

vsac special report

Gaps in postsecondary education aspiration:

A report on disparities among Vermont's high school graduates

Introduction

For many Vermont families, sending their children off to college to earn a degree that will lead to more and better opportunities is a celebrated rite of passage, part of the known and expected transition to adulthood. For too many Vermont families, however, college is a dream, the path to which is fraught with obstacles that wear them down and convince them that their hopes and aspirations for their children are unattainable. In fact, many write off the possibility of education or training after high school before the process even begins.

The Great Recession of 2008–2010 has had a significant effect on Vermonters of all walks of life. It laid bare the challenges of social and income inequality in our state and across the nation. In 2013, U.S. adults aged 25–32 with only a high school diploma earned a median income of \$28,000. According to the Pew Research Center (2014), these high school graduates now earn 11 percent less in constant dollars than did the same group in 1965. In contrast, adults aged 25–32 with a baccalaureate degree earned a median income of \$45,500, 17 percent more than those in 1965 (Figure 1).

The level of education attainment has become one of the defining markers of intractable income inequality (Lumina Foundation, 2013). The Great Recession clearly marked the end of an era in which a high school diploma enabled graduates to find work that would allow them to support their families with a middle-class income.

There are clear social justice reasons for addressing the rising income inequality caused by the education attainment gap. There are equally compelling fiscal and economic development reasons. The Federal Reserve conducted a study of differences in per capita income between states and concluded that a state's "knowledge stocks," measured by high school and college attainment rates and stock of patents, are the main factors explaining a state's relative per capita income (Bauer, Schweitzer and Shane, 2006). Simply put, higher state per capita income is a product of its efforts to increase education attainment. Conversely, low per capita income is a product of state disinvestment in postsecondary education attainment.



Vermont Student Assistance Corporation

10 East Allen Street
PO Box 2000
Winooski, VT 05404
Toll-free **800-642-3177**
Burlington area **655-9602**

Visit us online at
www.vsac.org

E-mail us at
research@vsac.org

April 2014

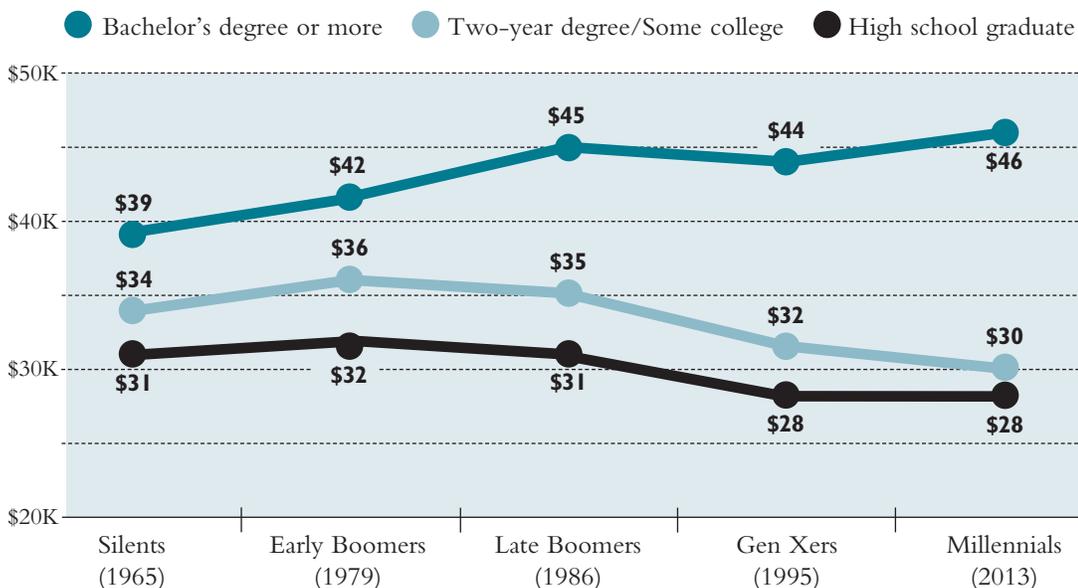
Increased education attainment also has a positive fiscal impact on state and local budgets, important for a state, such as Vermont, that faces significant budget challenges. (Baum, Ma and Payea, 2013). Individuals with higher levels of education:

- Earn more, pay more in federal and state taxes, and accumulate more retirement savings than those with less education;
- Have lower rates of unemployment and are less likely to require public assistance;
- Re-enter the workforce more quickly if they become unemployed;
- Have better health outcomes and are more involved in their communities; and
- Have children who do better in school and are motivated to pursue higher education themselves.

Preparing all students for the journey to some form of postsecondary education or training is a state imperative. Underscoring the need to address this critical state priority, researchers predict that the proportion of Vermont public school students eligible to participate in the subsidized lunch programs may grow as much as 1.3 percent a year, or from 40 percent in 2012 to 66 percent in 2030 (Mortenson, 2013a).

This paper presents findings from the most recent survey of Vermont’s high school seniors that show significant disparities in graduates’ plans after high school. Male students and students from households where neither parent has a college degree are less likely to aspire to attend college or obtain additional training after high school. Moreover, our findings suggest that aspiration rates vary considerably by region, adding another layer of complexity to the challenge of raising aspiration rates across the state. Increasingly, the likelihood that a student will obtain the education or training after high school he or she needs has become as much a function of family education and geography as of hard work or aptitude.

Figure 1. Rising earnings disparity between young adults with and without a college degree



Notes: Median annual earnings are based on earnings and work status during the calendar year prior to interview and limited to 25–32 year-olds who worked full-time during the previous calendar year and reported positive earnings. “Full-time” refers to those who usually worked at least 35 hours a week last year.

Source: Pew Research Center.

