844
	2nd Highest GPA (3.15 – 3.50)	70%	74%	78%	83%	88%	1,858
	Highest GPA (3.51 and higher)	72%	77%	85%	87%	89%	1,809
	TOTAL	1,865	1,865	1,866	1,866	1,864	9,326

a/ Income levels are not available for 2,604 students in the cohort and they are not included in this table.
b/ Campuses with above average graduation rates are: Altoona, Behrend, Berks, Hazleton, and Schuylkill.
c/ Campuses with below average graduation rates are: Abington, Beaver, Delaware County, Dubois, Fayette, Lehigh Valley, McKeesport, Mont Alto, New Kensington, Shenango, Wilkes-Barre, Worthington Scranton, and York.

Table 6. Six-Year Graduation Rates by Fall 1999 GPA and Income Quintile[a]

Time to Graduation

As Table 7 shows, Penn State students at higher income levels tend to complete degrees faster than do students at lower income levels. (Because this study was built around six-year graduation rates, Table 7 only looks at graduation through the six-year period.) Within groupings of similar academic ability, students were more likely to graduate within four years if they came from a high-income household. For example, of the students in the highest GPA group, 58 percent of those from the lowest income quintile finished within four years, compared to 65 percent of those from the highest income quintile.

	Years to Graduation	Lowest Income Quintile	2nd Lowest Quintile	Mid Income Quintile	2nd Highest Quintile	Highest Income Quintile
Lowest GPA Quintile	Four Years	40%	42%	36%	43%	45%
	Five Years	47%	42%	47%	46%	50%
	Six Years	13%	16%	17%	10%	5%
	Total Graduates	137	146	125	115	141
2nd Lowest GPA	Four Years	44%	41%	49%	56%	54%
	Five Years	47%	50%	43%	36%	41%
	Six Years	10%	9%	8%	8%	4%
	Total Graduates	199	229	231	227	249
Middle GPA Quintile	Four Years	46%	57%	53%	57%	57%
	Five Years	46%	36%	43%	38%	39%
	Six Years	8%	7%	4%	5%	4%
	Total Graduates	249	254	271	272	299
2nd Highest GPA	Four Years	58%	55%	64%	62%	67%
	Five Years	36%	39%	32%	32%	29%
	Six Years	6%	7%	4%	6%	4%
	Total Graduates	217	275	281	298	310
Highest GPA Quintile	Four Years	58%	62%	66%	72%	65%
	Five Years	36%	33%	31%	25%	32%
	Six Years	6%	5%	4%	3%	2%
	Total Graduates	211	287	317	355	325

Table 7. Time to Graduation (for Students Who Graduated within Six Years) – All Locations

Other research is consistent with, and helps explain, the picture that Table 7 paints. In King's analysis of national patterns, low-income students relied mainly on financial aid, wages and part-time enrollment and less on borrowing to cover the costs of tuition. King also found that "Low-income students who borrowed and worked part time were far more likely to attend on a full-time/full-year basis" (King, 2002, p.25). Low-income students may thus put themselves at a disadvantage by working more, enrolling part-time, and taking longer to manage the costs of their higher education.

Non-Completers and Subsequent Enrollment at Other Institutions

Determining all the reasons why students applied to and enrolled at Penn State but left before earning a degree is beyond the scope of this report. But we have explored whether students who left Penn State continued their education at other institutions, and how income levels and academic ability related to those enrollment patterns.

The National Student Clearinghouse is a comprehensive database of students enrolled at over 2,800 colleges and universities. At the time of this study, participating two-year and four-year colleges and universities, along with other trade and vocational institutions, enroll 91 percent of the students in higher education in the United States. The Clearinghouse provides information on whether students who left Penn State subsequently attended other institutions of higher education.

Table 8, which is based on those Clearinghouse data, shows that 53 percent of the Penn State non-completers had in fact enrolled at another institution by fall 2005. So one powerful bit of information from the Clearinghouse is that at least half of the Penn State non-completers are *not* dropping out of higher education.

Further, these data provide further evidence that income matters. Within each level of academic ability, greater proportions of higher income students re-enrolled at other institutions than did lower income students. Overall, 61 percent of the students at the highest income level enrolled at another school compared to 43 percent of those at the lowest income level.

	Lowest Income Quintile		2nd Lowest Income Quintile		Mid Income Level Quintile		2nd Highest Income Quintile		Highest Income Quintile		TOTAL
Fall 1999 GPA Quintile	# Non-completers	Total % Enrolled Elsewhere	# Non-completes	Total % Enrolled Elsewhere	# Non-completes	Total % Enrolled Elsewhere	# Non-completes	Total % Enrolled Elsewhere	# Non-completes	Total % Enrolled Elsewhere	# Non-completes
Lowest GPA	388	43%	234	49%	234	53%	203	54%	185	62%	1,244
2nd Lowest	172	36%	149	48%	149	44%	144	41%	137	62%	751
Mid-GPA	131	44%	114	52%	99	55%	102	47%	90	56%	536
2nd Highest	84	48%	96	59%	92	61%	90	58%	72	54%	434
Highest GPA	76	58%	82	62%	66	70%	60	72%	57	74%	341
TOTAL	851	43%	675	52%	640	54%	599	52%	541	61%	3,306

a/ Income levels are not available for 701 students who did not complete degrees; they are not included in this table.

