



**VCU**

L. Douglas Wilder School of  
Government and Public Affairs

Survey and Evaluation Research Laboratory

**Executive Summary of the  
*Virginia Educated Post-College Outcomes*  
Study of Virginia Public College and  
University Graduates from 2007 to 2018**

October 2021

**Prepared for**



**STATE COUNCIL OF HIGHER  
EDUCATION FOR VIRGINIA**



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## EXECUTIVE SUMMARY

### Overview

In March 2018, stakeholders at the State Council of Higher Education for Virginia (SCHEV) discussed how to assess the value and impact of higher education in Virginia in a holistic way that would include – but go beyond – employment and wages. This report describes information gained from *Virginia Educated*, a unique study designed to do that. To the research team’s knowledge, there is no other assessment of graduate outcomes in the United States that combines this study’s scale, lengthy multi-dimensional questionnaire and linkage to administrative<sup>1</sup> and secondary data to address questions about the impact of higher education on community, family and individual well-being, as well as employment and wages.

The study features 15,348 survey responses from graduates of state-supported institutions of higher education in Virginia. The respondents represent 499,665 graduates who earned an undergraduate credential (certificate, associate degree, or bachelor’s degree) from a Virginia state-supported institution of higher education between 2007 and 2018. Additional administrative and secondary data were matched to the survey data for the two-thirds of the respondents who consented to the linkage. Outreach for the survey was conducted by postal mail and email between December 2020 and May 2021, with most graduates having the option to complete the survey by web or on paper.

The study was conducted under contract to SCHEV by the Survey and Evaluation Research Laboratory in the L. Douglas Wilder School of Government and Public Affairs at Virginia Commonwealth University (VCU), with assistance from a survey advisory committee, SCHEV staff, the Virginia Economic Development Partnership, colleagues at VCU, a contracted consultant and subject matter experts consulted informally.

Most reports of survey results raise new questions and ideas for further analysis. This report should be viewed as a start, not a conclusion. Hopefully, the *Virginia Educated* dataset will be actively used as a resource well into the future to answer those new questions and support those further analyses.

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<sup>1</sup> This report uses the following terminology:

**Administrative data** – information already held by an organization in the course of its regular business.

**Credential** – blanket term for a bachelor’s degree, associate degree, two-year certificate or one-year certificate earned from an institution of higher education.

**Focal credential** – the credential that was used to identify graduates who were eligible for the survey, and the credential they were asked to think about when answering the survey questions.

**General education classes, courses or requirements (“gen ed”)** – courses required by most institutions of higher education in various subject areas intended to provide a well-rounded education.

**Secondary data** – existing information which can be used for purposes other than, or in addition to, the purposes for which it was originally created or collected.

## **The logic of the questionnaire**

Broadly, the value and impacts of higher education may be thought of as economic or non-economic, and occurring at the individual or societal levels. The intersection of these two dimensions creates four types of potential values and impacts of higher education: economic/individual (e.g., wages and benefits), economic/societal (e.g., philanthropy or tax revenues), non-economic/individual (e.g., knowledge, perspective, life satisfaction), and non-economic/societal (e.g., civic knowledge and participation, greater empathy).<sup>2</sup>

For example, people with college degrees earn more on average than those without college degrees – this is the college “earnings premium.” Even though the college earnings premium is shrinking due to increasing costs for higher education, some estimate that the lifetime college earnings premium still ranges from \$765,000 to more than \$1 million for graduates of public institutions in the U.S. Thus, college graduates earn more money for themselves and their families to use – an economic benefit at the individual level – and they also contribute more tax revenues – an economic benefit at the societal level. Similarly, non-economic benefits such as a sense of personal growth or achievement can have impacts at the individual and societal levels.

The *Virginia Educated* survey collected data directly from graduates in multiple topic areas that were determined by keeping in mind this way of thinking about the impacts of higher education. See the full report and Appendix D for more details about the logic of the questionnaire.

## **Results**

Respondents from two-year and four-year institutions are often different on some key variables, so their responses are often described separately in this report. Overall numbers are presented in some cases when the differences between two-year and four-year graduates are not large.

