



# **ACCESS AND SUCCESS – APPALACHIAN OHIO**

Report 3: Analysis of Spring 2008 Surveys and  
Selected Secondary Data Sources

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*Prepared by: Voinovich School of Leadership and Public Affairs, Ohio University*

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## EXECUTIVE SUMMARY

This document is the third in a series of four reports examining college access and retention for students in Appalachian Ohio. The results presented here are from surveys conducted in the spring of 2008 with high school seniors, their parents, high school counselors, and college students. Where possible, the 2008 data are compared to that of the 1992 *Access and Success* report. Also, similar to the previous two reports, this report continues the analysis of the wealth of data collected by the Ohio Board of Regents. Findings from this portion of the two-year research project include:

**More seniors from the class of 2008 plan to attend college right after high school than their counterparts in 1992.** Seniors from 25 high schools across Appalachian Ohio were asked this question in both the fall and late spring of their senior year, and the findings remained constant. Approximately 80 percent of the Appalachian Ohio high school seniors surveyed plan to go on to some form of postsecondary education right after high school, as compared to 65 percent in 1992.

**The actual college-going rate of Appalachian Ohio students has increased since 1992, but is still lower than the college going rate in the rest of the state.** Appalachian Ohio college students are just as likely to persist from their first to second year of college as students in the rest of the state. The persistence rates between non-Appalachian and Appalachian students remain similar, even for first generation college students. Appalachian Ohio high school graduates are more likely to delay enrollment in college than students in the rest of the state.

**Persistence to a baccalaureate degree is lower for Appalachian Ohio students than for their non-Appalachian counterparts. However, persistence to an associate's degree is higher for Appalachian Ohio students than for the rest of the state.**

**Finances and the lack of information about financial aid options and procedures have increased as barriers to higher education since 1992.**

- A higher percentage of 2008 high school seniors report lack of finances as one of their top barriers to higher education than in 1992.
- The percentage of 12<sup>th</sup> graders reporting lack of finances as a barrier increased 16 percentage points between the fall survey and the spring survey. As students approached graduation, began the application and financial aid processes, lack of finances became a major problem for more high school seniors.
- One in four high school seniors who planned to go on to higher education immediately after graduating from high school had not completed the Free Application for Federal Student Aid (FAFSA) as of April/May of their senior year.
- A higher percentage of 12<sup>th</sup> graders in 2008 reported that they could not afford college, as compared to the 1992 sample.
- Over 80 percent of parents surveyed reported lack of finances as a major barrier to their child continuing their education. The same percentage of school counselors reported that money was the primary obstacle facing Appalachian high school students and their parents when thinking about postsecondary education.

- School counselors stressed that many parents are unsure about how to navigate college financing and are often overwhelmed by the process.
- More than a third of all parents surveyed had not taken any steps to help finance their high school senior's postsecondary education. Among families making less than \$40,000 per year, 62 percent had not taken any steps to help finance their child's education.
- According to data from the Ohio Board of Regents Higher Education Information System, on average, expected family contributions appear to be 46 percent higher for parents of Non-Appalachian Ohio students than for their Appalachian peers.
- College students from Appalachian Ohio ranked lack of finances as the number one problem or difficulty they faced regarding college.
- High school students estimated that loans would account for the largest share of their college expenses; college students from Appalachian Ohio reported that loans comprised the largest share of their college expenses.

**There still exists a gap in aspiration to attend college right after high school between students whose parents have no college experience, as compared to those with at least one parent having attended college.** However, this gap is narrowed for students who participated in college access program in high school.

**A higher percentage of 2008 high school seniors planned to attend a college within 50 miles of home, as compared to the 1992 sample.** This finding was echoed in the parent and school counselor surveys. Also, a lower percentage of 2008 seniors were undecided about where they would attend as compared to 1992, indicated more thoughtful intentions to pursue higher education.

## ACKNOWLEDGEMENTS

Many people were crucial to the success of this portion of the *Access and Success – Appalachian Ohio* study, and we continue to be grateful for their support and assistance. This large survey, conducted in 25 high schools across a significant portion of the state of Ohio, would not have been completed without the many hours and miles contributed by staff at the Ohio Appalachian Center for Higher Education and Ohio College Tech Prep. These organizations shouldered most of the burden of collecting consent forms and administering surveys. We cannot thank them enough. Our goal was to “catch” the high school senior class of 2008 as close to spring graduation as possible. This meant surveying the high schools in a very compressed timeframe in April and May. We acknowledge that hard work and thank the survey crew!

Ohio University acknowledges and very much appreciates the vision and support provided throughout this ongoing project by of all four partner organizations: the **Ohio Appalachian Center for Higher Education**, the **Ohio Board of Regents**, the **Ohio College Access Network**, and the **Ohio College Tech Prep Program**.

Thanks to all who completed our surveys and interviews, including parents of high school students, and students at Ohio University and at the

University of Cincinnati. A very special thanks goes to the participating school districts, high school principals, school counselors, teachers, and project coordinators who allowed us into their schools and helped us to collect consent forms and conduct the survey. We are keenly aware of the multiple demands on their time and on students’ attention. School counselors provided even more time and valuable insights as they participated in interviews and surveys.

We especially thank the class of 2008 – the high school seniors from Appalachian Ohio who completed our fall and spring surveys. It was truly a privilege to get the rare experience to ask more than 1,200 high school seniors in our region questions about their future plans and what has influenced them up to now. We look forward to connecting with them again during their first year of college or work.

Project staff at Ohio University’s VOINOVICH SCHOOL OF LEADERSHIP AND PUBLIC AFFAIRS for this portion of the Access and Success study included Marsha S. Lewis, Anirudh V.S. Ruhil, Nicole R. Yandell, and Lesli K. Johnson. Ohio University students Holly Craycraft, Trevor Glew, and Mayla Puckett were an integral part of this project team.



## INTRODUCTION

For over two decades, researchers have benefitted from the increasing availability of carefully developed longitudinal databases developed and maintained by the National Center for Education Statistics (NCES), a center under the auspices of the U.S. Department of Education's Institute of Education Sciences (IES). These databases have evolved through the years and are capable of answering a host of questions, including two of critical interest to postsecondary research: What factors predict whether (1) a student graduating from high school will access postsecondary education, and (2) whether this student will complete a postsecondary degree program or certificate. Choy (2002)<sup>1</sup> highlights the key discoveries resulting from work on these databases:

- The likelihood of a student accessing postsecondary education increases with their parents' education and income;
- A rigorous high school mathematics curriculum is positively correlated with enrolling in college, especially for first-generation college students (i.e., those whose parents did not study beyond high school);
- College outreach programs help students access postsecondary education, and;
- Socioeconomic constraints in general, and rising college costs prevent both access to, and completion of, postsecondary education.

Recently, the focus has shifted away from issues of college access to those of persistence while

in college. This change in emphasis is at least partially motivated by a recognition that although college access rates appear to have improved over the years college persistence rates have flat-lined. For example, as documented by Horn et al. (2005), whereas postsecondary enrollment rates for the cohorts graduating from high school in 1972, 1982, and 1992 jumped from 60 to 65 to 75 percent, respectively, bachelor's degree completion rates barely moved from 66 percent for the 1972 and 1982 cohorts to 67 percent for the 1992 cohort. The widening median income gaps (U.S. Census Bureau, Current Population Survey, 2008 Annual Social and Economic Supplement) between high school (\$28,290), Associate (\$36,362) and Bachelor's (\$47,240) degree holders further underscores the value added by postsecondary education.

The one glaring shortcoming of these large-scale longitudinal studies is their inability to allow researchers to disaggregate data by non-obvious at-risk student populations such as, in particular, Appalachian Ohio students. It is as much to fill this gap as to update the postsecondary educational profile of our region's youth (circa the landmark 1992 Access and Success Study) that the present research – *Access and Success – Appalachian Ohio: College Access, Retention, Postsecondary Pathways, and Completion* – is being undertaken under the aegis of the Ohio Board of Regents, the Ohio Appalachian Center for Higher Education, the Ohio College Access Network, the Ohio College Tech Prep Program, the College of Education's Center for Higher Education (Ohio University), and the Voinovich School of Leadership and Public Affairs (Ohio University).

This study is designed to address specific re-

<sup>1</sup>Choy, Susan. (2002). *Access & Persistence: Findings From 10 Years of Longitudinal Research on Students*. American Council on Education, Washington, DC.

search questions, some of which were examined in reports released in 2007 and earlier this year.<sup>2</sup> In this report, the third in the series, we begin to address the following specific questions:

1. What percentage of high school students living in Appalachian Ohio attends college or some form of postsecondary education? How does this percentage vary by gender, sub region, and other factors?
2. Where do high school students living in Appalachian Ohio seek higher education degrees?
3. What are the barriers to, and influences on, access to higher education for high school students living in Appalachian Ohio? Are these barriers similar to or different from those identified in the 1992 *Access and Success* study?
4. What was the trajectory of students who went on to some form of higher education? Did they delay enrollment, complete their program, stop out, drop out, or transfer? What does the trajectory look like for students with identified risk factors (such as first-generation college students)?

We explore these issues by way of the following data sources:

- The spring 2008 high school student survey was examined independently and in combination with the fall 2008 high school student survey for the second report. Both high school student surveys were also compared to the 1992 high school survey conducted as part of the 1992 *Access and Success* study;
- A survey of parents of 2008 high school seniors;
- Surveys/interviews of high school counselors in the 25 surveyed high schools in Appalachian Ohio;
- A preliminary college student survey targeting students whose hometown was in Appalachian Ohio and who were nearing the completion of a 2- or 4- year degree program at Ohio University or the University of Cincinnati (all campuses), and
- An analysis of the Ohio Board of Regents Higher Education Information (HEI) database, disaggregated by Appalachian Ohio residency upon enrollment to an Ohio college or university for two cohorts of students—one cohort enrolling in college in 2001 and the other enrolling in college in 2003.

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<sup>2</sup>These reports may be accessed via any of the following sites: <http://www.oache.org/news/post.php?id=34>, <http://www.voinovichschool.ohio.edu/projects/68.aspx>, or <http://www.coe.ohiou.edu/centers-partnerships/centers/center-higher-ed.htm>

## APPALACHIAN STUDENTS' ACCESS TO POSTSECONDARY EDUCATION

What percentage of high school students living in Appalachian Ohio attends college or some form of postsecondary education? How does this percentage vary by gender, sub region, and other factors?