The need to help prepare all — not just many — of Vermont’s children academically, and inspire them to look beyond high school, is a shared responsibility and investment. Likewise, success in doing so will undoubtedly lead to an immeasurable shared return on that investment. As stated by Berger and Fisher (2013), “The benefits of a more educated population accrue not only to the more educated workers, but to future generations and to the broader society.”

In the first section of this report, we present factors known to be associated with postsecondary aspiration, and describe programs and practices that help increase the aspiration rate. We include preliminary findings from an upcoming report on the rate at which low-income and first-generation students enroll in postsecondary programs. Finally, we propose strategies to increase opportunities for early career and education exploration and to change the trajectory of postsecondary aspiration rates.

Post-high school plans: Gaps in aspiration

Every student should graduate from high school with a clearly defined plan for obtaining the education or training needed to achieve his or her life goals. Ideally, the transition from high school to postsecondary education and training and the workplace should be as simple and as seamless as the transition from middle school to high school. No student graduates from middle school without knowing where he or she will be as a ninth grader. Our failure to consistently provide the same level of guidance and support to all high school seniors leaves too many students and their families without the knowledge or support they need to make this transition successfully. This does not reflect a failure on the part of any individual or group: it represents a policy and systems failure. Our policies and system of education remains rooted in a 19th- and 20th-century, agrarian model that assumed that a high school diploma provides the skills needed for most people to transition to the workforce. There is irrefutable evidence that this is no longer true.

Vermont excels in supporting students in their transitions through middle school and high school. Nearly 88 percent of students who start the ninth grade successfully complete high school within four years (Vermont Agency of Education, 2013). By comparison, U.S. Secretary of Education Arne Duncan recently announced the national 2010–2011 averaged freshman graduation rate as 80 percent (Duncan, 2014). While every child who fails to graduate is a loss, our high school continuation and graduation rates are among the top in the nation.

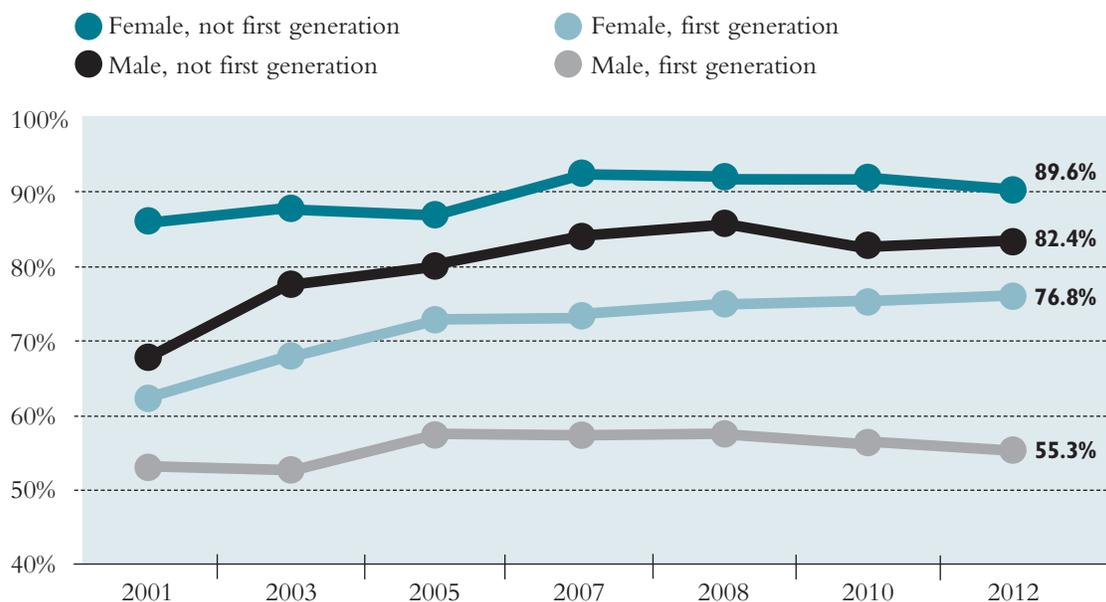
Vermont slightly outperforms the nation in the proportion of high school seniors who aspire to continue their education after high school. Preliminary findings from a nationally representative sample of ninth graders indicate that by the spring term of the 11th grade, 72.5 percent of students planned on pursuing some form of postsecondary education or training after graduating from high school (Ingles and Dalton, 2013). Vermont has been measuring the aspiration rate — the proportion of high school seniors who report they plan to pursue some form of education or training soon after graduating from high school — since 1978. The Vermont high school Class of 2012 had a postsecondary education or training aspiration rate of 74.8 percent. This rate is higher than the national 11th-grade average, as reported by Ingles and Dalton, but virtually unchanged since the Senior Survey was conducted in 2010.

Below the surface, however, the data suggest that there are gaps in aspiration that we as a state must address. There have been subtle declines in aspiration rates for both males and females since 2008, the year we hit record high aspiration rate levels (82 percent for females and 71 percent for males). It is likely that two factors are affecting these declines. The Great Recession placed greater pressure on family income and discouraged lower- and middle-income families from pursuing education opportunities that, with available financial aid, they may have been able to afford. In addition, political discourse about the value and affordability of education and training may have disproportionately discouraged first-generation students and their families from fully exploring their education and training options.

The Senior Survey data show that differences in aspiration rates strongly correlate with parental educational attainment and are heavily influenced by gender. The aspiration rate of first-generation females has risen significantly over the past decade, while the aspiration rate of first-generation males has remained unchanged and continues to be significantly lower than the other groups (Figure 2).¹

Figure 2 also shows the growing gender gap in postsecondary aspiration among first-generation students. From 2007 to 2012, the difference in aspiration rates between male and female first-generation students increased from 15.8 points to 21.5 points. In contrast, the gender gap among students who are not first generation decreased during this period, from 8.2 percentage points to 7.2 points.