Overall, survey respondents were positive about their undergraduate experiences. Majorities expressed satisfaction with several specific aspects of their undergraduate education and cited its beneficial effects in various life domains. Negative feedback concentrated on the cost of higher education and the burden of student debt.

Findings in the major topic areas of the survey are reviewed below.

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<sup>2</sup> See American Association of Community Colleges, American Association of State Colleges and Universities, & Association of Public and Land-Grant Universities (2015), *Advancing a comprehensive study of post-collegiate outcomes: Framework and toolkit* [White paper], <https://www.aplu.org/library/advancing-a-comprehensive-study-of-post-collegiate-outcomes-framework-and-toolkit/file>. See also Table 1 in the full *Virginia Educated* report for more details about this way of modeling the impacts of higher education.

### **Satisfaction with undergraduate education**

Both two-year and four-year graduates expressed a high degree of satisfaction with their overall undergraduate education and with numerous specific aspects of it. These results can be seen as a strong endorsement of public higher education in Virginia from those who directly experienced it between 2007 and 2018. Women were more likely to be satisfied than men or those identifying with other genders. Non-Hispanic Whites who graduated from four-year institutions were most likely to be satisfied with their undergraduate experience, while satisfaction among two-year graduates varied less by race/ethnicity. Graduates in liberal arts, and psychology and social sciences were less satisfied with their undergraduate education overall and with its various components, across both two- and four-year graduates. The literature suggests that most college graduates find their undergraduate education worth the investment. In the *Virginia Educated* survey, 56.3 percent of all graduates agreed it was worth the cost. Appreciation now for general education courses taken as undergraduates was notably less favorable.

There were six major satisfaction questions on the survey. The full question wording and answer categories for each item are shown below. For each item, the two most favorable responses were combined to indicate “agreement,” “satisfaction” or “appreciation.”

- Please indicate your agreement or disagreement with the next few items.  
Remember, there are no right or wrong answers. (Item c in this list of items was “I am satisfied with my life.”)
  - Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree
- How satisfied are you with how your undergraduate experience prepared you for the workplace?
  - Very dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Very satisfied
- Please indicate your level of agreement or disagreement with the following statement: Your undergraduate education was worth the cost.
  - Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree
- Think for a moment not just about your job, but about your career. Since completing your undergraduate education, how satisfied are you with the progress you have made toward your long-term career goals?
  - Extremely dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Extremely satisfied
- Overall, how satisfied are you with the undergraduate education you received?
  - Very dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Very satisfied

- What level of appreciation do you have now for the general education classes you took as part of your undergraduate experience?
  - Not at all appreciative, Slightly appreciative, Moderately appreciative, Very appreciative, Extremely appreciative

In total, 88.1 percent of all graduates were satisfied with their overall undergraduate experience (44.3 percent “satisfied” and 43.8 percent “very satisfied”). Majorities of graduates were also satisfied with how the undergraduate experience prepared them for the workplace (69.5 percent), their progress toward long-term career goals since graduation (69.2 percent), their own life (69.0 percent) and whether their undergraduate education was worth the cost (56.3 percent “agreed” or “strongly agreed” that it was worth the cost).