The 1992 *Access and Success* study used students' self-reported intentions and high school personnel's estimates to approximate the Appalachian Ohio college-going rate.<sup>3</sup> Between the 1992 and 2008 *Access and Success* studies, additional data sources have become available on the college-going rate and various factors that influence that rate. However, as was the case in 1992, it is still impossible to calculate a precise college-going rate as, for instance, there is no way to track students who graduate from Ohio high schools and attend postsecondary institutions out of state or attend an Ohio postsecondary institution not required to report data to the Ohio Board of Regents. To address this important research question on today's Appalachian Ohio college-going rate we use data from the Ohio Board of Regents on recent Ohio high school graduates who attend Ohio colleges or universities,<sup>4</sup> high school seniors' self-report of their intentions to go on to college, and school counselors' estimates of the percentage of their seniors who go to college.

### ESTIMATED COLLEGE-GOING RATE OF APPALACHIAN OHIO STUDENTS

To approximate the percentage of high school students from Appalachian Ohio attending some form of postsecondary education, records of students going from high school to an Ohio college were accessed from the Ohio Board of Regents' *Profiles of Recent Graduates Enrolled As First Year College Students* datasets for the years 2001 through 2005. It is important to note that these data include only students who go to a college in Ohio that reports information to the Ohio Board of Regents and does not include those going out of state or to private, in-state institutions that do not report these data. Figure 1 shows the rate of in-state Ohio college enrollment for recent high school graduates for the five years from 2001 to 2005.<sup>5</sup> Appalachian Ohio figures are approximately five to seven percentage points lower than the overall Ohio percentages each year for the five-year period.

Using national and state data, the Ohio Board of Regents estimates that 57 percent of Ohio's recent high school graduates went directly on to college somewhere in the United States in 2004.<sup>6</sup> If Appalachian Ohio's in-state college-going rate

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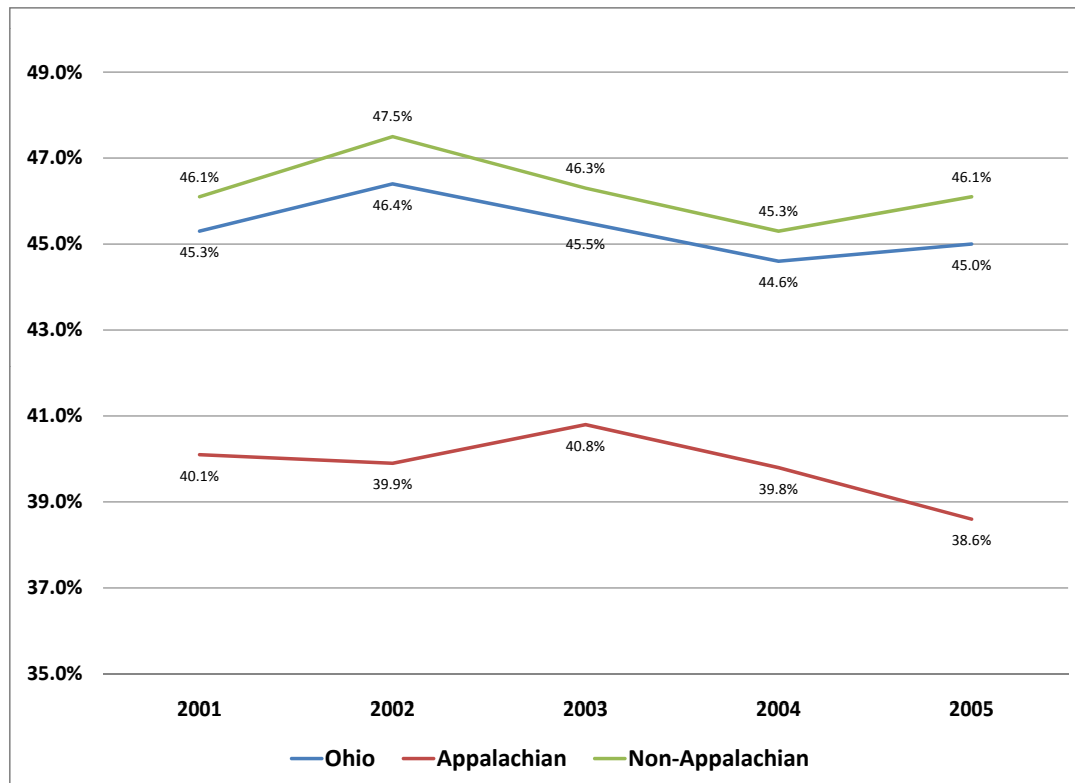
<sup>3</sup>Crowther, T., Lykens, D., & Spohn, K. (1992). Report of the Appalachian Access and Success Project to the Ohio Board of Regents. Athens: Institute for Local Government Administration and Rural Development, Ohio University/Shawnee State University.

<sup>4</sup>Not all Ohio postsecondary institutions are required to report data to the Ohio Board of Regents. For instance, part-time students attending Ohio colleges that are not participating in the Ohio Choice grant program are not included in the OBR data sets.

<sup>5</sup>Source: Ohio Board of Regents profiles of recent graduates enrolled as first year college students, 2001-2005. Does not include some students enrolled in Ohio colleges, such as part-time students in private colleges not receiving the Ohio Choice grant.

<sup>6</sup>Ohio Board of Regents. (2005). Making the Transition from High School to College in Ohio 2005: A Statewide Perspective. Columbus, Ohio.

**Figure 1: Recent Graduates’ Estimated College-going Rate (in Ohio)**



for recent high school graduates is five to seven percentage points lower than the statewide rate, it can be estimated that the overall Appalachian Ohio college-going rate is five to seven percentage points lower than the statewide estimate, or approximately 51 percent. This assumes that roughly the same percentage of students in and outside of Appalachian Ohio go to colleges in other states or to Ohio institutions that do not report to the Ohio Board of Regents.

Although based on incomplete data, the 2004 estimated college-going rate of 51 percent for Appalachian Ohio students is up significantly from the college-going rate reported in the 1992 *Access and Success* study. In the 1992 study, school personnel in the surveyed high schools estimated the college-going rate to be approximately 43 percent. However, as local educational experts in the region

argued that this figure overestimated the regional college-going rate by as much as 12 percent, the estimated college-going rate for Appalachian Ohio high school students in 1992 was between 31 and 43 percent. Based on estimates from school district personnel, these figures were problematic for reasons indicated in the original study, but represented the best data available at the time.

### **HIGH SCHOOL SENIORS’ INTENTIONS FOR HIGHER EDUCATION**

While we know that not every high school senior who intends to go on to postsecondary education will do so, intent to enroll is an important predictor of actual college attendance, and changes in intent to go to college are correlated with changes in actual college-going rate. Students must plan to

go to college and think they can go to college before they will actually apply and enroll.

The fall 2007-08 survey instrument asked 12<sup>th</sup> graders several questions regarding their plans after graduating high school.<sup>7</sup> In the fall survey, approximately 81 percent of the respondents indicated plans to continue their education right after graduating high school. Only two percent of the seniors indicated no plans to continue their education sometime in the future, but 10 percent said they either didn't know when this would be or thought it would be more than a year from now. In addition, a higher percentage of female than male students plan to immediately continue their education, and is also higher for students with at least one parent who attended college. The intent to enroll in college immediately after high school differed only slightly among the three Appalachian Ohio economic development regions (see Table 1).<sup>8</sup>

Comparing the 1992 and 2008 samples, it is clear that more high school seniors intend to go to college right after high school now than in the past. In particular, 81 percent of 2008 seniors indicate that they plan to continue their education right after high school, an estimate that is 16 percentage points higher than that estimated by the 1992 study (65%).

### INTENT BY PARENTAL EDUCATION LEVEL

An important factor to consider when considering college-going rates is whether or not the student is among the first in his or her family to attend college. This information is important because college access researchers and practitioners know that students whose parents have no experience with formal education beyond high school often face more barriers to attending and succeeding in college.

Compared to the state as a whole, Appalachian Ohio has a higher percentage of adults without for-

mal education beyond high school. For adults 25 years and older, approximately two thirds in Appalachian Ohio have no formal education beyond high school, as compared to just slightly over half statewide.<sup>9</sup> Therefore a higher percentage of high school students in the Appalachian region face barriers related to being among the first in their families to venture into higher education.

Additionally, a larger proportion of Appalachian Ohio students enrolled in Ohio colleges are the first in the family to continue their education beyond a high school diploma. The Ohio Board of Regents tracks and reports first-generation college student enrollment. Figure 2 indicates the percentage of recent Ohio high school graduates enrolled as first-year college students at postsecondary institutions in Ohio who are first-generation college students.<sup>10</sup> The data indicate that the percentage of postsecondary students who are first generation college students is higher for Appalachian Ohio than for the rest of the state. The trend for the five years shown indicates that the proportion of first-generation college students is decreasing statewide.

When examining the surveyed high school seniors, there is a statistically significant difference ( $\chi^2 = 30.4, p < 0.05$ ) between students who would be first generation college students and students whose parents attended at least some college. Students whose parents have college experience are significantly more likely to report plans to continue their education right after high school (89 percent plan to) as compared to students reporting neither parent attended college (75 percent of these students plan to continue their education right after high school; see Table 2).

Since parental experience with higher education is known to be a significant predictor of college enrollment, high schools and college access programs have worked to address the specific barriers that would-be first generation col-

<sup>7</sup>The 2007-08 high school seniors in the sample were asked the same question in the spring and the percentage had dropped slightly (79% indicated they planned to attend college). Fall data are reported here because the 1992 high school survey was conducted in the fall and the 2007-08 fall survey collected more demographic information that helps address the research questions.