Figure 2. Trends in aspiration rates for recent high school graduates by gender and parent’s educational attainment level



¹ For the purposes of this report, students who report that neither of their parents (or guardians) has obtained a four-year degree are referred to as first-generation students. Students with at least one parent who has obtained a four-year degree are not first generation.

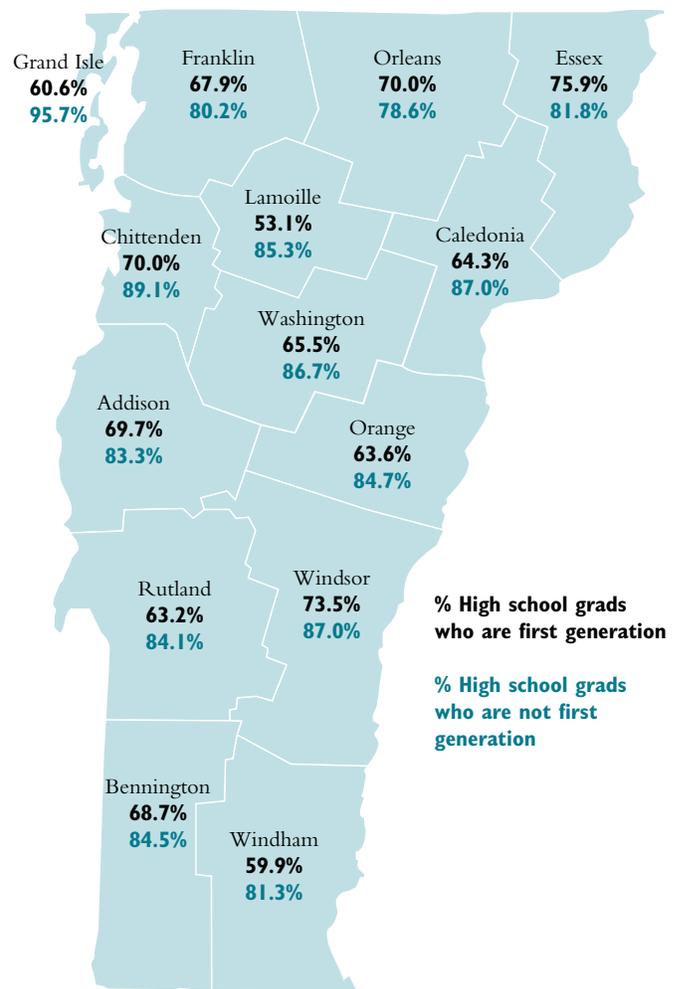
Further, the data indicates that counties vary widely in the proportion of their high school seniors who plan to continue their studies after graduation. But the gap in aspiration between students whose parents don't have a four-year degree, and those with at least one parent who has a four-year degree, is even wider (Figure 3). As the map shows, the aspiration gaps between students who are first generation and those who are not first generation are distributed unevenly across the state.

Differences between Vermont's counties may be a reflection of the inherent economic and social diversity across the state. It was once assumed that rural areas had wider gaps and lower aspirations. Data from the 2012 Senior Survey suggests this is not always the case. What we know is that the differences seem to persist after students graduate from high school. Preliminary findings from a study of this cohort's postsecondary enrollment (forthcoming, summer of 2014) suggest that these differences become even more acute. Data collected from the National Student Clearinghouse indicate that the continuation rate, or percentage of Class of 2012 high school graduates who enrolled at a two- or four- year institution, is more than 14 percentage points below the aspiration rate.

These findings underscore an important point: Our critical state education priorities should not be limited to improving the test scores and academic performance of elementary and secondary students. It reinforces the need for a fundamental shift in education policy and systems to provide all students with the knowledge, skills, and concrete plans they need to prepare for and succeed in life after high school.

The next section of this report examines the factors that research has demonstrated affect the aspiration and postsecondary education and training continuation rates of students across all demographic groups.²

Figure 3. Vermont postsecondary education aspiration rate by county



² Throughout this report we refer to postsecondary education or training. There are many education, training and apprenticeship options from which students may choose. Unless noted, references to postsecondary education or training are not limited to degree programs and include the multitude of options that are available.

Factors associated with postsecondary aspiration

Parents' influence

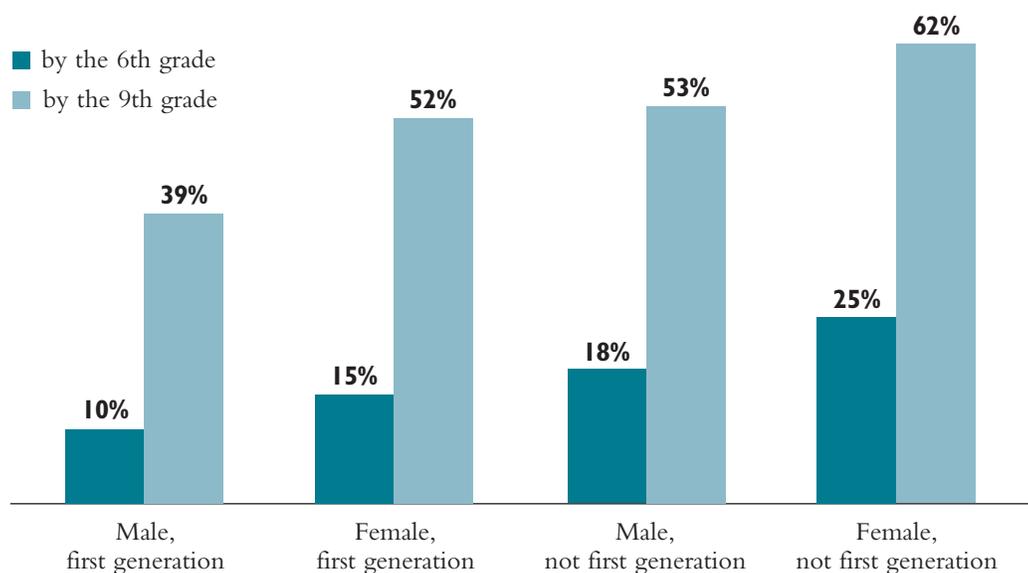
Parents' educational attainment and the benefits that accrue from growing up in a family that had experience with applying for, going to, and graduating from college affects parents' actions and expectations about college for their own children. Of particular interest is determining when families begin talking about life after high school and what these students feel their parents want them to do.