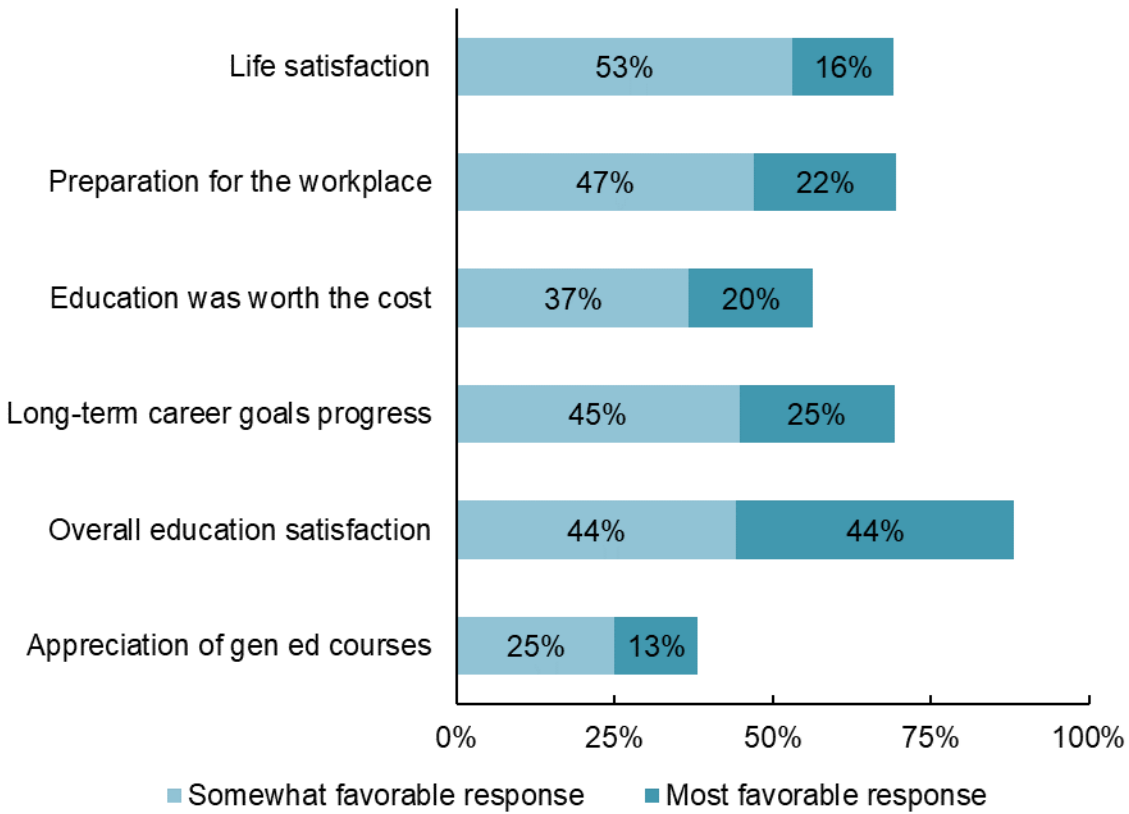
However, appreciation now for the general education classes they took then was only 38.1 percent across the top two rating categories (25.0 percent “very appreciative” and 13.1 percent “extremely appreciative”). This may indicate an opportunity for further exploration and action. See Figure 1.<sup>3</sup>

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<sup>3</sup> In this report, percentages in the text include a decimal. Figures display percentages rounded to whole numbers for clarity in the displays.