<sup>8</sup>Source: Fall 2007 High School Survey. Ohio University

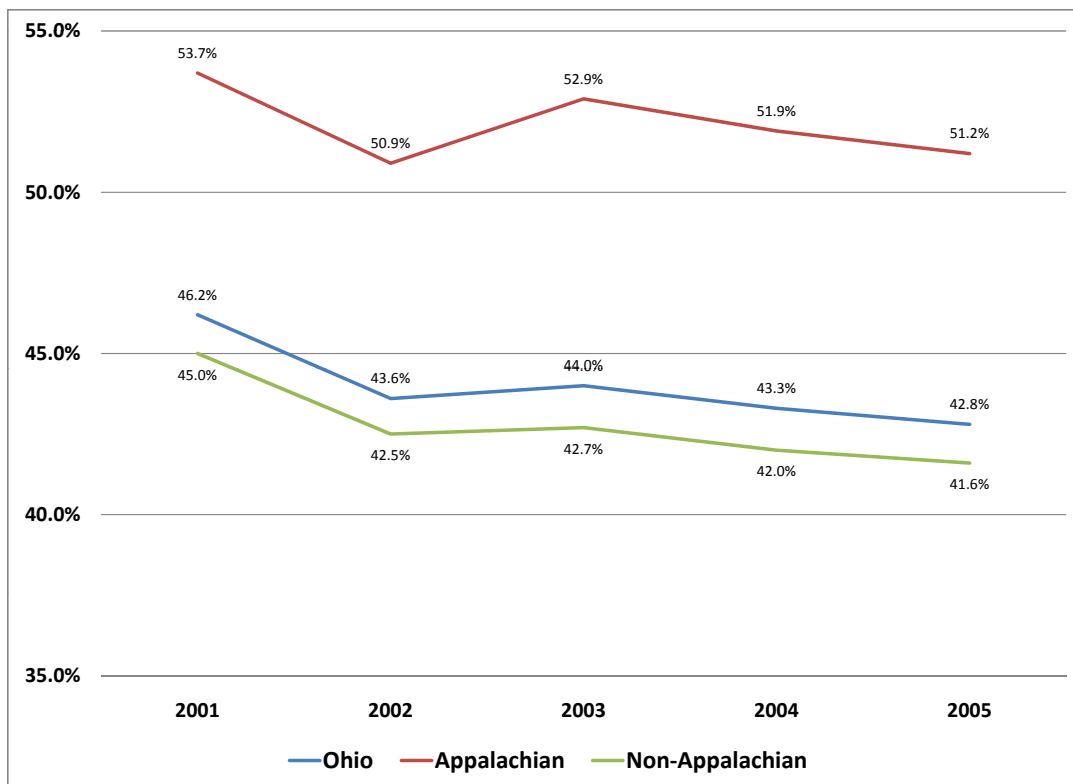
<sup>9</sup>U.S. Department of Commerce, Bureau of the Census. (2001). Census of Population and Housing (STF-3A Files). Washington: DC: Author.

<sup>10</sup>Source: Ohio Board of Regents profiles of recent graduates enrolled as first year college students, 2001-2005

**Table 1: High School Seniors’ College Intentions (2007-2008)**

Response	Gender			First-generation	Economic Regions		
	All	Males	Females		7	10	11
Right after high school	80.5%	74.2%	85.9%	75.1%	81.4%	77.0%	82.2%
After 1 Year	6.9%	7.6%	6.3%	8.2%	7.2%	7.1%	5.9%
After 1+ Years	1.1%	1.9%	0.3%	1.1%	1.4%	1.1%	0.0%
Yes, but don’t know when	9.3%	12.4%	6.5%	11.6%	8.5%	12.0%	7.9%
No, I don’t plan to	2.3%	3.9%	1.0%	4.1%	1.5%	2.8%	4.0%
No. of Respondents	1,141	516	616	466	656	283	202

**Figure 2: Percentage of First Generation College Students**



lege students face. For example, there are programs that allow high school students and parents to spend time on college campuses in order to overcome some of the fears about what college is like. Other programs address financial aid and application processes. In order to gauge the impact of these types of programs, high school students were asked if they had ever participated in a program in high school to help prepare them for college.<sup>11</sup>

Examining those students who report they participated in a high school program to help them prepare for college, there is still evidence of a statistically significant difference ( $\chi^2 = 5.4, p < 0.05$ ) between students who would be first generation college students and students whose parents have some college experience. However, the gap in aspiration for a college education immediately after high school narrows. Among students participating in a program to help prepare for college, 83 percent of would-be first generation college students and 93 percent of students whose parents have some college report that they plan to continue their education right after high school. In addition to this narrowing of the gap between students with and without parental college experience, the overall percentage of students who plan to attend college right after high school is greater for students who participated in a high school program to prepare them for college. Eighty-seven percent of the students who reported being in a special program to prepare them for college plan to go on to higher education immediately after high school, as compared to 79 percent of the students who did not participate in a special program to prepare them for college.

### **PARENTS' INTENTIONS FOR STUDENTS' HIGHER EDUCATION**

Parents of 2007-08 high school graduates were asked if their son or daughter planned to go to college in the year following high school graduation. Of the 221 responses to this question, 194 parents (88 percent) indicated that their high school senior would go to college the following fall, but

a lower percentage (74 percent) indicated that they had helped their son or daughter with college applications. Ninety-eight percent of the parents surveyed indicated that they were encouraging their son or daughter to pursue higher education.

### **SCHOOL COUNSELORS' ESTIMATES OF COLLEGE-GOING RATE**

School counselors were asked to approximate the percentage of students from their high schools that pursued higher education following graduation. Estimates varied among the 25 counselors surveyed, and ranged from 35-80 percent. Approximately one-half of the counselors interviewed estimated between 35-53 percent of high school seniors pursued some avenue of post secondary education. It is important to note that many of these counselors indicated their estimates were based on the number of students they assisted in the application process. As one school counselor indicated during the interview,

It's really difficult to tell because there is not a lot of data. However, I usually always take care of placing the stamps and sending the applications out each year, so I know how many I send. I do that because then I know that they have actually been sent. Usually there is always between 50-60 percent of our seniors that go on to some sort of certification program or a 2- or 4-year degree program.

There is no systematic follow-up in place in most high schools to track students after graduation, although some high schools do more formal post-graduate tracking than others. Counselors in smaller high schools tend to know most of the students' families and may have better estimates of the overall college-going rate than those in larger high schools in the region.

<sup>11</sup>Since high school students are not always familiar with the specific types of college access programs in which they participated, this global question was used to code respondents as participating or not participating in any type of college access program.

**Table 2: Students’ Plans to Continue After High School  
(by Parents’ Education & College Access Program Exposure)**

	First-Generation	Not First-Generation
All Respondents	75.0%	89.0%
Had Some College Prep Program	83.0%	93.0%

**Table 3: College Readiness Behaviors High School Seniors (2008)**

	FAFSA Completed	Visited A College	Took ACT
All Respondents	65.0%	90.0%	72.0%
Planning to Go to College Right After High School	76.0%	94.0%	84.0%

**COLLEGE READINESS BEHAVIORS:  
ADMISSIONS AND FINANCIAL AID**

In the spring of 2008, in addition to asking about their plans beyond high school, 12<sup>th</sup> graders were asked whether or not they had taken several specific steps related to going on to higher education after graduation. The spring surveys were conducted in April and May just prior to graduation in order to most accurately capture the students’ intentions with regard to higher education. Students were asked about college admissions testing, applications, and financial aid.

Most students who indicated they planned to go to college right after high school had applied to at least one postsecondary institution by the time of the spring survey. These postsecondary institutions included four-year colleges, two-year colleges and vocational or certificate programs. Eighty-four percent of the students who planned to go to college right after high school reported having taken the ACT.(see Table 3).<sup>12</sup>

Of the students planning to go to college right after high school, 76 percent reported having completed the FAFSA at the time of the spring survey (April/May 2008). This figure is noteworthy in that one in four students surveyed had not taken this important step toward college entrance and fi-

nancing. This finding, although similar to national studies on student financial aid, is one indication that the students’ and parents’ reported barriers of lack of financial aid information is affecting college preparation behaviors for a significant portion of students in Appalachian Ohio.<sup>13</sup>

**HIGH SCHOOL CURRICULUM**

Of the high school students surveyed, approximately 70 percent reported taking a college prep or tech prep curriculum in high school. The percentage of students who indicated they pursued a college prep curriculum was up nine percentage points from the 1992 survey.

Counselors were also asked about specific curriculum that students choose in high school and how that affects their success in college. On average, the counselors estimated that approximately 60 percent of their students were enrolled in a college prep or tech prep curriculum. Several counselors stressed that students were generally prepared for college academically if they chose more challenging high school coursework. Students that did not tended to struggle academically and required remediation efforts

[Student performance is] based upon whether they have a strong back-

<sup>12</sup>Source: Spring 2008 High School Survey. Ohio University

<sup>13</sup>Advisory Committee on Student Financial Assistance (2008). *Apply to Succeed: Ensuring Community College Students Benefit from Need-Based Financial Aid*. Washington, DC. Author.



ground from the high school coursework. Kids who haven't chosen the hardest track often have to do remediation. [That is] getting better now with state requirements, but [they] still can

pick regular science over chemistry.

They struggle in math and chemistry. Other than that, they have really good success [in college] in general.

## CHOICE OF COLLEGE TYPE AND LOCATION

Where do high school students living in Appalachian Ohio seek higher education degrees?

### LOCATION AND TYPE OF COLLEGE: HIGH SCHOOL STUDENTS' PERSPECTIVE

Twelfth graders expressing an intention to attend college either immediately after high school or at some time in the future were asked where they planned to attend. Students were asked this on both the fall and spring surveys. Responses were similar between the two survey periods. The spring results are reported here, as students plans for the following year are likely to be more finalized as they approach high school graduation. Of the spring respondents, 53 percent indicated that they planned to attend an Ohio college within fifty miles of home. Another 23 percent indicated plans to attend a college in Ohio, but farther away than 50 miles. Fourteen percent expressed plans to attend college in a neighboring state, and another 3 percent planned to attend in some other state. Approximately 8 percent were unsure at the time of the spring survey.

Table 4 compares the spring 2007-08 responses with the 1992 responses to the location of college question.<sup>14</sup> As is evident from this table, there is a substantial difference between the two cohorts in terms of both (a) the proportion of students who plan to attend a nearby college and (b) those that are unsure where they will attend college. In particular, while roughly a quarter of the respondents

to the 1992 survey were unsure about the location of the college they would attend, this rate drops to approximately 8 percent in the 2008 sample. The percentage of those planning to attend a nearby college is approximately 22 points higher in 2008 than in 1992.