Talking about post-high school plans

Findings from the Class of 2012 Senior Survey show a great diversity in when family conversations about what to do after high school first begin. Few families, 17 percent, started talking about post-high school plans before students entered the middle school years. First-generation males were the least likely group to begin talking with their parents about post-high school plans in elementary school. Only 10 percent of first-generation males report talking to their parents about what to do after high school by the time they were in the sixth grade. By comparison, 18 percent of males who are not first generation had done so (see Figure 4).

While early conversations are relatively rare for all students, the majority of students, 51 percent, reported having started talking to their parents about what to do after graduating from high school by the time they reached ninth grade. The notable exception is among first-generation males, 39 percent of whom report having had these types of conversations before starting high school. As will be discussed later in this report, delaying discussions about high school and training until later in high school has a negative impact on course selection during the early years of high school and can prevent "late deciders" from meeting academic course requirements for the education and training to which they subsequently aspire.

Figure 4. Starting the "post-high school" conversation



Parents' aspirations

Parents' aspirations for their children matter. The majority of students (63.6 percent), regardless of their parents' educational level, reported they felt their parents wanted them to continue their education immediately after high school, significantly higher than those who felt their parents preferred they enter the workforce (10.4 percent) or join the military (2 percent). Twenty-one percent reported their parents' willingness to let the student themselves decide what to do after graduation. Still, students with parents who completed a four-year degree were more likely than first-generation students to say their parents wanted them to continue — 71.2 percent and 58.5 percent, respectively.

As shown in Table 1, the aspiration rates among students who say their parents want them to continue range from 87 percent to 98 percent. In contrast, the aspiration rate of students who say their parents want them to enter the workforce is significantly lower, ranging from 14 percent to 36 percent.

Table 1. How parents' aspiration and education levels impact students' plans

Parents want student to:	Student is:	Male student aspiration rate	Female student aspiration rate
Continue studies	First generation	87%	92%
	Not first generation	97%	98%
Enter the workforce	First generation	14%	17%
	Not first generation	36%	32%

There may be a number of good reasons why parents might encourage their children to postpone or decline pursuing additional training after high school, a question that fell outside the scope of this project. However, it is clear that parents whose expectations are understood to be that their children continue their studies are likely to have children who intend to enroll in an education or training program soon after graduating.

Early career exploration and education planning

Exploring different career options and getting information about the education and training needed to pursue those careers is an important and necessary step in preparing for life after high school. The good news is that Class of 2012 graduates reported that they received information about post-secondary education earlier in their educational careers than did their peers a decade ago. The bad news is that the Class of 2012 graduates report receiving career information later than did their peers a decade ago.

In 2001, 27 percent of graduates reported that they received information about education after high school in the eighth grade or earlier. By 2012, this had increased to 37 percent. At the same time, however, students reported having received information about careers later in their high school career. Forty percent of graduates in 2001 reported that they received career information in the eighth grade or earlier. By 2012, this had decreased to 33 percent (Table 2). Together, these findings indicate that about two-thirds of all high school graduates report first receiving information about career exploration and postsecondary education after they had already started high school. This can negatively affect ninth- and 10th-grade course selection, making it difficult to meet postsecondary admission requirements once a decision is made.

Table 2. Graduates who report first receiving career or education planning information before entering high school: Class of 2001 & 2012

Type of information:	Class of 2001	Class of 2012
Postsecondary information	27%	37%
Career information	40%	33%

Postponing career exploration and related information about postsecondary training and education options until students reach high school may influence postsecondary aspirations and the timing of those decisions. These findings suggest there are different windows of opportunity for providing guidance, career awareness, and exploration curriculum to students who may be questioning pursuing postsecondary training or education.

However, the need for information and assistance for postsecondary planning isn't only for those students who may be on the fence about college. A recent national report found that even students who were actively preparing to apply to colleges felt they needed this type of support (ACT, 2013). More than 60 percent of ACT-tested high school graduates reported needing additional assistance with deciding their education and career plans. The report also found that the proportion of students feeling they needed assistance was lower among the high school graduates who reported being "very sure" of their planned major.

Preliminary findings from a meta-analysis of the pre-college access literature (Harvill, Maynard, Nguyen, Robertson-Kraft and Tognatta, 2012) indicate that programs that provide students with supplemental services such as counseling, social and academic enrichment, and mentoring have a positive impact on high school graduation and college enrollment. Findings from VSAC federally funded outreach programs also indicate that targeted interventions make a difference. VSAC outreach programs provide low-income and/or first-generation students with a variety of early awareness, career, and postsecondary exploration experiences in middle school and high school, as well as individualized counseling such as assistance in planning for and applying for college and financial aid.