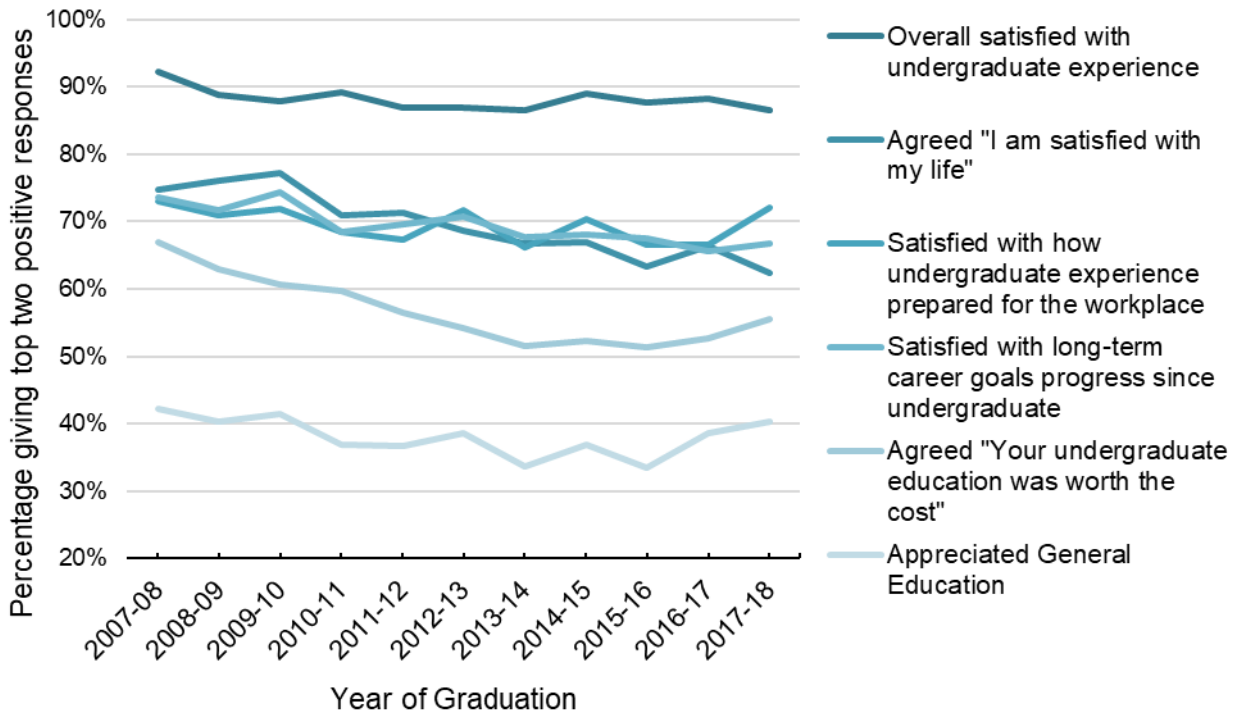


**Figure 1: Favorable Responses to Six Satisfaction Questions, All Graduates**



Generally, graduates from the earliest cohorts included in the study (those graduating in 2007-08, 2008-09 and 2009-10) gave higher satisfaction ratings than those in the middle cohorts. Those in the most recent cohorts showed moderately better ratings than those in the middle cohorts. Although the figure below appears to present a trend in data collected at different points in time, it is important to recall that all of the data were collected at essentially one point in time from people who graduated in different years. See Figure 2.

**Figure 2: Percent of Graduates Who Were Satisfied by Year of Graduation**



(Not trend data - the data were collected at one point in time from people who graduated in different years in the past.)

Graduates of two-year institutions were generally less satisfied on these six measures of satisfaction than were their four-year counterparts, but majorities of two-year graduates felt satisfied on all of the measures except general education classes – and there, the two-year graduates were more appreciative than were the four-year graduates (45.8 percent compared to 34.8 percent). Of the 29.5 percent of all graduates who were the most dissatisfied with general education classes, roughly half said that the courses did not provide much value, knowledge or skills; were not relevant to – or took time away from – major fields of study; and/or were not worth the cost or time.

In addition to the six major satisfaction questions described above, respondents reported their satisfaction with nine sub-components of their undergraduate experience. After combining the two favorable responses for each item, the three sub-components rated highest by graduates of both two- and four-year institutions were academic quality (88.4 percent of two-year graduates and 92.0 percent of four-year graduates were satisfied), class size (86.1 percent of two-year

graduates and 90.2 percent of four-year graduates were satisfied) and relevance of course content (88.2 percent of two-year graduates and 88.0 percent of four-year graduates were satisfied). Satisfaction with professional networking (50.7 percent of two-year graduates and 47.1 of four-year graduates were satisfied) was the only sub-component of the undergraduate experience with favorable ratings below 60 percent.

### **Primary reason for starting undergraduate education**

A career-related reason was most frequently selected by both two-year and four-year graduates as the primary reason for starting their undergraduate education, but about one-third of graduates selected a reason that was not career-related.

Overall, 64.3 percent of graduates said the primary reason they started their undergraduate education was job- or career-related (e.g., “get a good job,” “get a promotion or advance your career,” “attend an apprenticeship program”) and 35.7 percent gave other reasons that were not job- or career-related (e.g., “your family, teachers, or friends expected you to,” “have a well-rounded education,” “figure out what you wanted to do”). The career-related reasons selected by two-year graduates were more likely to apply to an existing job (e.g., “get a promotion or advance your career,” “change careers”); those selected by four-year graduates were more likely to pertain to a prospective job (e.g., “get a good job,” “get the job or career you wanted”).