One plausible explanation for the marked difference in college location plans is the current effort among area high schools, colleges, and college access programs to disseminate crucial information about college programs. This suggestion is borne out by students' responses to questions asking them about the recruitment efforts of higher education institutions in the region and information dissemination efforts at their own high schools. This increased information could help explain why fewer students are unsure about where they will go to college and why more are planning to go to college closer to home. In 1992, only 40 percent of high school seniors thought that area colleges did a good job in encouraging students to pursue higher education; in 2008, almost 70 percent thought area colleges do a good job in encouraging students to pursue higher education.<sup>15</sup> Similarly, in 2008, approximately 79 percent of high school seniors in the sample reported that their school did an excellent or good job in encouraging students to pursue higher education, as opposed to only 43 percent in 1992. When asked, "Does your school provide you enough information regarding career choices and required training?", 68 percent of the 2008 sample responded "yes," while only

<sup>14</sup>The 1992 *Appalachian Access and Success* report (page 148) included frequencies and percentages for the college location question, including those not attending. For Table 4, the 1992 percentages were recalculated to exclude those not planning to attend college. Note also that in the table percentages do not round to 100% because one of the response categories ("Foreign Country") is excluded. The 2008 estimates are drawn from the 2008 Spring High School Survey. Ohio University

<sup>15</sup>The 2008 survey instrument included "excellent" as a category for this question, along with "good," "fair," "poor," and "don't know." The 70 percent reported here are those that reported either "excellent" or "good."

**Table 4: Choice of College Location  
(1992 versus 2008)**

Location	1992	2008
Ohio college ( $\leq$ 50 miles of home)	30.3%	52.7%
Ohio college ( $>$ 50 miles of home)	33.6%	22.6%
Out of State	12.4%	16.1%
Unsure	23.2%	8.4%

60 percent of the 1992 sample answered “yes” to the same question. Of course, it is also likely that the noted difference in college attendance plans is due in some part to advances made in information technology (IT) since 1992. The Internet makes it easier to obtain information on college admission criteria, financial aid availability, application procedures, and many other details that can help students select a school to meet their needs.

On the 2008 spring survey, students were also asked about the type of postsecondary institution they planned to attend. Approximately two-thirds of the respondents indicated they plan to attend a four-year college or university. Another 23 percent plan to attend a two-year college, and the remaining 11 percent plan to attend a vocational, technical or trade school after they graduate from high school.

**LOCATION AND TYPE OF COLLEGE: PARENTS’ PERSPECTIVES**

Parents were asked to list the college their senior will attend the fall after graduation. Over half of the parents reported their high school senior would be attending a postsecondary institution in Appalachian Ohio. Approximately 90 percent indicated their senior would attend an Ohio college (see Figure 3).<sup>16</sup> The percentage of parents indicating that their son or daughter will attend a college in Appalachian Ohio is roughly the same as the percentage of high school students who plan to go to college close to home; however, a higher percentage of parents surveyed plan for their students to attend an Ohio college than the student survey

indicated.

Over 80 percent of parents surveyed indicated their senior would attend a 4-year school while approximately 20 percent indicated a 2-year school (see Figure 4).<sup>17</sup> The majority indicated that their son or daughter would attend a public postsecondary school.

**COLLEGE LOCATION: HIGH SCHOOL COUNSELORS’ PERSPECTIVES**

High school counselors observe that the majority of their students who pursue education beyond high school choose to do so close to home. However, close to home often means colleges in neighboring states, especially for high schools in counties along the Kentucky, Pennsylvania, or West Virginia borders. High school counselors note that the cost is a crucial factor in where students choose to apply.

Many of the counselors observe that numerous students pursue their education at two-year colleges and then perhaps transfer to four-year institutions. In addition, there seems to be a general consensus that the majority of high school seniors attend local institutions or regional branch campuses. Many students choose local colleges and commute from home, particularly with the rising costs of fuel, tuition, and room and board. School counselors also report students choosing nearby schools, both in and out of state that grant special tuition rates to students based on geography or participation in programs such as Postsecondary Options or Ohio College Tech Prep. For example, one high school counselor in the Hocking College

<sup>16</sup>Source: 2008 Parent Survey. Ohio University

<sup>17</sup>Source: 2008 Parent Survey. Ohio University

Figure 3: 2008 College Location: Parents' Perspectives

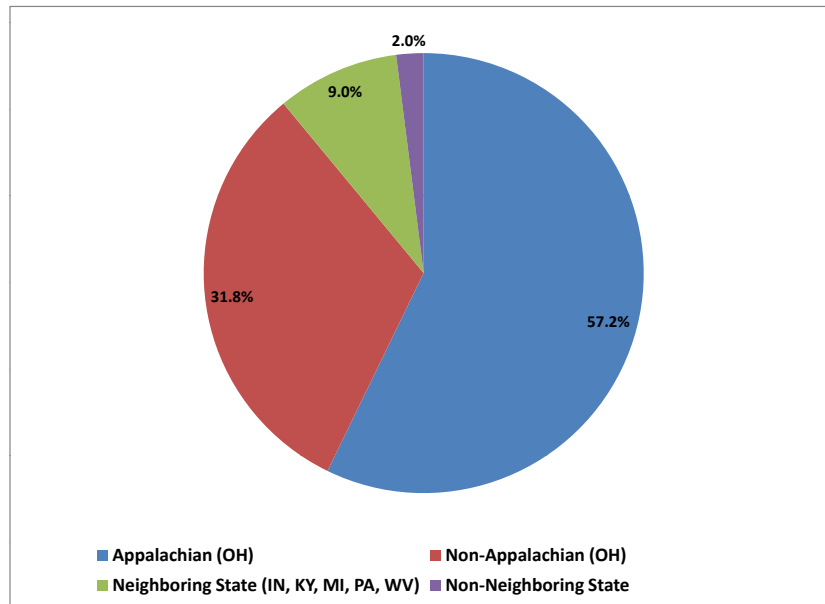
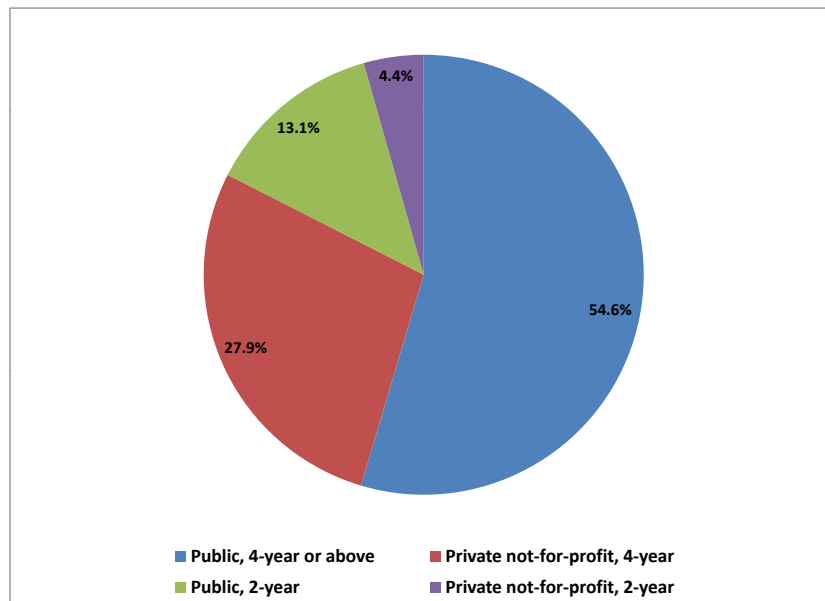


Figure 4: Type of Institution: Parents' Perspectives (2008)



region states that most students attend this institution because:

[It] has to do with the tech prep program. They can go for free if they meet certain requirements. We have artic-

ulation agreements with Hocking that they can get some credits when they go there in programs like computers, drafting, and health programs.

## BARRIERS TO, AND INFLUENCES ON, ACCESS TO HIGHER EDUCATION

What are the barriers to, and influences on, access to higher education for high school students living in Appalachian Ohio? Are these barriers similar to or different from those identified in the Access and Success study?

### BARRIERS TO HIGHER EDUCATION

One of the most important objectives of the 2008 high school survey is to help identify the barriers to higher education for today's Appalachian Ohio high school students and to see if the barriers are different in any way to those identified in the 1992 *Access and Success* study. If the barriers have changed, programming and policy must adapt to better address current realities. To that end, several questions on the 2008 high school survey asked students about difficulties they encounter as they plan for college.

#### REPORTED BARRIERS TO HIGHER EDUCATION: HIGH SCHOOL SENIORS

On both the fall and spring surveys, 12<sup>th</sup> graders were asked to rank the three major problems or difficulties they have encountered regarding college. Students had the following choices: *lack of information regarding college programs, want an immediate income, won't fit in, no friends planning to go to college, not smart enough, live too far from college, poor grades in school, lack of parent support, don't like school, lack of financial aid information, lack of finances, and other.*

Comparing the 2008 responses to those of the 1992 survey of 12<sup>th</sup> graders, the top problems or difficulties regarding college remain essentially the

same, although the distribution of the specific responses appears to have shifted. This is evident in Figure 5 which compares the 1992 and 2008 responses related to the leading problems or difficulties students report regarding college.<sup>18</sup>