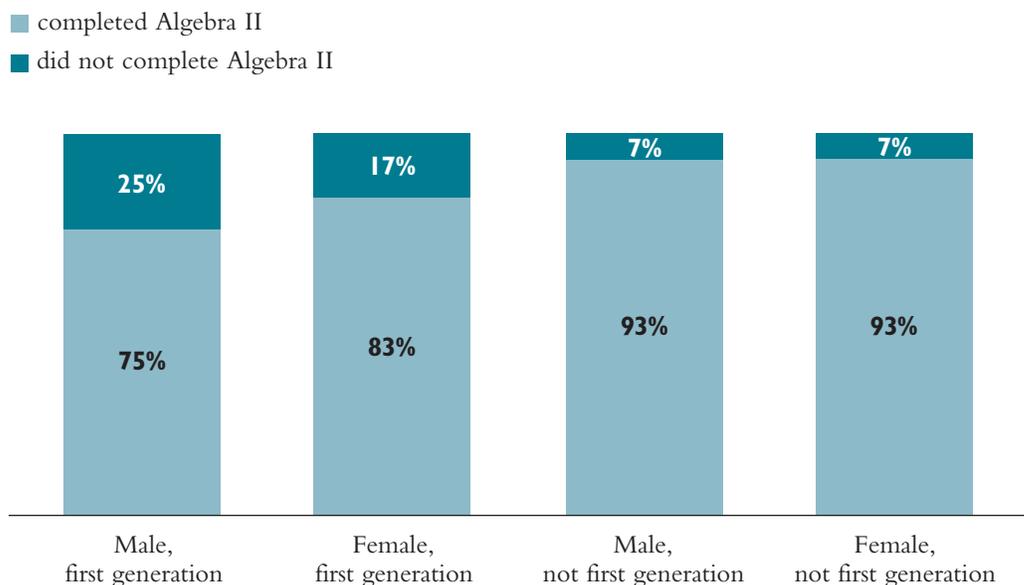
These students, served by a caseload model, have postsecondary enrollment rates that are dramatically different than low-income students in general.

The most recent performance data show that 83 percent of GEAR UP’s Class of 2012 caseload students continued their studies within six months of graduating from high school. This rate far exceeds the state’s overall postsecondary enrollment rate of 60 percent and the postsecondary enrollment rate of students who are eligible for free- or reduced-priced lunch programs (43 percent, VT AOE, 2013).³ Findings from an in-depth analysis of the postsecondary outcomes of Vermont’s outreach programs (Massell, 2010) suggest that students served by the caseload model enroll in and complete college degrees at a higher rate than low-income students who did not receive this level of support.

Academic preparation

It is now widely accepted that a rigorous high school curriculum prepares students and leads to an increased likelihood of enrolling and succeeding in college (Kurlaender and Howell, 2012). The Senior Survey data find that first-generation graduates were less likely to report having completed a higher-level mathematics class such as Algebra II, long considered as a gateway to the rigorous curriculum needed for college preparation. First-generation males were the least likely group to complete Algebra II. Students whose parents’ had received a college degree report having completed Algebra II at an equal rate, regardless of gender (Figure 5).

Figure 5. Students’ Algebra II completion by gender and parental education attainment

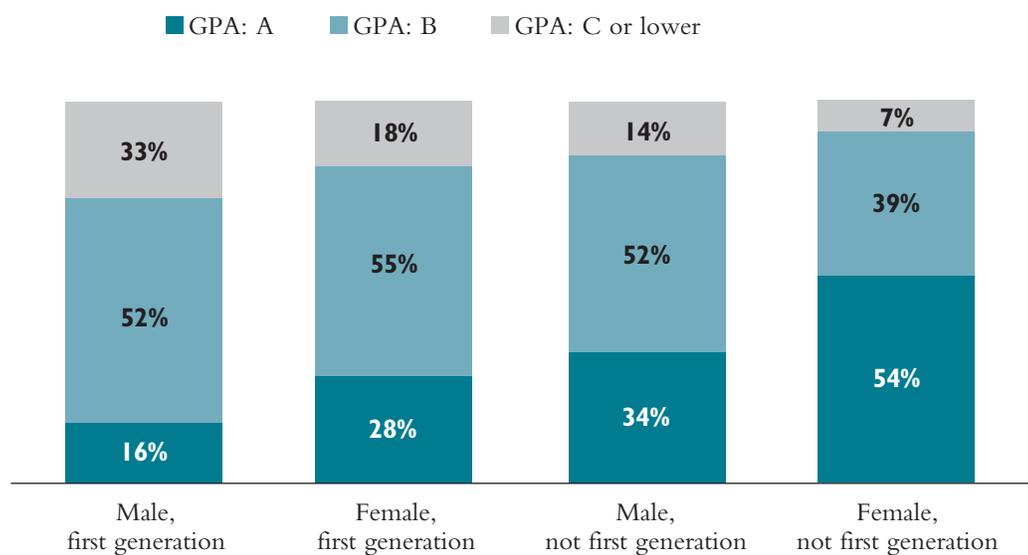


³These rates are for Vermont’s high school Class of 2011 students who graduated with a regular high school diploma and enrolled in an institution of higher education within 16 months of their high school graduation date, a slightly different set of criteria than VSAC uses. Similar to VSAC’s GEAR UP postsecondary enrollment rate, the state’s published enrollment rate is not based on the ninth-grade cohort; it was also derived from the National Student Clearinghouse’s database.

These findings are consistent with the preliminary findings from the High School Longitudinal Study (HSLS:09), a nationally representative survey of ninth graders who will be followed into young adulthood. Findings from the second wave of data collection show females are more likely to be enrolled in Algebra II or more advanced mathematics courses than males by the spring term of 11th grade. Even more striking is the pattern of mathematics enrollment by parent education; the higher the parent’s educational attainment, the higher the proportion of students who were enrolled in Algebra II or more advanced classes. Specifically, fewer than 68 percent of students from households where the highest level of education held by a parent is a high school diploma were enrolled in higher-level math courses; by comparison, 85 percent and 91 percent of students whose parents have a bachelor’s degree or a master’s degree, respectively, were enrolled in higher-level math course by the end of 11th grade (Ingels et al., 2013).

For the Vermont Class of 2012, the average grade point average (GPA) also varied significantly across all groups (see Figure 6). More than half of females from households where at least one parent had a four-year degree reported having strong grades (an A average), highest of all the groups. In contrast, 16 percent of first-generation males reported earning an A average. Taken together these findings suggest significant differences in the high school experiences of students by gender and parental educational attainment.