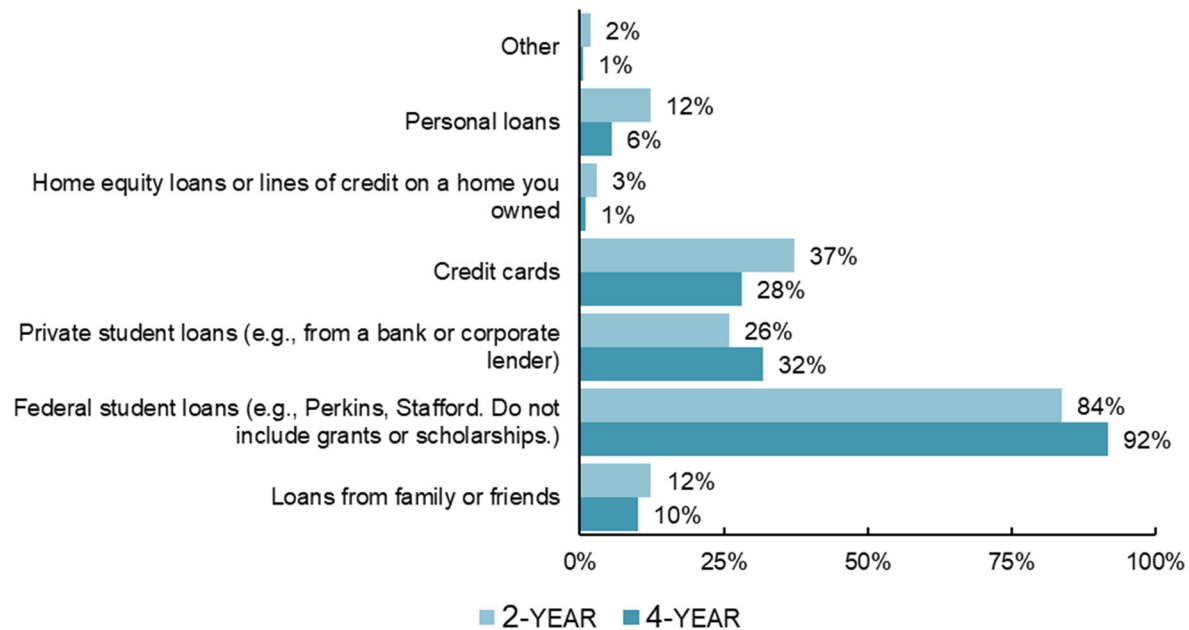
## Student debt

The U.S. Department of Education office of Federal Student Aid reported in 2020 that about one million Virginians owed \$41 billion in federal student loan debt. The Institute for College Access and Success indicates that, across both public and private non-profit institutions, those in the Virginia 2019 graduating class who borrowed had an average education debt of \$30,574 (the national average was \$29,300). Those average debt figures exclude private and informal loans. Several studies find that student loan debt affects the transition to adulthood by delaying family formation – especially for women – and reducing home ownership. Literature also shows that racial disparities in student debt can persist into adulthood.

About half of all *Virginia Educated* survey respondents had student debt when they graduated, in line with figures from other sources. Non-Hispanic Black/African-American graduates were more likely to have debt of any kind. Credit card debt and informal loans were often used to pay for higher education, especially among two-year graduates. Two-year graduates were less likely to complete their undergraduate education with student debt but they were more likely to be carrying student debt at the time of the survey, compared to four-year graduates.

Significant proportions of respondents said that paying their undergraduate student loan debt was more of a problem than they expected, and about half of all respondents who had student debt at the time of the survey were worried about their undergraduate student loan debt situation. Despite being more likely to carry student loan debt and being more worried about their debt, two-year graduates were more likely to agree that their undergraduate education was worth the cost, compared to four-year graduates.

In the *Virginia Educated* survey, the most frequently mentioned negative aspect of the undergraduate experience was its cost and associated debt. Among two-year graduates, 39.9 percent personally owed student loan debt or other money used to pay for their education when they graduated, as did 56.0 percent of four-year graduates. This was 50.5 percent for all graduates taken as a whole, a figure that is in line with data from other sources. Among the respondents who owed money when they graduated, 83.6 percent of two-year graduates and 91.7 percent of four-year graduates had federal student loans as part of their debt. But many also used credit card debt to finance their education (37.3 percent of two-year graduates and 28.1 percent of four-year graduates) as well as student loans from a private lender (26.0 percent of two-year graduates and 31.9 percent of four-year graduates). Loans from family or friends were used by 12.4 percent of two-year graduates and 10.1 percent of four-year graduates, and personal loans were used by 12.3 percent of two-year graduates and 5.5 percent of four-year graduates. See Figure 3 below.