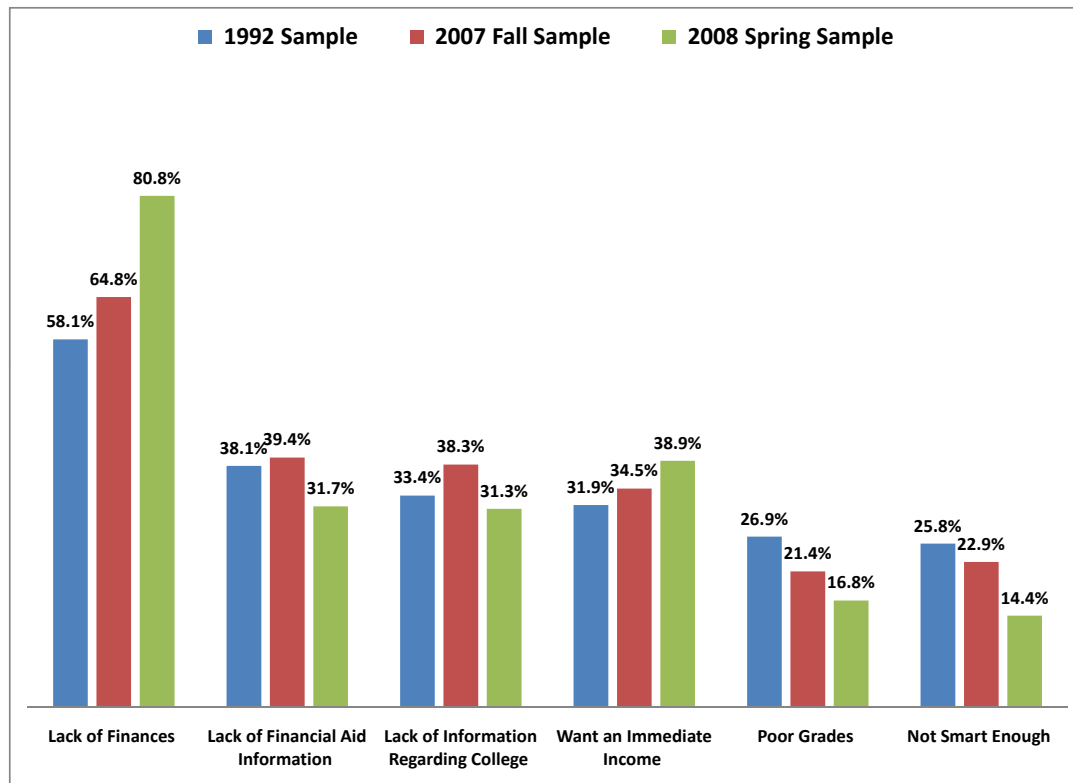
The rank order of the problems is the same for the fall 1992 and 2008 samples. However, there are two noteworthy differences in the percentage of students reporting specific barriers as one of their top three problems or difficulties between 1992 and 2008. Comparing the fall surveys (1992 and 2008), a higher percentage of 2008 high school seniors report a *lack of finances* as one of their top barriers to college than in 1992. A lower percentage of 2008 seniors report self-efficacy-related issues (*not smart enough, poor grades*) as barriers, compared to 1992 seniors.<sup>19</sup>

Examining the 2008 sample, another important finding is the shift from fall to spring in the percentage of students reporting a particular barrier to higher education. Because Figure 5's estimates for 2008 only include students who completed both a fall and a spring survey, the same group of students answered the question twice—once in the beginning of their senior year of high school and again at the end. The percentage of students reporting *lack of finances* as a major problem or difficulty regarding going on to college increased 16 percentage points, from 65 percent in the fall to 81 percent in the spring. Perhaps as students got closer to graduating from high school, applied or thought more carefully about applying to postsec-

<sup>18</sup>Source: The 1992 Appalachian Access and Success report; the 2007 Fall High School Student Survey; and the 2008 Spring High School Student Survey. Ohio University

<sup>19</sup>In the 1992 study "not smart enough" was phrased as "not intelligent enough."

Figure 5: Self-Reported Problems Encountered Regarding College (High School Seniors)



ondary schools, and completed financial aid paperwork, the realities of financing higher education became more apparent.

Isolating a subset of 2008 high school seniors reporting participation in some kind of special program to help students plan or prepare for college, approximately the same percentage reported *lack of financial aid information* as a barrier, as compared to students who said they did not participate in a college access program. However, a lower percentage of students participating in an access program reported *lack of information regarding college education programs* as a barrier, as compared to students who did not participate in an access program. Based on these differences, it appears that college access programs are making inroads regarding information about specific postsecondary educational options,

but that the complex issues surrounding financial aid are much more difficult to address.

#### REPORTED BARRIERS TO HIGHER EDUCATION: PARENTS

Parents were asked to rank the three major problems or difficulties their high school senior faced regarding his/her education beyond high school. The parents' echoed the responses of the high school seniors. Over 80 percent of parents identified a lack of finances as a major barrier to their child continuing their education (see Table 5).<sup>20</sup> Sixty percent selected it as the number one barrier. Lack of information on financial aid and college programs were also identified as important barriers.

<sup>20</sup>Source: 2008 Parent Survey. Ohio University

**Table 5: Parents’ Rankings of Major Problems/Difficulties Regarding College**

Problem/Difficulty	Percent
Lack of finances	80.9%
Lack of financial aid information	56.2%
Lack of information regarding college programs	39.2%
Lack of specific courses or curriculum	33.0%
Feels like he/she won’t fit in	13.9%
No friends going to college	11.3%
Other problem or difficulty	9.8%
Poor grades in school	8.8%
Doesn’t see the value in going to college	7.7%
Senior has not faced major problem or difficulty	5.2%

**Table 6: Students’ Ranking of Major Problems/Difficulties Regarding College  
Appalachian Ohio College Students**

Problem/Difficulty	Percent
Lacked finances	61.5%
Lacked information regarding college educational programs	59.6%
Lacked financial aid information	34.8%
Concerned about “fitting in”	33.0%

**REPORTED BARRIERS TO HIGHER EDUCATION:  
HIGH SCHOOL COUNSELORS**

When asked about barriers to higher education, eighty percent of the counselors surveyed stated that money was the primary obstacle facing high school seniors and their parents. Other barriers identified by school counselors included lack of parental support and students wanting an immediate income after high school. The counselors indicated that, as many parents have no experience with college, they are not comfortable navigating the admissions procedures and dealing with financing higher education. Although they want their children to succeed, a fear of the unknown is

a major obstacle for many families when thinking about and preparing for college.

**PERCEIVED BARRIERS TO HIGHER EDUCATION:  
COLLEGE STUDENTS**

The college students surveyed for this study were students nearing the end of a degree program (2- or 4-year) and whose home address is an Appalachian Ohio county. Since these students were ready to graduate, they were asked to reflect on the barriers they had to overcome in order to access and succeed in higher education (see Table 6).<sup>21</sup> The top three barriers reported by college students finishing degree programs are similar to those reported by high school students and parents.

<sup>21</sup>Source: Spring 2008 High School Student Survey



## PAYING FOR COLLEGE

Since the cost of college and the lack of information about options to pay for college are the biggest barriers reported by high school seniors, several specific questions about how students are planning to pay for college are analyzed here. Questions about financing college were also asked of parents, and college students.

### HIGH SCHOOL SENIORS' PLANS FOR FINANCING COLLEGE

On both the 1992 and the 2008 surveys, 12<sup>th</sup> graders were asked, "Can you afford college?" In 1992, approximately 33 percent of the respondents said they could not afford college, while on the 2008 spring survey, 38 percent indicated that they could not afford college. Insofar as these responses accurately reflect the financial status of Appalachian Ohio seniors, it is important to note growth in the proportion of high school seniors indicating that they do not think they can afford a college education.

The question of college affordability was further examined by disaggregating responses by whether or not the students' parents had any college experience. For students who have at least one parent with some college experience, 15 percent more responded that they could afford college as compared to students who would be first generation college students.

There are likely two dimensions to this response pattern. One has to do with the income of parents with and without postsecondary education. Because on average, households with at least one college-educated family member have higher incomes than other households, college for children in these households may actually be more affordable or is at least perceived to be so. The other dimension has to do the parents' familiarity with

financial aid options. Parents who have some college experience may be more comfortable asking for or acquiring information on financial aid options or have experience with financial aid applications, student loans, etc.

Table 7 reports 2008 high school seniors' estimates of how they will pay for college.<sup>22</sup> The percentages reported indicate the average percentage of college expenses that students estimated would be financed by a specific source. For instance, the average percentage of college expenses students estimated would be paid by loans was 30 percent. Loans ranked as the largest category of payment for college and 661 of the respondents indicated that they would use loans to pay for college. More respondents (707) indicated that parents would be a source of payment for college, and the average percentage of college costs estimated to be paid by parent contributions was 25 percent. Scholarships were the next payment source mentioned, both in terms of estimated percentage of total cost to be covered (22%) and number of students selecting this as a source of funds ( $N = 654$ ). Students were asked in a separate question if they had already received a scholarship to help pay for college and approximately half of the seniors reported on the spring 2008 survey that they had already been offered a scholarship to pay for all or part of their college expenses.

### PARENTS PLANS FOR FINANCING COLLEGE

Parents of high school seniors were asked what

<sup>22</sup>Source: Spring 2008 High School Student Survey. Ohio University

**Table 7: High School Seniors’ Estimates of How They Will Pay For College**

	Loans	Parents	Scholarship	Grants	Own Income/Savings
Average % of College Expense Covered	30.0%	25.0%	22.0%	20.0%	15.0%

**Table 8: Steps Parents Report Having Taken to Finance Child’s Education**

Response	Percent
Have not taken any steps yet	37.7%
Started a savings account	34.3%
Reduced other expenses	27.5%
Worked another job and/or more hours	22.2%
Invested in stocks or real estate	15.0%
Bought U.S. savings bonds	11.1%
Participated in a state-sponsored college savings program	5.8%
Re-mortgaged your property or taken out a home-equity loan	5.3%
Bought an insurance policy	4.8%

steps they had taken to save for their senior’s education after high school. Overall 37.7 percent of the families reported they were not able to save for their child’s education. A third of respondents reported starting a savings account and over 20 percent indicated they had reduced other expenses and/or worked another job and/or more hours in anticipation of college expenses.

Considering the impact of family income on saving for higher education, approximately 62 percent of surveyed families making less than \$40,000 a year had not taken any step to save money for their senior’s education (see Table 9).<sup>23</sup> Only 14.6 percent of families making more than \$80,000 reported not taking any steps. For families able to save for their senior’s education, those making under \$40,000 were able to save an average of \$1,500. Families making over \$80,000 reported saving an average of \$20,000.