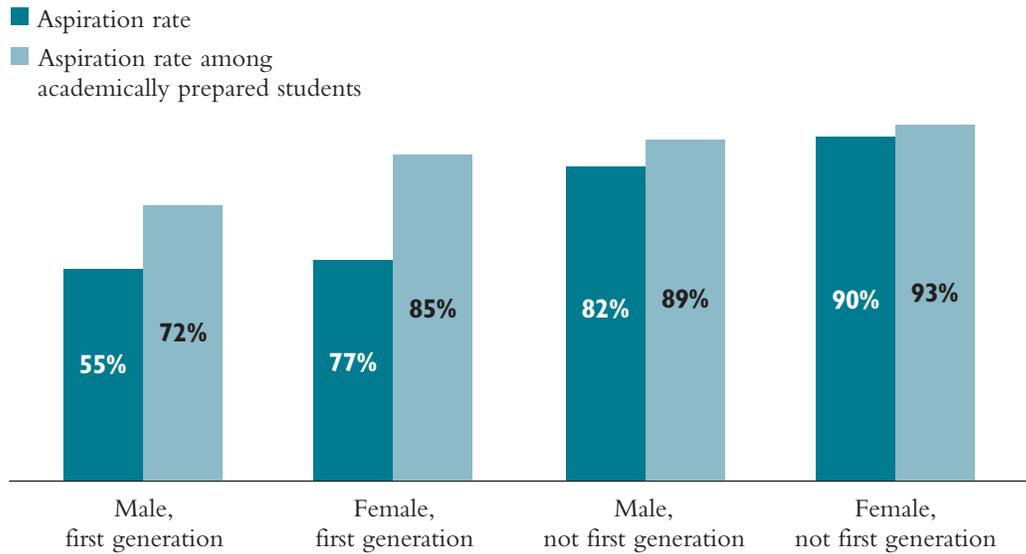
Figure 6. High school GPA by gender and parental education attainment



But what of students who are academically prepared? As would be expected, students who completed Algebra II and had a GPA of B or better were much more likely to plan to continue their studies after graduating from high school. While there were still differences by gender and parental educational attainment, the gaps in aspiration narrowed dramatically. Among first-generation students with a B average or better, the aspiration rate was 72 percent for males and 85 percent for females. Students with a B average or better whose parents had completed a four-year degree had higher rates —

89 percent for males and 93 percent for females. When compared with the overall group rates, the aspiration rate of academically prepared, first-generation males approximated the statewide aspiration rate of 74.8 percent (Figure 7).

Figure 7. Aspiration rates among academically prepared students and overall, by group



Our data suggest that when controlling for academic preparation, some regional differences persist, but all show improvement. Table 3 shows the county-level aspiration rates of first-generation students overall and that of first-generation students who were academically prepared. Note that in all but two counties (Lamoille and Rutland), academically prepared, first-generation students have aspiration rates that are above the statewide average of 74.8 percent.

Table 3. County-level aspiration rates among first-generation students overall and among those who are academically prepared

	Addison	Bennington	Caledonia	Chittenden	Essex	Franklin	Grand Isle	Lamoille	Orange	Orleans	Rutland	Washington	Windham	Windsor	Statewide
First generation, overall	69.7	68.7	64.3	70.0	75.9	67.9	60.6	53.1	63.6	70.0	63.2	65.5	59.9	73.5	66.9
First generation, academically prepared	84.7	78.0	75.7	82.8	78.9	81.9	84.2	63.2	80.2	84.2	72.4	76.1	81.3	88.4	79.9

Postsecondary outcomes: A first look

Preliminary findings from a study on the Class of 2012's postsecondary outcomes suggest that the disparities in aspiration persist even after students enroll in college (forthcoming, summer of 2014). Using data from the National Student Clearinghouse (NSC), we examined the postsecondary participation rate (whether high school graduates subsequently enrolled at a two- or four-year postsecondary institution) and persistence rate (whether college enrollees returned to college for a second year) for the cohort.

Six out of 10 Vermont students who graduated in 2012 were found to be enrolled at either a two- or a four-year postsecondary institution by the fall of 2012.⁴ Thus, Vermont's postsecondary enrollment rate is lower than the comparable national rate for the high school Class of 2012, which, according to the U.S. Census Bureau was 66 percent.⁵

Although the state's overall rate is lower compared to the nation, Vermont continues to be outpacing many states in the percentage of low-income students enrolled in college. By comparing the total number of Pell recipients in AY11–12 to the number of fourth to ninth graders nine years earlier who were approved for the free- or reduced-price lunch program, researchers are able to compare how well states are succeeding, or failing, in their college access efforts. The most recent data compiled by the Pell Institute shows Vermont ranks second in the nation in college participation rates for students from low-income families, with 40 percent of low-income students enrolled at a four-year institution and receiving Pell grants. At the other end of the spectrum, Alaska ranks last in the nation, with less than 10 percent of low-income students enrolling at a four-year college (Mortenson, 2013b).

Despite Vermont's success in providing access to postsecondary education for its most vulnerable students, the Senior Survey findings provide insight on how disparate the postsecondary enrollment patterns are between students who are first generation and those who are not first generation.⁶