**Figure 3: Types of Debt Incurred from Undergraduate Education**

More than half of the respondents who owed money when they graduated reported that paying their undergraduate student loan debt was “a little more” or “a lot more” of a problem than they expected: 57.7 percent of two-year graduates and 52.4 percent of four-year graduates said this. Also, 50.8 percent of two-year graduates and 39.0 percent of four-year graduates who owed money when they graduated said they are “extremely,” “very,” or “moderately” worried about their undergraduate student loan debt situation. See Figure 4. See below for a quote written by a respondent about student loan debt.<sup>4</sup>

*“I would not be as financially healthy as I am now. Even though I have student loan debt, I am able to get a good job which provides me enough to pay my loans and rent a shared apartment in a good area.”*  
 -- Virginia Educated respondent

<sup>4</sup> In this executive summary, quotes from respondents are featured in blue boxes. These quotes are derived from five main open-ended questions:

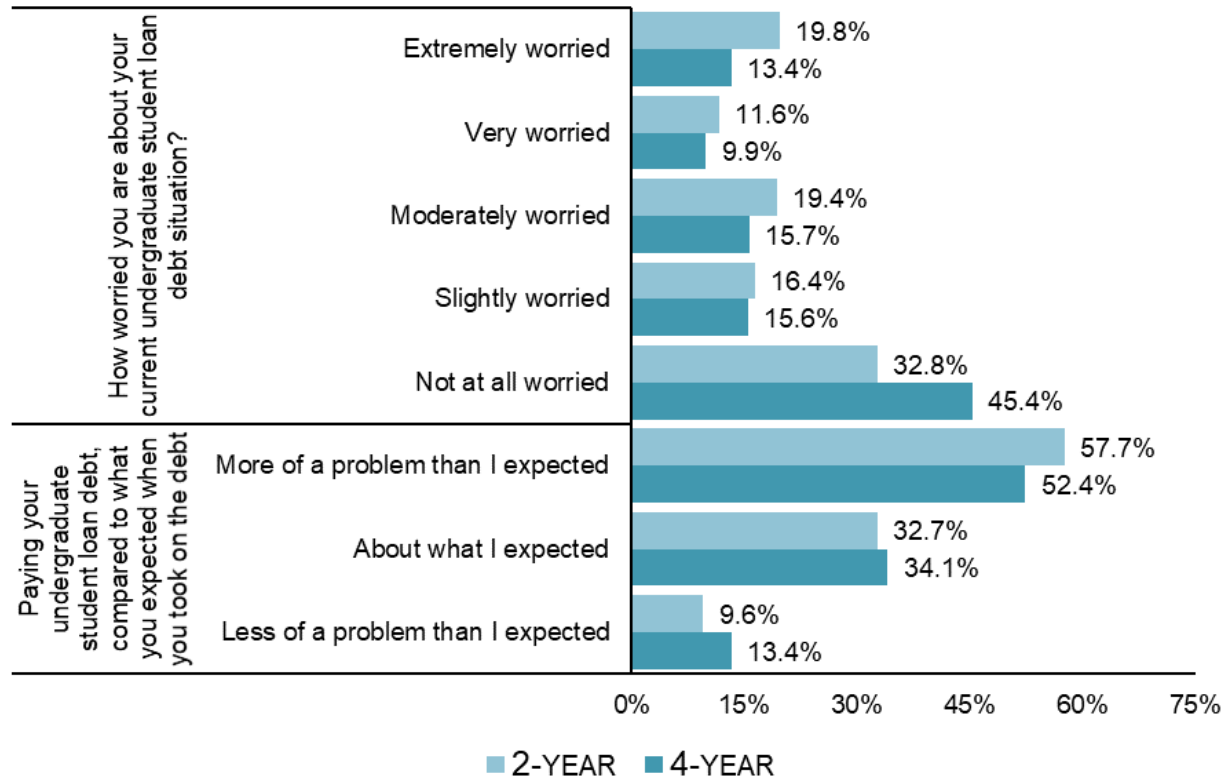
1. “In what ways do you not feel successful?” (Asked of those who volunteered not feeling successful when asked in a closed-ended format “There are many ways to define success. In what ways are you successful?”)
2. “What could your college or university have done differently to prepare you for the workplace?”
3. “What are the biggest impacts your undergraduate education has had on your life – positive or negative? What would your life be like today without your undergraduate education?”
4. “What advice would you give undergraduate students today?”
5. “Please use this space for any other comments about the issues covered in this survey.”