The HEI database also sheds some light on parents’ ability to contribute towards their children’s postsecondary education. In particular, the data show that the average Appalachian student could expect a family contribution of \$3,152 (2001 cohort) and \$3,077 (2003 cohort) in comparison to their Non-Appalachian counterparts who could

expect \$5046 (2001 cohort) and \$4,848 (2003 cohort), respectively. Indeed, on average expected family contributions appear to be 46 percent higher for parents of Non-Appalachian students than for their Appalachian peers. In addition, these gaps widen at both the lower and the upper end of the expected contribution spectrum.

### SCHOOL COUNSELORS PERSPECTIVES ON FINANCING COLLEGE

According to surveyed school counselors, parental attitudes towards higher education are quite positive, but knowledge and expertise regarding college financing are often lacking. Parents are critical to identifying the needed financial resources but they are often overwhelmed by this responsibility. Of particular concern was difficulty completing the FAFSA.

The FAFSA form in particular seems to overwhelm parents—you can see them check out.

It’s all money based. They all want their kids to go, but they want to be able to afford it. They want them to go to 2-year schools and then transfer. Or,

<sup>23</sup>2008 Parent Survey. Ohio University

**Table 9: Median Family Savings for Their Senior’s Higher Education (by Income Level)**

	≤ \$40,000	\$41,000 - \$80,000	> \$80,000
Family has not taken any steps	62.1%	35.2%	14.6%
Median amount saved	\$1,500	\$5,000	\$20,000

they want them to do postsecondary education where they get college credit for free.

They really want their kids to pursue higher education, but most of them know very little about it. In addition, they have done very little to prepare in regards to saving money. They only get a glimpse of reality when we [sit] down with them to work on the FAFSA.

[Parents] want their kids to go on to higher education, but [are] keenly aware of how expensive it is – especially the ones who don’t qualify for Pell.

Regardless of the reasons, over 80 percent of school counselors surveyed emphasized that tuition increases have significantly influenced the college-going rates of Appalachian Ohio seniors. Many students cannot attend their college of choice; many were limiting their options to nearby local institutions; and those who were able to pursue higher education often struggled to complete their degrees.

**COLLEGE STUDENTS’ REPORT ON PAYING FOR COLLEGE**

The Appalachian Ohio college student respondents from Ohio University and the University of Cincinnati reported the percentage of their college expenses that were covered by specific categories. These reports indicate the average percentage of college expenses that students estimated were financed by a specific source. For instance, the college students reported that, on average, 58 percent of their college was financed by student loans. Loans ranked as the largest category of payment for college, with parents as the second largest source (39%). This pattern was similar to that estimated by the high school seniors. The high school students surveyed also estimated that student loans would make up the largest percentage of their college expenses; however, the high school students’ estimate of the percentage covered by student loans (30%) was lower than the college students’ reported average (58%).

## STUDENTS' EDUCATIONAL TRAJECTORIES IN HIGHER EDUCATION

What was the trajectory of students who went on to some form of higher education? Did they delay enrollment, complete their program, stop out, drop out, or transfer? What does the trajectory look like for students with identified risk factors (such as first-generation college students)?

College attrition rates attract a great deal of attention from policymakers, parents, and institutional researchers.<sup>24</sup> Therefore, researchers have long tried to understand the personal, social and institutional factors that predict when a student is likely to stop attending college. Of course, just as not all students who enroll in a postsecondary institution will graduate, so also not all students who stop attending college do so for good. Indeed, some students may return in their second-year (*first-year persisters*), others may interrupt their enrollment for a brief period of time (*first-year stopouts*), a few may return to the same (*stopout returns*) or to another institution (*stopout transfers*) after this brief absence while some students may not return to college for five or more years (*stayouts*).

We assessed the prevalence of these behaviors within the populations of Appalachian and Non-Appalachian first-time enrollees in both cohorts (i.e., the 2001 and the 2003 cohorts, respectively) tapped by the HEI database. We first asked: "What proportion of students enrolled in a particular institution returned to the same institution in the year following their first-time enrollment?" As it turns out, Appalachian students are just as likely to reenroll in the public or private postsecondary institution they attended in their first-year as are Non-Appalachian students.<sup>25</sup>

Interestingly, this similarity in first-year persistence rates is also evident if we restate the preceding question more broadly and ask: "What percentage of first-time enrollees in a given cohort are found to be attending any public or private institution in the year following their first-time enrollment?" The answer is roughly 72 and 74 percent of Appalachian and Non-Appalachian students, respectively. Nor do these profiles differ for first-generation college students.

However, students' trajectories as they move from first-time enrollment to, in a sizable proportion of cases, graduation also illustrate some differences between Appalachian college students and their Non-Appalachian peers. An excellent way to explore these differences is to analyze the lag between graduation and enrollment. On average about 72 percent of Appalachian students are found to enroll in a postsecondary institution in the year of their high-school graduation. Another 6 percent appear to enroll after a one-year gap, followed by about 2 percent enrolling at one-year intervals. For the Non-Appalachian student population, however, about 77 percent enroll in the year they graduate, followed by 6 percent after a one-year gap, and about 2 percent at one-year intervals thereafter.<sup>26</sup>

We also assessed persistence to a baccalaureate or an associate's degree within six years of first-

<sup>24</sup>See Stratton, Leslie S., Dennis M. O'Toole and James N. Wetzel. (2008). "A Multinomial Logit Model of College Stopout and Dropout Behavior." *Economics of Education Review* 27(3):319-331.

<sup>25</sup>Source: Ohio Board of Regents' HEI Data.

<sup>26</sup>Our preliminary analysis of the limited data available from the college seniors' survey shows a similar pattern. In particular, the college survey data show 82% ( $N = 111$ ) of the students as saying they enrolled immediately upon graduation with 80% of students who delayed enrollment ( $N = 25$ ) saying they enrolled after a lag of more than two years.

**Table 10: Graduation Rate by Degree Type and Appalachian Status (2001 Cohort)  
(Students with Intent to Graduate)**

	Baccalaureate Degree		Associate’s Degree <sup>1</sup>		Associate’s Degree <sup>2</sup>	
	Not Graduating	Graduating	Not Graduating	Graduating	Not Graduating	Graduating
Appalachian	55.6%	44.4%	72.8%	27.2%	70.7%	29.3%
Non-Appalachian	47.8%	52.2%	81.6%	18.4%	83.0%	17.0%

**Table 11: Graduation Rate by Degree and Appalachian Status (All Students, 2001 Cohort)**

Degree	Group	Not Graduating	Graduating
Baccalaureate	Non-Appalachian	69.0%	31.0%
	Appalachian	76.0%	24.0%
Associate	Non-Appalachian	91.5%	8.5%
	Appalachian	85.0%	15.0%

time enrollment by focusing on students’ stated intentions at the time of enrollment and their degree status.<sup>27</sup> In particular, we focused on students indicating their intention at enrollment to obtain “a bachelor’s degree” (Baccalaureate Degree), “an associate degree for the job market” (Associate Degree<sup>1</sup>), or “an associate degree for transfer” (Associate Degree<sup>2</sup>). Looking at students’ stated intention at the time of enrollment is crucial because not all students, regardless of institution type or major enroll in pursuit of a terminal degree. As is evident from Table 10, only 44 percent of Appalachian baccalaureate degree seekers graduated versus 52 percent of Non-Appalachian seekers.<sup>28</sup> Appalachian students fare better in terms of associate’s degree attainment. Similar patterns are evident within the pool of first-generation Appalachian and Non-Appalachian students.

We can also analyze the extent to which Appalachian students persist to a degree more generally. We can do so by ignoring students’ intentions as stated at the time of enrollment and in-

stead focus strictly on whether they graduated or not. Of course, this more liberal view of differences in graduation rates does not distinguish between students who never intended to obtain a baccalaureate or associate’s degree and hence is likely to understate graduation rates. Bearing this caution in mind, in Table 11 we outline the distribution of 2001 cohort graduates by Appalachian/Non-Appalachian home address at the time of enrollment and degree type.<sup>29</sup> Clearly while fewer Appalachian enrollees appear to graduate with a baccalaureate degree than do their Non-Appalachian peers, the picture is reversed for those graduating with an associate’s degree (15% of Appalachian students earn an associate’s degree as compared to 9% of Non-Appalachian students). Graduation rates do not appear to differ as much within the subset of first-generation students who finish with a baccalaureate degree (20% for Appalachian and 25% for Non-Appalachian students) but continue to reflect a sizable gap in associate degree graduates (19% and 11%, respectively).

<sup>27</sup>Note that this reduces the effective dataset to the 2001 cohort of first-time enrollees because the six-year tracking window for the 2003 cohort would be complete only in 2009.

<sup>28</sup>Source: Ohio Board of Regents’ HEI Data.

<sup>29</sup>Source: Ohio Board of Regents’ HEI Data.

## CONCLUSIONS

This third study in the series highlights findings from the Ohio Board of Regents HEI data as well as from a spring 2008 survey of high school seniors, their parents, college students from Appalachian Ohio, and school counselors from the surveyed high schools. The good news is that more Appalachian Ohio students want to go to college and plan to go to college right after high school than was evident in the 1992 *Access & Success* study. More high school seniors feel competent to go on to higher education today than did in 1992, and while not all students who plan to go to college actually do so, a higher percentage of Appalachian Ohio students are pursuing higher education today than did in 1992. Yet, even as these advances are laudable, there is work to be done to deal with what might be a shrinking educational pipeline.

In recent decades the improving and maintaining the “educational pipeline” has become the mainstay of K-16 educational policy. Simply put, all states are striving to develop policies that not only enable their students to graduate from high school but also, thereafter, both access college and persist through to graduation. This was hardly news when in 2004 the National Center for Public Policy and Higher Education issued a Policy Alert that circulated widely.<sup>30</sup> Recent demographic trends have, however, prompted a renewed interest in the fundamental question higher education has long grappled with: “What can we do to encourage all students in general, and at risk student groups in particular, to attain postsecondary edu-

cation?” The trends at stake here are two in particular:

1. Starting with the 2009-2010 12<sup>th</sup> grade high school cohort, Ohio and almost all states in the nation will experience a decline in their number of high school graduates.<sup>31</sup>
2. The retiring of baby boomers, coupled with a smaller, less educated (in terms of high school diplomas and college degrees) workforce will most likely lead to declining personal incomes for the average American. These declines, by some accounts, may be as much as 2 percent in real dollars.<sup>32</sup>

These estimates and forecasts do not, unfortunately, extend to the residents of Appalachian Ohio and hence we cannot directly assess whether these trends will assume greater significance for our youth. Given our findings thus far, however, we can certainly infer that as the rest of the nation and our state go, so will the fortunes of our Appalachian youth. We know, for example, that Appalachian students tend, more often than not, to come from disadvantaged economic backgrounds, are more likely to be among the first in their family to go to college, and are less likely to have been exposed to a rigorous college preparatory curriculum or program.

