



West Virginia Higher Education  
Policy Commission

Dr. Brian Noland, Chancellor

RESEARCH BRIEF

## FIRST-GENERATION STUDENTS IN WEST VIRGINIA: Findings from the 2010 Senior High School Opinions Survey

*This Higher Education Policy Commission Research Brief compares the high school experiences and college plans of first-generation students in the West Virginia high school class of 2010 to those of their peers whose parents or guardians had attended college. Here first-generation means those high school students whose parents or guardians did not attend any college. This brief provides a snapshot of differences between these groups with respect to academic preparation, college aspirations, college influences, and college choice. Just over 40 percent of respondents self-identified as first-generation students.*

### Key Findings

- First-generation students reported being less prepared for college-level coursework, including earning lower grades in high school, scoring lower on the ACT, and taking fewer math courses.
- Whereas 90 percent of non first-generation students planned to attend college, just over 73 percent of first-generation students said they would enroll in college after high school.
- Just over 53 percent of non first-generation students reported that they first considered attending college in elementary school, compared to just 26 percent of their first-generation peers
- First-generation students were more likely to report plans to rely on loans, federal grants, institutional scholarships, state need-based aid and work-study. Non first-generation students were more likely to cite parents/relatives as a source for funding college than first-generation students.

### Overview

In spring 2010, a sample of West Virginia's seniors was asked to respond to a series of questions about their high school experiences and their plans after graduation. The questions were intended to provide teachers, principals, counselors, faculty, administrators, and policy makers across the state with the most current snapshot of the students' perspectives, experiences, and plans as they transitioned to life beyond high school.

The sample was designed to be representative of the seniors enrolled in public high schools in 2010. In addition, because of considerable variation in the size of high schools, the sample was drawn to be representative across both small and large schools. A random sample was drawn from the 117 high schools across the state. In addition, all GEAR UP and GEAR UP comparison schools were purposefully sampled, resulting in a final sample of 61 schools. In total, 47 of the 61 (about 77%) high schools (had respondents). Responses are representative of the 18,472 high school seniors enrolled in spring 2010. A detailed description of the survey and methods used for this report can be found in the methodological appendix. All frequencies reported here represent weighted distributions.

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## Academic Preparation

Students were asked a series of questions about how prepared they were for college-level coursework after high school. First-generation students were more likely to have reported earning lower grades in high school, taking a two-year college preparatory curriculum, scoring below 22 on the ACT, and taking fewer math courses than their peers whose parents or guardians had attended college. For example, about 72 percent of non first-generation reported taking a four-year preparatory high school curriculum compared to 48 percent of first-generation students.

**Table 1:** Academic Preparation

		Not First-Generation	First-Generation
		Column %	Column %
Cumulative High School GPA	Not reported	13.8	16.4
	Less than 2.0	8.4	9.1
	2.0 to 2.99	14.4	21.4
	3.0 or Higher	63.4	53.1
High School Curriculum Path	Professional (prep 4-year college)	72.2	48.0
	Skilled (prep 2-year college)	16.9	27.6
	Entry (prep work-force)	4.4	11.5
	Unsure	6.5	13.0
ACT Scores	Not reported	32.2	53.9
	Bottom Quartile, <19	11.2	14.8
	Third Quartile, 19-21	15.9	14.9
	Second Quartile, 22-23	13.6	6.7
	Top Quartile, >=24	27.1	9.7
Highest Math Level Completed Successfully	Less than Algebra 1	0.8	1.1
	Algebra 1	1.4	2.2
	Geometry	5.4	12.3
	Algebra 2	32.4	42.3
	Trigonometry	26.3	23.1
	Pre-calculus	17.7	12.2
	Calculus or above	15.9	6.7

\*Differences statistically significant at the 95% confidence level.

## College Aspirations

Students whose parents or guardians had not attended college were less likely to consider attending college in elementary school, had lower aspirations for an academic degree, and were less likely to have visited a college campus during their senior year than their non first-generation peers. Whereas 90 percent of non first-generation students planned to attend college, just over 73 percent of first-generation students said they would enroll in college after high school. First-generation students were also more likely to report that they would delay their college enrollment. Educational attainment research suggests that students who delay college entrance after high school are less likely to attend and eventually graduate than those who go directly to college.