In addition, a sixth closed-ended question included an “Other, write in” response that could be a source of some quotes:

6. “What should Virginia’s colleges and universities focus on to make students more successful?”

Expressed as percentages of all graduates – including those who had no debt and those who previously paid it off – 13.0 percent of two-year and 17.9 percent of four-year graduates said that paying their undergraduate debt was “a lot more of a problem” than they expected, and 19.6 percent of two-year and 21.2 percent of four-year graduates reported that they were at least “moderately” worried about a student debt situation.

**Figure 4: Level of Worry Regarding Student Debt, Expectations about Paying**



*“I absolutely needed a degree to get the job I have now. However, student loan debt has been crippling for my personal life and personal finance. I am working full-time at a great company and I have no savings because any free cash goes towards my loans. I’m getting to the age where saving for a home should be a priority, but I have no idea how that will be possible for me.”*

*– Virginia Educated respondent*

A “stress analysis” accounting for current student debt payment amounts relative to income, student loans being in deferment or reduced payment plans, and respondents’ opinions about their debt indicated that graduates who were more likely to be stressed included – but were not limited to – those with the following characteristics:

- Females
- Rural residents
- Two-year graduates
- First-generation graduates
- Non-traditional or underrepresented graduates
- Graduates of color
- Underemployed graduates
- Graduates in caregiving roles during their undergraduate education
- Graduates in lower income brackets
- Graduates who started their undergraduate education when they were 25 to 44 years old compared those who started at age 20 or younger (other age group comparisons were not significantly different)

Respondents who left school with undergraduate student loan debt most frequently reported that it interfered with or delayed their ability to save for retirement (53.1 percent of two-year graduates and 59.7 percent of four-year graduates), general standard of living (53.4 percent and 59.4 percent), buy a home (43.7 percent and 51.8 percent), travel (36.8 percent and 48.2 percent), get additional education (43.6 percent and 36.5 percent) and buy a car (31.5 percent in both groups).

*“I work 7 days a week. Most of my pay goes to school loans. I will not be able to start [my] life until I’m in my 40’s. College has financially ruined my life.”*

*– Virginia Educated respondent*

*“It has allowed me to communicate better with people. It has put me in debt and worry about finances but without my education I wouldn’t have the job I do now and be in the better financial situation than without one”*

*– Virginia Educated respondent*

## **Employment**

The literature shows that job satisfaction and job security tend to be greater for college graduates, and college graduates may be less likely to experience job or career disruption. Close to 90 percent of the *Virginia Educated* respondents were currently working. Many who were not working were out of the labor force due to disability, retirement, being full-time students or attending to family duties. Employed graduates largely worked for someone else rather than being self-employed. The vast majority worked 40 or more hours per week, and mostly in jobs that were closely related to the discipline they studied and offered benefits. Four-year graduates were more likely than were two-year graduates to describe their jobs in positive terms and be satisfied with progress toward their long-term career goals. Nearly one-third of two-year graduates and nearly one-half of four-year graduates who were involved in one or more social, volunteer, study/research, or job/career-related extracurricular activities said their participation helped them get a job.

Overall, 87.3 percent of the *Virginia Educated* respondents were currently working – 83.3 percent of two-year graduates and 89.4 percent of four-year graduates. Because many who were not working were not in the labor force due to disability, retirement, being full-time students or attending to family duties, a calculated unemployment rate among graduates would be low.

*“My degree was integral in getting a job to pursue the career and life style I wanted. College set me up to decide where I could take my talents in choosing a career.”*  
– Virginia Educated respondent

For some graduates, the COVID-19 pandemic resulted in layoffs and reduced hours. Of the 8.2 percent of graduates not currently working (including those not in the labor force), 24.7 percent lost their job due to COVID-19. Of the 11.3 percent working fewer than 35 hours per week, 28.7 percent said it was because of COVID-19.