Their first-generation student status does not impose as severe a penalty on their ability to access and succeed in college as does the financial hurdle; 81% of both high school seniors and parents

<sup>30</sup>See <http://www.highereducation.org/reports/pipeline/>

<sup>31</sup>See *Knocking at the College Door: Projections of High School Graduates by State and Race/Ethnicity, 1992 to 2022*. The Western Interstate Commission for Higher Education, March 2008.

<sup>32</sup>See Kelly, Patrick J. (2008). *As America Becomes More Diverse: The Impact of State Higher Education Inequality*. San Jose, California: The National Center for Higher Education Management Systems (NCHEMS).

surveyed in spring 2008 identified the lack of finances as a problem when it came to making plans for college. Loans thus figure prominently as the means by which most students pay for a college education. But not all student borrowers persist to a degree, and in doing so end up with a significant debt burden without the earnings potential provided by a college degree.<sup>33</sup> Further, if students delay enrolling in college because, as a sizable proportion of the high school seniors we surveyed said, they “need an immediate income” or if they work one or more jobs while attending college, their likelihood of not persisting to a degree increases. A similar penalty is imposed if they lack rigorous academic preparation when in college. In short, for our youth finances and inadequate academic preparation appear to be critical barriers to postsecondary educational attainment. These barriers can be addressed. Gladieux and Perna (2005: 16-17) offer some solutions, including:

1. Make college more affordable so as to reduce dependence on loan financing and stu-

dent employment, especially for those with the greatest need. *Measuring Up: The Report Card on Higher Education* (2006) indicated that compared with best-performing states, families in Ohio devote a very large share of family income, even after financial aid, to attend public two- and four-year colleges and universities, which enroll 75 percent of college students in the state. The state’s investment in need-based financial aid is very low (29 percent) when compared with top-performing states (89 percent).

2. Focus on policies that prepare students better for postsecondary training and that help students understand their educational options, including the appropriate use of loan financing.
3. Strengthen on-campus support for financially and academically at-risk students, to ensure that all students who enter postsecondary education have the resources to help them succeed in attaining a degree

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<sup>33</sup>Gladieux, Lawrence and Laura Perna. (2005). *Borrowers Who Drop Out: A Neglected Aspect of the College Student Loan Trend*. San Jose, California: The National Center for Public Policy and Higher Education.

## APPENDIX: DATA SOURCES

### SURVEY OF HIGH SCHOOL SENIORS

#### Survey Instruments

The fall and spring high school senior survey instruments were developed by selecting items from the 1992 *Appalachian Access and Success* high school survey instrument and supplementing those with items from national surveys of high school students conducted by the National Center for Education Statistics. In order to best accommodate the diversity of resources available in the sampled high schools, the instrument was developed for both web-based and paper-and-pencil delivery. For the fall survey, a total of 806 students completed the paper version of the survey, and 339 students completed the survey via the web-based interface. For the spring survey, a total of 818 students completed the paper version and 229 students completed the web-based version.

#### Sample Selection and Survey Deployment

The original sampling frame included all public K-12 school districts in the 29-county region of Appalachian Ohio ( $N = 217$ ). A stratified random sample was selected, with stratification to ensure representation of high schools with and without active college access programs. Twenty-eight high schools in 14 counties were selected into the original sample, but five schools declined to participate. Once the survey was in the field and some preliminary results were available, two joint vocational schools were added to the sample in order to facilitate the inclusion of students involved in

tech prep and vocational programming. The Tri-County Career Center in Nelsonville, Ohio and the Collins Career Center near Chesapeake, Ohio were selected on the basis of convenience and their willingness to participate in the survey process. Although only two in number, it should be noted that together these career centers serve 16 school districts in four counties located within the study area. See Figure 6 and Figure 7 for school districts and the high schools in these districts that participated in the fall 2007 and spring 2008 surveys.

Once the schools were selected and agreed to participate, staff from the Ohio Appalachian Center for Higher Education, Ohio College Tech Prep, and Ohio University's Voinovich School contacted the high schools to establish the process for securing consent from students and parents, and for deploying the surveys. Ohio University's Voinovich School received 1,145 completed fall surveys for an overall response rate of 38 percent; the completed spring surveys totaled 1,047 for an overall spring response rate of 35 percent.

While the 2008 sample is comparable to the 1992 sample in the number of responses and number of high schools and counties surveyed, the overall response rate is lower than the 1992 response rate of 69 percent. The lower response rate for the 2008 survey is most likely due to two key differences between the current study and its 1992 predecessor, the requirement for active parental consent and an increase in the overall number and variety of surveys that are now deployed in the public schools.

Since the 2008 response rate was lower than the 1992 response rate, it is important to assess comparability and potential bias. In order to examine both response bias and comparability with the 1992 sample, a subsample of 2008 respondents



Figure 6: Location of School Districts Participating in the Survey

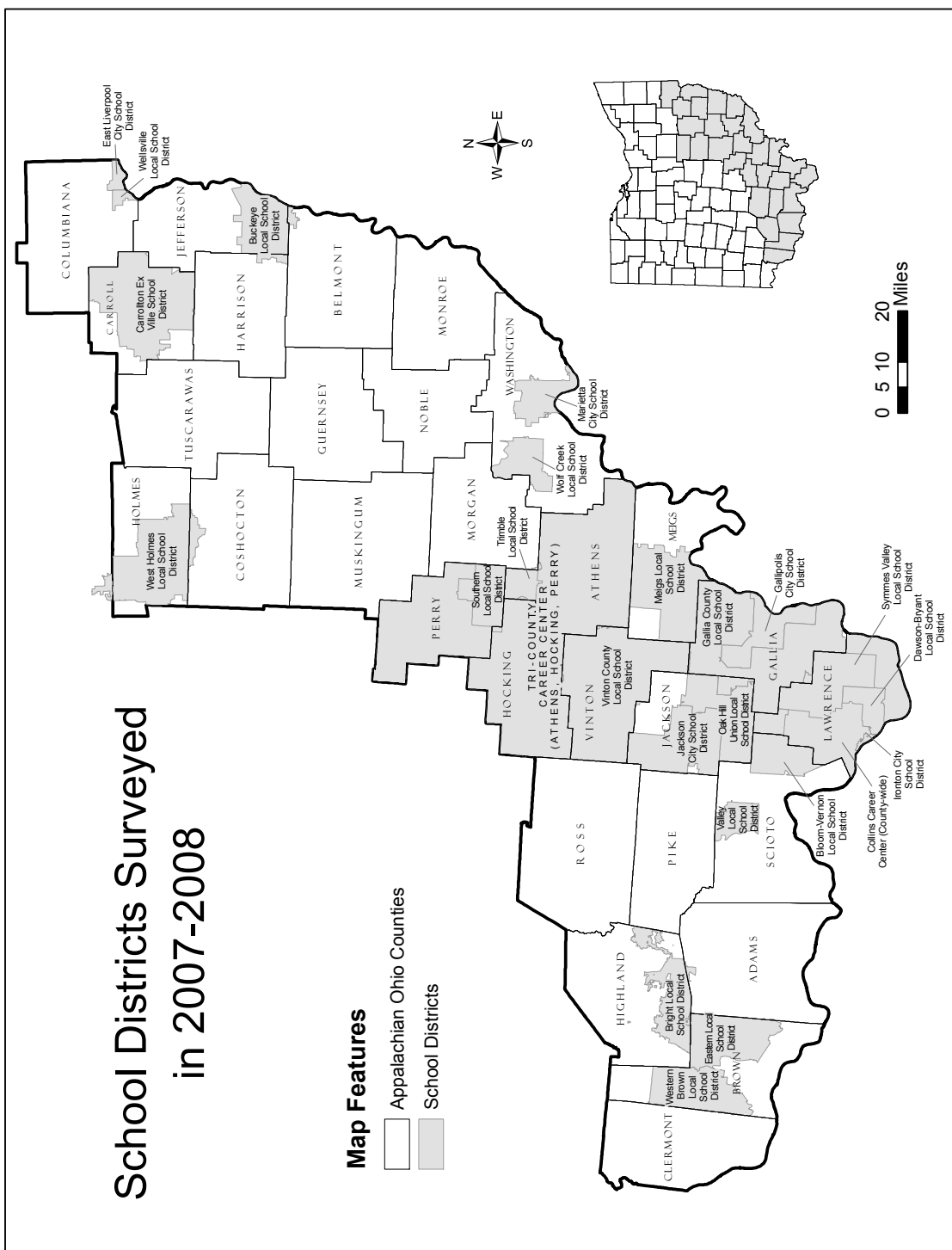
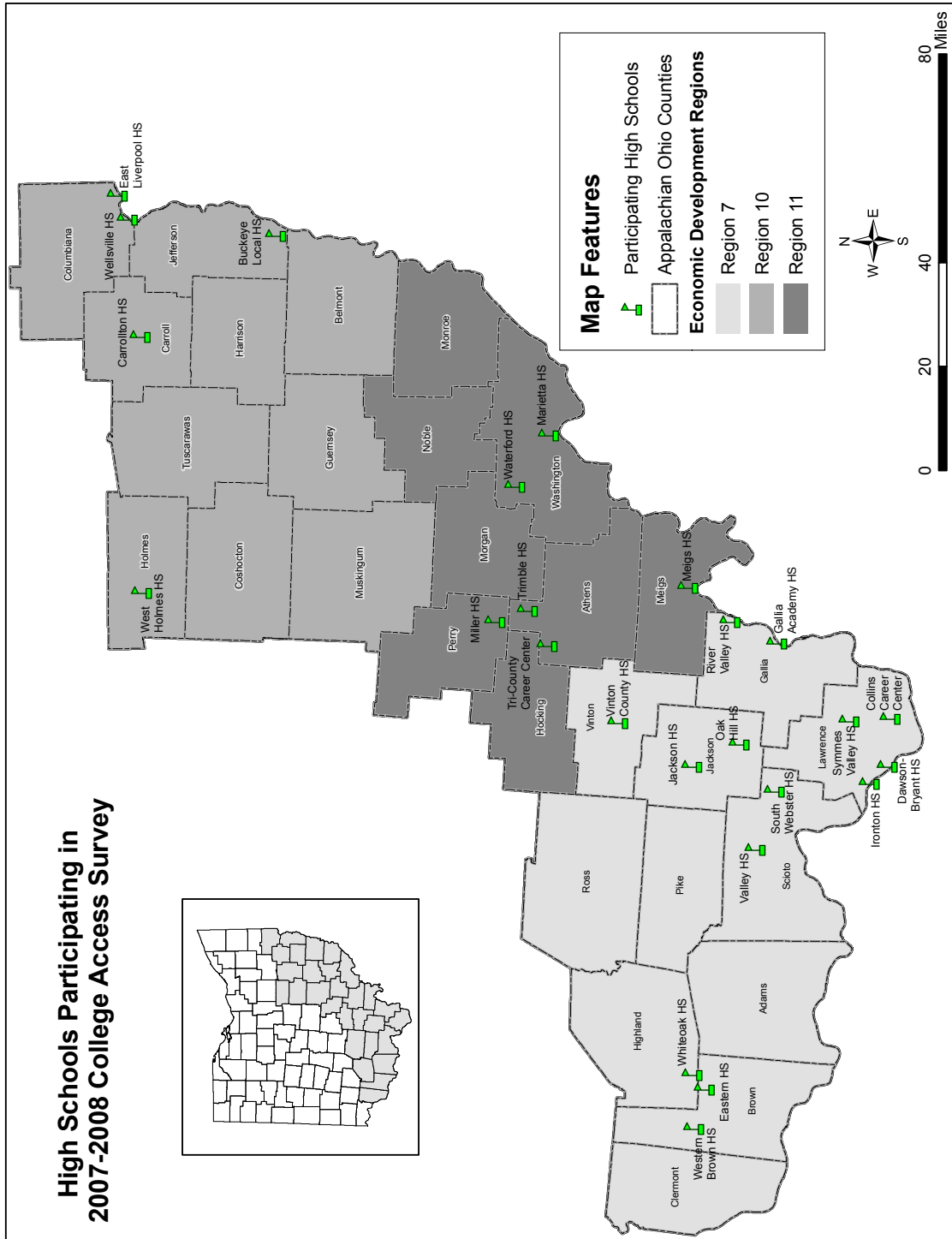