Just over 53 percent of non first-generation students reported that they first considered attending college in elementary school, compared to just 26 percent of their first-generation peers. Overall, first-generation students were less likely to report that they would go to college and that they had applied. Over 35 percent of first-generation students had not visited a college campus during their senior year, compared to almost 20 percent of their non first-generation peers.

**Table 2: College Aspirations**

		Not First-Generation	First-Generation
		Column %	Column %
First considered attending college	Elementary school	53.1	26.2
	Middle school	22.5	25.0
	Freshman year of HS	6.8	12.6
	Sophomore year of HS	2.8	4.3
	Junior year of HS	4.8	8.5
	Senior year of HS	4.7	7.8
	Never considered going	5.2	15.5
I have decided to attend college		90.0	73.1
I have decided to attend college next fall		83.6	62.3
I have already applied to college		80.4	58.8
Number of college campus visits in past 12 months	None	19.4	35.4
	One	21.0	23.3
	Two	22.7	18.1
	Three	15.4	10.8
	Four	7.3	4.3
	Five or more	14.2	8.1
Highest academic degree student hopes to obtain	No academic degree	1.8	3.5
	High School diploma/GED	5.3	15.4
	Vocational or undergraduate certificate	4.9	7.5
	Associate's Degree	7.2	14.0
	Bachelor's Degree	28.1	29.8
	Master's Degree	31.7	21.2
	Doctoral degree	20.9	8.6

\*Differences statistically significant at the 95% confidence level.

### College Influences

Students were asked questions regarding how well informed they felt about certain college finance options, who influenced their college aspirations, and what their major sources of information about college were. Significant differences emerge between first-generation and non first-generation students.

Overall, close to 80 percent of non first-generation students said they felt somewhat or very informed about the PROMISE scholarship compared to about 68 percent of first-generation students. First-generation students

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reported feeling more informed about Pell Grants, a federal need-based grant program. All students reported more frequently that parents/guardians were very or somewhat influential on their college aspirations.

Interestingly, however, close to 90 percent of non first-generation students cited the influence of parents or guardians compared to about 77 percent of first-generation students. First-generation students were more likely to report a teacher being influential than their non first-generation peers. College websites were listed most frequently as a very or somewhat important source of information for both first-generation and non first-generation students, though websites were more frequently reported as important by the latter.

**Table 3:** College Influences

	Not First-Generation Column %	First-Generation Column %
<b>Informed about Financing Options</b>		
PROMISE Scholarship	78.3	66.8
Federal Loans*	60.8	59.6
Pell Grant	50.3	54.9
Work study*	52.9	51.5
West Virginia Higher Education Grant Program	47.1	49.6
West Virginia Engineering, Science and Technology Scholarship	31.7	35.0
College Savings Plans (529 Plans)*	34.7	35.0
Tax Credits (e.g., Hope, American Opportunity)	28.0	31.1
West Virginia Higher Education Adult Part-Time Student Grant	24.3	30.3
Underwood-Smith Teacher Scholarship	24.5	28.7
<b>Influences on College Aspirations</b>		
Parent/Guardian	89.2	77.7
Teacher	60.5	63.1
Friend*	63.3	62.1
Grandparent	58.7	54.6
Guidance Counselor	45.5	51.0
Other family member	52.1	50.1
Sibling	44.2	41.0
College admissions counselor*	39.1	37.8
Principal	32.1	35.7
Coach	30.8	27.7
Religious leader*	27.7	26.4
Community outreach counselor*	15.8	16.2
<b>Sources of Information about College</b>		
College websites	81.0	69.1
Direct mail	63.4	59.1
Brochures	58.8	56.2
E-mail	56.2	51.0
College fairs*	49.8	49.9
College planning websites*	44.4	44.9
Television	31.8	35.1
Signs	30.3	33.8
CFWV.com	29.5	32.0
Magazines	29.3	31.6
Newspapers	24.6	27.6
Radio	22.6	26.0

\*Differences statistically significant at the 95% confidence level.