Table 8. Enrollment Rates at Other Colleges and Universities for Penn State Non-Completers[a]

Table 9 shows that lower-income students who were Penn State non-completers tended, disproportionately, to re-enroll in two-year schools. This may be because the tuition costs were lower at these schools; many of the two-year schools at which students enrolled were community colleges.

	Lowest Income Level	2nd Lowest Income	Mid Income Level	2nd Highest Income	Highest Income Level
Lowest GPA Quintile	72%	54%	62%	62%	72%
2nd Lowest GPA	35%	48%	46%	42%	33%
Mid-GPA Quintile	28%	29%	20%	27%	22%
2nd Highest GPA	33%	21%	27%	21%	8%
Highest GPA Quintile	18%	12%	20%	9%	10%

a/ Income levels are not available for 701 students who did not complete degrees; they are not included in this table.

Table 9. Penn State Non-Completers Who Enrolled at Other Higher Education Institutions: % Enrolled at Two-Year Schools

The theme is consistent. Income appears to relate to the likelihood that students will complete a Penn State degree, to whether Penn State non-completers move on to continue their educations at another institution, and to the type of institution in which those individuals subsequently enroll.

Conclusions

Public higher education in the Commonwealth is expensive; nothing in this report is going to change that reality for Penn State, or for any public college or university in Pennsylvania.

A recent policy report on the current state of higher education in the Commonwealth, produced by The Learning Alliance for Higher Education at the University of Pennsylvania (April 2006), analyzed participation, completion, price, and public perceptions of colleges and universities. Those researchers concluded that higher education in Pennsylvania is expensive but affordable. In their view, the message is essentially positive, and it "ought to give pause to those who believe American higher education has a cost crisis or that the tuitions that colleges and universities charge are thwarting the opportunities of young people in large numbers" (p. 39). They wrote that "higher education in Pennsylvania is largely a success story" and that public higher education in the Commonwealth is "largely effective" in terms of participation and degree completion (pp. 6-7).

Our view, based on the Penn State data analyzed in this study, is similar in many respects. Penn State is a success story for many thousands of students. The numbers in this report do not indicate that Penn State faces a crisis, or that the high tuition charged by Penn State is precluding most or many of our students from earning a degree. In fact, Penn State stands out for its unusually high graduation rates. In general, and for most of our students, Penn State does a remarkable job.

On the other hand, the data in this report do not support a view that there is no problem at all. There are strong indications that a particular segment of students – those from lower-income families – may be disadvantaged in completing their Penn State degrees.

Put another way, our analysis leads us to question the implicit assumption that because someone enrolls in a college or university, he or she can afford it. There are signals in our data suggesting that this is probably not true for a subset – a minority, but nonetheless, an important cohort – of Penn State students.

We do not want to step beyond the evidence. But it does appear clear that, for whatever reason, there are important differences in the path to a bachelor's degree for Penn State students of equivalent academic ability who come from families of different income levels. Low-income Penn State students may be disadvantaged in substantive ways by their families' inability to pay for college, by the burden of work, and by the pressure of substantial loans.

This is, of course, a problem for higher education nationally. As reported in *The Chronicle of Higher Education* (Leubsdorf, 2006), many students at four-year public colleges and universities face a gap between their ability to pay for college and the cost of attending, even with money from financial aid, and the gap is largest for students from lower-income families. Sixty-three percent of students do not have enough money – from their family's expected contribution plus financial aid – to cover tuition and other expenses of attending college (those figures are based on data from a national 2003-04 survey of colleges and universities by the National Center for Education Statistics). The same report looked at students who do have enough money to pay for college yet receive financial aid anyway, noting that students from upper-income families, earning an average of $89,400 a year, had $3,400 more than necessary to pay for college without loans and $6,000 with loans. In other words, nationally, many students are not having their financial need met, while many are receiving aid but really do not have need.

Penn State, like other public universities, will of course continue to address these challenges. It is our hope that this report can help inform the university's decisions about admissions, enrollments, financial aid, development, and the mix of need-based and merit-based aid. These are substantive questions on matters of great significance for higher education, for Penn State, and for the students and families we serve.

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Appendix A – Fall 1999 Cohort Six-Year Graduation Rates by Campus[a]

Campus	# Students	6-Year Graduation Rate	Campus Type
Shenango	64	37.5%	Below Average Graduation Rate
Delaware County	480	37.7%	Below Average Graduation Rate
Worthington Scranton	261	38.3%	Below Average Graduation Rate
York	266	38.7%	Below Average Graduation Rate
Beaver	263	44.9%	Below Average Graduation Rate
Lehigh Valley	180	45.0%	Below Average Graduation Rate
DuBois	133	45.1%	Below Average Graduation Rate
Mont Alto	257	47.1%	Below Average Graduation Rate
Abington	777	47.4%	Below Average Graduation Rate
Fayette	134	48.5%	Below Average Graduation Rate
Wilkes-Barre	213	50.7%	Below Average Graduation Rate
McKeesport	285	51.6%	Below Average Graduation Rate
New Kensington	163	52.1%	Below Average Graduation Rate
Schuylkill	204	54.9%	Above Average Graduation Rate
Hazleton	506	57.5%	Above Average Graduation Rate
Berks	698	57.7%	Above Average Graduation Rate
Altoona	1,171	65.4%	Above Average Graduation Rate
Erie	817	67.0%	Above Average Graduation Rate
Campus Total	6,872	53.6%	
University Park	5,058	84.1%	

[a/] Penn State – Harrisburg is not included in this table because no first-time students were enrolled at the campus in Fall 1999.