Figure 7: Location of High Schools Participating in the Survey



were chosen based on the response rates of individual high schools. This comparison of the full 2008 sample to the high response rate subsample indicates acceptable levels of similarity in respondents. It is reasonable to assume that data from the two samples can be compared. However, when 2008 results are compared to 1992 results, the subsample statistics were also calculated and any discrepancies reported.

The fall survey was the more comprehensive of the two instruments; the spring survey focused mainly on students' intentions to go on to higher education after graduation, whether they had applied and been accepted at a postsecondary institution, and information on financing and barriers to higher education. The spring instrument also collected various forms of contact information so that researchers can follow up with them in the 2008-09 academic year. Students who completed both surveys totaled 857. The source of the data (fall survey, spring survey, or respondents to both surveys) is noted for all analyses in this report.

## **SURVEY OF SENIORS' PARENTS**

### **Survey Instrument and Deployment**

The parent survey was developed by selecting items from the 1992 *Access and Success* parent survey instrument and adding items to address specific research questions for the 2008 study. The parent survey focused on the senior's intentions after high school, factors influencing college selection, barriers to pursuing higher education, and efforts made by the family to save for college expenses. The parent survey was developed as an anonymous tri-fold paper-and-pencil survey with return postage paid. Surveys were distributed to high school seniors completing the spring survey. The participating seniors were asked to take the survey home to their parent(s). Parents mailed the completed survey to Ohio University's Voinovich School. A total of 224 surveys were returned before June 2008. Due to the anonymous nature of

the survey, responses to the parent survey cannot be linked to particular high schools or students.

Due to the deployment technique, bias could have been introduced. Students with more interest in higher education may have been more likely to give their parents the survey and parents that want their children to pursue higher education may have been more likely to complete the survey.

## **SURVEY OF HIGH SCHOOL COUNSELORS**

### **Survey Instrument and Deployment**

The counselor at each high school participating in the high school student survey was asked to complete both a web-based survey and a structured interview (see Figure 6). All 25 counselors completed the interview, and 21 out of 25 completed the accompanying web-based survey. The survey instrument was developed by selecting items from the 1992 study and adding additional items to address specific research questions. Both the survey and interview collected information from the counselor's perspectives on efforts to provide information on higher education and college expenses, college readiness behaviors, and the barriers and challenges facing students at their school.

## **SURVEY OF COLLEGE STUDENTS**

### **Survey Instrument**

The college survey was developed by selecting items from two ongoing national surveys of college students, the *Baccalaureate and Beyond* and the *National Survey of Recent College Graduates*, and adding additional items to address specific research questions.<sup>34</sup> The survey was developed and deployed as a web-based survey. The college instrument collected information on high school experiences, college selection process, current enrollment, college expenses, and plans after graduation. Respondents were also asked to provide various forms of

<sup>34</sup>1993/03 *Baccalaureate and Beyond Longitudinal Study (B&B:93/03)*. National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.; 2006 *National Survey of Recent College Graduates*. U.S. Department of Commerce, Economics and Statistics Administration, Washington DC.

contact information so that researchers can follow up with them after graduation.

### Sample Selection and Deployment

Institutional research offices at the University of Cincinnati and Ohio University provided e-mail address for graduating students from a two- or four-year program with home addresses in an Appalachian Ohio county. Logistical constraints precluded surveying students from other universities during the spring of 2008. The sample from Ohio University and the University of Cincinnati, along with 2008 graduates of two- and four-year programs at other colleges and universities with large percentages of students from Appalachian Ohio counties, will be surveyed again in the late fall of 2008. These recent graduates will be asked about their success in the job market or graduate school so far, where they relocated (i.e. were they able to stay in Ohio if they wanted to?), student loan indebtedness, and other factors relevant to college access, retention, postsecondary pathways and completion for students in Appalachian Ohio.

The students surveyed at Ohio University and the University of Cincinnati received a web link to the survey in an e-mail explaining the study and inviting them to participate. Periodic e-mail reminders were sent to participants until July 7, 2008. A total of 149 respondents completed the survey between May and July 2008 for a response rate of 7.2 percent. Table 12 shows the percentage of enrollment with a home address in an Appalachian Ohio county for the two universities surveyed in the spring of 2008.<sup>35</sup>

### HIGHER EDUCATION INFORMATION (HEI) DATA

The Ohio Board of Regents' Higher Education Information database contains some of the richest information on postsecondary students attending two- and four-year institutions in Ohio. Specif-

ically, the HEI database is a comprehensive relational data warehouse maintained at the Ohio Board of Regents and contains data supplied not only by Ohio's colleges and universities but also data supplied by several federal, state, and local entities. From this vast repository the Ohio Board of Regents kindly agreed to provide us with data on two cohorts of students enrolling in Ohio institutions for the first-time - those who enrolled in Fall of 2001 and those who enrolled in the fall of 2003.

For each student in these two cohorts the data provided a full accounting of when and what high school they graduated from, their cumulative grade point averages (GPAs), parents' income, what college they enrolled in, if and when they stopped attending, when they graduated, their degree-level (bachelor's or associate's), the subject they majored in, and so on. Specifically, the data included a total of 161,859 freshman enrollee students, 80,472 enrolled in the fall term of the 2001-2002 academic year and 81,387 enrolled in the fall term of the 2003-2004 academic year. Appalachian students comprised about 12 percent of these records.<sup>36</sup> For ease of discussion, each of these groups is referred in this report to as the "2001 cohort" or the "2003 cohort".

The HEI database proved invaluable because they enabled us to answer some of the research questions guiding this study, questions that the high school, parent, counselor, and college surveys were simply not designed to address. It also enabled us to compare Appalachian students to their Non-Appalachian peers on a number of critical dimensions including, but not restricted to, graduation rates, barriers to higher education, and other attributes.

Here we do not discuss some of the well-known complex linkages between known barriers and students' higher education enrollment and degree attainment profiles but instead restrict our focus to providing what we see as critical snapshots

<sup>35</sup>Source: Ohio Board of Regents' Higher Education Information System - Autumn Enrollment by County: 2006 [Data file].

<sup>36</sup>Note that the original dataset received from OBR-HEI included a total of 175,363 student records. However, these included multiple records for students registered in more than one institution in a given cohort, and/or students registered in multiple cohorts. For our analytic purposes, we reduced these multiple records to a single record per student along the following lines: (a) For students with multiple records in a given cohort we retained the record with the highest number of course credits taken in the Fall term; (b) For students with records in multiple cohorts we retained their 2001 cohort record.

**Table 12: Appalachian Ohio Students' Enrollment in Surveyed Universities**

University	Campus	Enrollment Share
Ohio University	Main Campus	23.8%
Ohio University	Chillicothe Campus	79.5%
Ohio University	Eastern Campus	92.5%
Ohio University	Lancaster Campus	14.4%
Ohio University	Southern Campus	97.2%
Ohio University	Zanesville Campus	84.2%
University of Cincinnati	Main Campus	9.4%
University of Cincinnati	Clermont Campus	72.2%
University of Cincinnati	Raymond Walters Campus	10.5%

of the typical Appalachian student's experiences in pursuit of higher education in Ohio.

That said, we do target particularly well-known impediments to higher education. For example, it is well-known that first-generation students are less likely both to access the postsecondary education sector and to successfully nav-

igate the pathways to graduation. Therefore, in all analyses that employ the HEI data we not only compare profiles of Appalachian and Non-Appalachian students per se but also, where relevant, those of first-generation college attendees within the population of Appalachian and Non-Appalachian students, respectively.



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