## College Choice & Finance

First-generation students were less likely to have submitted a FAFSA, more likely to plan on attending college part-time, and more likely to report plans to attend a community college than their non first-generation peers. Whereas just over 80 percent of non first-generation students said they planned to rely on parents/relatives to finance college, only about 66 percent of first-generation students said the same. First-generation students were more likely to report plans to rely on loans, federal grants, institutional scholarships, state need-based aid and work-study. Interestingly, non first-generation students were more likely to report affordability as a somewhat or very important factor affecting college choice than their first-generation peers.

**Table 4:** College Choice

	Not First-Generation	First-Generation
	Column %	Column %
<b>Submitted a FAFSA</b>	84.0	76.0
<b>Plans to attend Full-time</b>	90.6	81.1
<b>Plan to attend Part-time</b>	9.4	18.9
<b>Sources of Financing College</b>		
Parents/relatives	80.1	66.1
Personal savings	61.0	56.9
Federal loans	41.9	48.5
Pell Grant	34.4	47.5
Scholarship from the college	58.1	47.3
Other loans	40.5	46.2
State need-based aid	29.8	39.5
Work-study	32.3	36.6
Scholarship from private source	33.6	28.1
PROMISE Scholarship	39.1	27.7
Military programs*	10.1	10.7
<b>Institution Type</b>		
On-line	0.1	0.1
Out-of-state	10.3	5.8
In-state, Independent	6.2	4.8
In-state, Community & Technical College	10.3	14.8
In-state, Baccalaureate-granting	50.0	31.7
Missing or Did Not Reply	23.0	42.9
<b>Factors influencing college choice</b>		
Affordability	81.1	68.7
Marketing Material from Institution	62.7	52.4
Scholarship Offer	64.5	50.2
Academic Reputation of Institution	67.1	50.0
Part-time Employment Available at Institution	52.0	49.3
Close to home	52.2	48.7
Attractive Social Life	58.6	44.7
Size of Student Body	53.3	44.0
Plan to Live and Work in Same State Post-Graduation	45.6	43.8
Near enough to live at home	42.4	43.4
Easy to Gain Admission	45.0	41.9
PROMISE Scholarship Accepted at the Institution	52.1	39.3
Friends Attending Same Institution	43.7	38.8
Honors Programs	42.5	34.2
Attractive Athletics Program	40.5	32.7
Parent Preferences	42.2	31.6
Attractive Religious Affiliation or Program	29.4	27.2
Institution Recommended by Teacher or Counselor*	27.6	25.8

\*Differences statistically significant at the 95% confidence level.

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**Methodological Appendix**

The target population for the survey was all West Virginia students who were high school seniors in spring 2010. Respondents were selected through a random, stratified sample. High schools were the primary sample unit, with the sampling frame constructed from a list of all high schools ( $n=117$  in 2010) maintained by the West Virginia Department of Education. High schools were stratified by the size of the senior class as well as the three U.S. Congressional districts in West Virginia in order to make the sample as representative as possible. High schools were assigned to Congressional districts based on the address of their main administrative office. To stratify by senior class size, each high school was assigned to a quartile. The lowest quartile had fewer than 86 students in the senior class, followed by 86 to 137, 138 to 197, and 197 or more. Data on senior class size were obtained from the U.S. Department of Education's Common Core of Data for 2009.

In addition, all Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) schools ( $n=18$ ) in West Virginia as well as their comparison schools ( $n=18$ ) were sampled. GEAR UP schools are those that participate in the GEAR UP program administered by the West Virginia Higher Education Policy Commission. Comparison schools for GEAR UP were selected prior to survey administration using Euclidean distance similarity measures. The percentage of tenth-grade students who achieved proficient levels in reading and math in 2008 WESTEST were used as matching factors (except Lincoln County High School, for which the 2009 data was used). Other key school level indicators (e.g., school size, graduation rates, percentage of low-income students, and proportion minority students) were also generally matched for each pair of schools.

Sampling was implemented via PROC SURVEYSELECT in SAS version 9.1. In total, 61 schools—including all GEAR UP and comparison schools were selected to receive the survey. The survey was administered via high school guidance counselors who were asked to distribute hard copies of the instrument during the homeroom period. To elicit a high response rate, three follow-up contacts were made with guidance counselors and principals. In total, 47 of the 61 (about 77%) of high schools had respondents. Overall, 4,592 students responded to the survey, representing about 25 percent of the target population ( $n=18,365$ ) and 51 percent of the sample ( $n=9,071$ ).

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