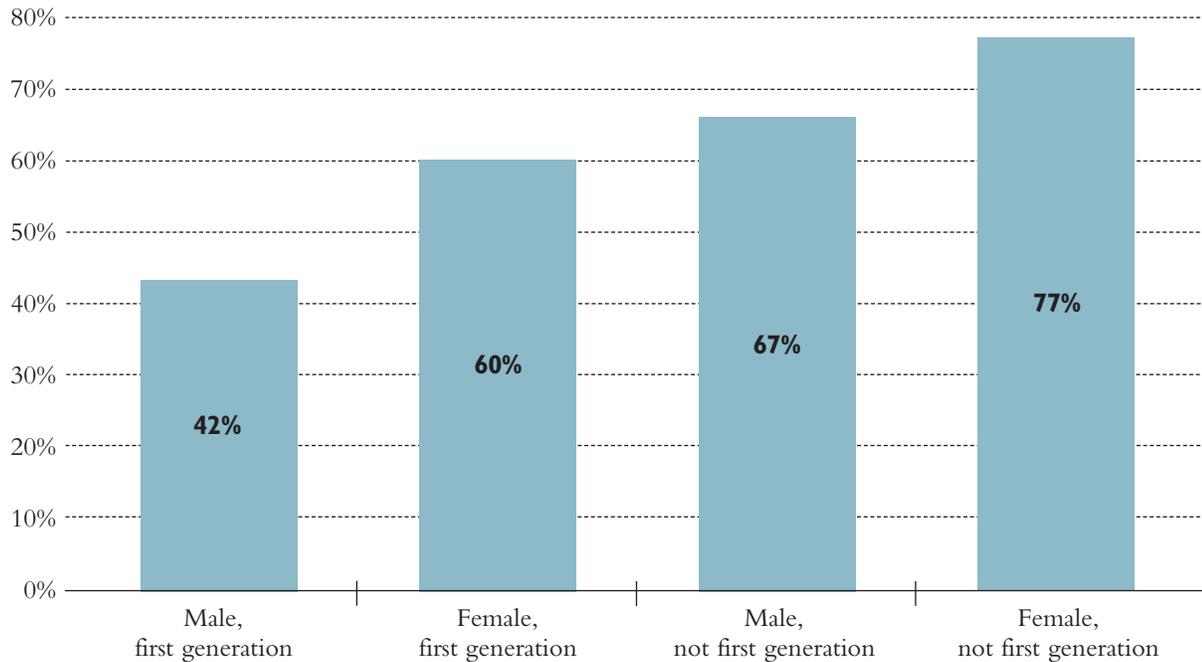
Fifty-one percent of first-generation students and 72 percent of students who are not first generation students were enrolled at a two- or four-year postsecondary institution by the fall of 2012. The gender differences seen in aspiration are also reflected in enrollment rates. For example, 60 percent of first-generation female graduates were enrolled, comparable to the statewide average, while only 42 percent of first-generation males were enrolled (Figure 8).

⁴National Student Clearinghouse collects enrollment information from more than 3,500 colleges and universities — enrolling over 98 percent of all students in public and private U.S. institutions. The data extract for the Class of 2012 returned no records of students attending vocational or technical postsecondary training programs. See more at: <http://www.studentclearinghouse.org/colleges/studenttracker/#sthash.F49QDehD.dpuf>.

⁵Source: U.S. Census Bureau, Current Population Survey, October 2012. The percent of recent high school graduates enrolled either full-time or part-time at a two- or four-year institution calculated by VSAC Research.

⁶The Senior Survey does not have access to students' eligibility for the free- and reduced-price lunch program, and uses parental educational attainment as a proxy. However, the Agency of Education has compared the two- and four-year postsecondary enrollment rates for students who are eligible for free- and reduced-price lunch and those who are not and have found a 17-point difference in enrollment rates of the two groups.

Figure 8. Vermont Class of 2012 postsecondary enrollment rates



Among students who are not first generation, the gender gap exists but is lower (a difference of 10 points). Thus, the differences in aspiration rates between genders persist when it comes to postsecondary enrollment.

Some have compared our state’s ability to transition students from high school to college as a leaky pipeline. Senior Survey data suggest that the education pipeline leaks for all student groups, regardless of gender or parental educational attainment. There is, perhaps surprisingly, no difference between first-generation males and females who are not first generation. Both groups’ postsecondary enrollment rates are lower than their aspiration rates by about 13 points, making an even stronger case for the need to change how we engage and prepare all Vermont students to continue their education after high school.

Future directions

Evidence, including Vermont’s experience with the GEAR UP and TRiO programs, shows that targeted interventions work to increase the chance that a low-income student or a student whose parents might have limited college experience can continue his or her educational path. Vermont has developed effective programs for raising low-income attainment but the scope and reach of these programs is inadequate to meet state needs.

Ultimately, ensuring that all students are able to pursue the education and training they need requires that we transition from thinking about a PreK–12 system to a PreK–16 system. Creation of personalized learning plans and the expansion of the availability of dual enrollment and early college represent initial steps in this direction.

Vermont’s national reputation as a state that is committed to high-quality education is at risk unless we establish statewide policies that make postsecondary education and training a reality for all Vermonters. It is time to renew our priorities and commitment to the state’s future — both for its residents and for Vermont’s economy. Our ability to attract new business and retain and grow existing businesses that provide livable wages is dependent on the extent to which Vermont offers a well-educated and well-trained workforce that can compete successfully with workers in other states and around the world. Equally important is the entrepreneurial sector that is heavily dependent on knowledge workers. Earlier this year, ADP announced that 43 percent of new nationwide job growth came from the small business sector.

Our state faces a stiff headwind. The number of high school graduates is projected to continue to decline significantly over the next decade. It is imperative we provide every Vermont child and family, no matter what the family circumstances, with the support, tools, and information they need to prepare and plan for the future. In addition to supporting the Agency of Education’s initiatives to address student K–12 performance gaps, based on our report’s findings we suggest a number of priority areas within the framework of increasing postsecondary aspiration:

- Develop strategies to encourage parents to begin conversations about education and training after high school as early as possible;
- Explore alternatives for how, who, and when to provide career and postsecondary education information and adapt the delivery of this “aspiration curriculum” to meet the individual needs of the school and its students;
- Target students with the specific supplemental services needed to complete a rigorous high school curriculum;
- Expand the availability and use of Introduction to College Studies (ICS), dual enrollment and early college programs by first-generation and low-income students;
- Ensure that every high school senior has the means to develop and begin executing a career, education, and training plan prior to graduation

A one-size-fits-all approach will not be effective. Data from the high school Class of 2012 Senior Survey highlight the fact that different regions, and even different schools within a region, must develop tailored strategies to address their particular challenges. Counties without their own high school face different circumstances and challenges than do counties with multiple high schools. Each county and school will benefit from developing the strategies that best meet the needs of their students within a common, statewide framework of state and district priorities.

The challenges the state faces are daunting, but not impossible to address. It has often been said that due to our small size, Vermont is an ideal place to try large-scale change. Just as in other ambitious endeavors, what is required is a statewide commitment to increasing the postsecondary aspirations of students who today fall between the cracks, while continuing to engage and support those who already have a clear plan to continue their studies after high school. What is clear is that the status quo is increasingly insufficient in addressing the growing inequality in the educational aspirations, as well as the postsecondary enrollment, of Vermont students.

Communities will need to assess the particular needs of their students and develop strategies accordingly. VSAC will work with critical stakeholders to bring about this process by creating a clearinghouse of strategies that can make a difference. That said, increasing the state's postsecondary aspiration rates will require a coordinated effort, bringing together diverse and committed stakeholders. Each of these stakeholder groups — from businesses, nonprofits, and foundations to local and state government; from middle schools and high schools to public and private postsecondary institutions — brings an important perspective and, perhaps more important, an expertise and a set of invaluable resources to the communities they are a part of. All of us must work collaboratively to ensure the brightest of futures for our state's young people and establish a lasting foundation for our state's economic growth and shared prosperity: a highly skilled, educated, and competitive workforce.

About VSAC

Vermont Student Assistance Corporation is a public, nonprofit corporation created by the Vermont Legislature in 1965 to help Vermonters plan and pay for education or training beyond high school. It is an instrumentality and agency of the state. VSAC administers Vermont's 529 college savings plan; outreach services to encourage low-income students to aspire to and complete college; college and career planning services for all Vermonters; need-based state grants for full-time, part-time and non-degree study; public and private scholarship programs; and private education loans. Find us at www.vsac.org or on Facebook at <https://www.facebook.com/VermontStudentAssistanceCorporation>.

References

- ACT (2013). *College choice report Part 1: Preferences and prospects*. Retrieved March 31, 2014. <http://www.act.org/collegechoice/13/pdf/CollegeChoiceRpt-2013-14-Part1.pdf>.
- ADP (2014). *Small business national employment report*. Retrieved April 4, 2014. <http://www.adpemploymentreport.com/2014/February/SBS/SBS-NER-February-2014.aspx>.
- Bauer, P.W., Schweitzer, M.E., & Shane, S. (2006). *State growth empirics: The long-run determinants of state income growth*. Cleveland, OH: Federal Reserve of Cleveland.
- Baum, S., Ma, J., & Payea, K. (2013). Education pays 2013: The benefits of higher education for individuals and society. College Board, *Trends in Higher Education* series.
- Berger, N., & Fisher, P. (2013). *A well-educated workforce is key to state prosperity*. Economic Analysis and Research Network, Washington DC.
- Carnevale, A. P., Jayasundera, T., & Cheah, B. (2012). *The college advantage: Weathering the economic storm*. Georgetown University Center on Education and the Workforce.
- Duncan, A. (2014). *Why I wear 80*. Retrieved February 20, 2014. <http://www.ed.gov/blog/2014/02/why-i-wear-80/#.UwYo5i8xy-w.email>.
- Elliott, W., & Beverly, S. (2011). Staying on course: The effects of savings and assets on the college progress of young adults. *American Journal of Children & Poverty*, 17(2), 165–185.
- Ingels, S.J., & Dalton, B. (2013). *High school longitudinal study of 2009 (HSL:09) first follow-up: A look at the fall 2009 ninth-graders in 2012* (NCES 2014-360). U.S. Department of Education, Washington, DC: National Center for Education Statistics. Retrieved February 20, 2014. <http://nces.ed.gov/pubsearch>.
- Harvill, E.L., Maynard, R.A, Nguyen, H.T.H., Robertson-Kraft, C., & Tognatta, N. (2012). *Effects of college access programs on college readiness, and enrollment: A meta-analysis*. Society for Research on Educational Effectiveness, Spring 2012 conference proceedings.
- Kurlaender, M., & Howell, J.S. (2012). *Academic preparation for college: Evidence on the importance of academic rigor in high school*. College Board: Advocacy and Policy Center Affinity Network background paper.
- Lumina Foundation (2013). *Lumina Foundation strategic plan 2013-2016*. Retrieved April 10, 2014. http://www.luminafoundation.org/advantage/document/goal_2025/2013-Lumina_Strategic_Plan.pdf.
- Massell, L.N. (2010). *Extending our view: An analysis of postsecondary education outcomes for GEAR UP and Talent Search participants in the Vermont high school class of 2003* (Doctoral dissertation).
- Mortenson, T. (June, 2013). *Low-income students in the K-12 pipeline heading for higher education by state, 1989–2030*. Postsecondary Education Opportunity, Number 252.
- Mortenson, T. (Sept, 2013). *College participation rates for students from low-income families by state, 1993–2012*. Postsecondary Education Opportunity, Number 255.
- Pew Research Center (February, 2014). *The rising cost of not going to college*. Retrieved February 21, 2014 from <http://www.pewsocialtrends.org/2014/02/11/the-rising-cost-of-not-going-to-college>.
- Vermont Agency of Education (2013). *2011–2012 dropout & high school completion report*. Retrieved Feb 18, 2014. <http://education.vermont.gov/data/dropout-and-high-school-completion>.
- Vermont Agency of Education (2013). *Vermont high school graduates — postsecondary enrollment rate*. Retrieved Feb 21, 2014. http://education.vermont.gov/documents/EDU-Data_High_School_Graduates_Higher_Education_Enrollment_Rate.pdf