Those graduating from four-year institutions were a little more likely to be currently employed – 89.4 percent of four-year graduates reported being currently employed compared to 83.3 percent of two-year graduates.

Overall, about two-thirds of all employed graduates said their jobs related “very well” (41.0 percent) or “moderately well” (25.0 percent) to the discipline they studied in their undergraduate education. Among two-year graduates, 43.0 percent said “very well” and 20.9 percent said “moderately well.” Among four-year graduates, 39.7 percent said “very well” and 26.9 percent said “moderately well.”

When it came to their current primary job, graduates of two-year institutions were most likely to be in “other” jobs that they could not characterize from the list presented in the survey questionnaire (12.3 percent), a healthcare practitioner job that required a bachelor’s degree (11.2 percent), or a healthcare practitioner job that required less than a bachelor’s degree (10.1



percent). (Regarding mentions of jobs that required a bachelor’s degree, 28.6 percent of two-year graduates reported obtaining additional credentials at the bachelor’s level or beyond.) Fewer than seven percent of two-year graduates reported working in any of the other listed fields.

Among graduates of four-year institutions, the most common current primary jobs were in “other” areas (13.8 percent), business and financial operations (13.4 percent), a healthcare practitioner job that required a bachelor’s degree (9.1 percent) and education, training or library-related jobs (8.5 percent) – fewer than eight percent reported working in any of the other areas

Many respondents (48.4 percent of two-year graduates and 58.1 percent of four-year graduates) worked for large for-profit firms. Most employers had 500 or more employees. Overall, 75.7 percent to 81.0 percent of employed two-year graduates received health insurance, paid time off, or retirement contribution benefits from their employers. The figures among four-year graduates ranged from 82.1 per cent to 88.2 percent. Only 23.1 percent of two-year graduates and 19.6 percent of four-year graduates received student loan forgiveness or assistance benefits.

When presented with a list of 12 statements that might apply to their primary job, graduates of four-year institutions were more likely to select positive statements – for example, feeling respected by colleagues – while those graduating from two-year institutions were more likely to select negative statements, such as not earning enough money.

### **Underemployment**

One important focus of the study is underemployment – situations in which people’s jobs do not require their full education and/or skills, or provide fewer hours than desired. The literature shows that underemployment rates are increasing over time, are highest after a recession, are higher among recent graduates, and vary across majors, gender, and races/ethnicities. The *Virginia Educated* survey had multiple ways to measure underemployment, and they yielded estimates of underemployment for the graduates in total ranging from 12.5 percent to 42.4 percent. Many potentially underemployed graduates did not perceive themselves to be underemployed because they found their jobs to be fulfilling and/or they preferred the work/life balance they had.

Measuring underemployment easily and precisely can be difficult. Four ways to measure underemployment in the survey yielded different estimates of underemployment.

First, the survey asked employed respondents if they considered themselves to be underemployed. Only 12.5 percent of graduates overall said they were underemployed (14.9 percent of two-year graduates and 11.3 percent of four-year graduates). Along those lines, as noted above most graduates (66.0 percent) said that their primary job relates “very well” (41.0 percent) or “moderately well” (25.0 percent) to their undergraduate field of study.

Second, a separate method of calculating potential underemployment used responses to several questions in the survey.<sup>5</sup> Based on this measure, a far greater share of graduates – 42.4 percent overall – might be classified as underemployed (45.1 percent of those graduating from two-year institutions and 41.0 percent from four-year institutions).

Third, only 11.6 percent of four-year graduates said their current primary job functions required less than a bachelor’s degree, which would indicate possibly being underemployed. Similarly, only 11.4 percent of two-year graduates said their current primary job functions required less than an associate degree to perform. Taken as a whole, only 11.5 percent of graduates said that their primary job functions required a credential less than their focal credential. It should be noted, however, that these self-reports may differ systematically from what a more detailed examination might determine.

Fourth, rather than comparing the self-reports about job functions to the focal undergraduate credential, they can be compared to the highest credential held by the graduates, including any credentials they earned in addition to the focal credential. Using this approach, 25.0 percent of two-year graduates and 23.0 percent of four-year graduates were possibly underemployed (23.7 percent overall).

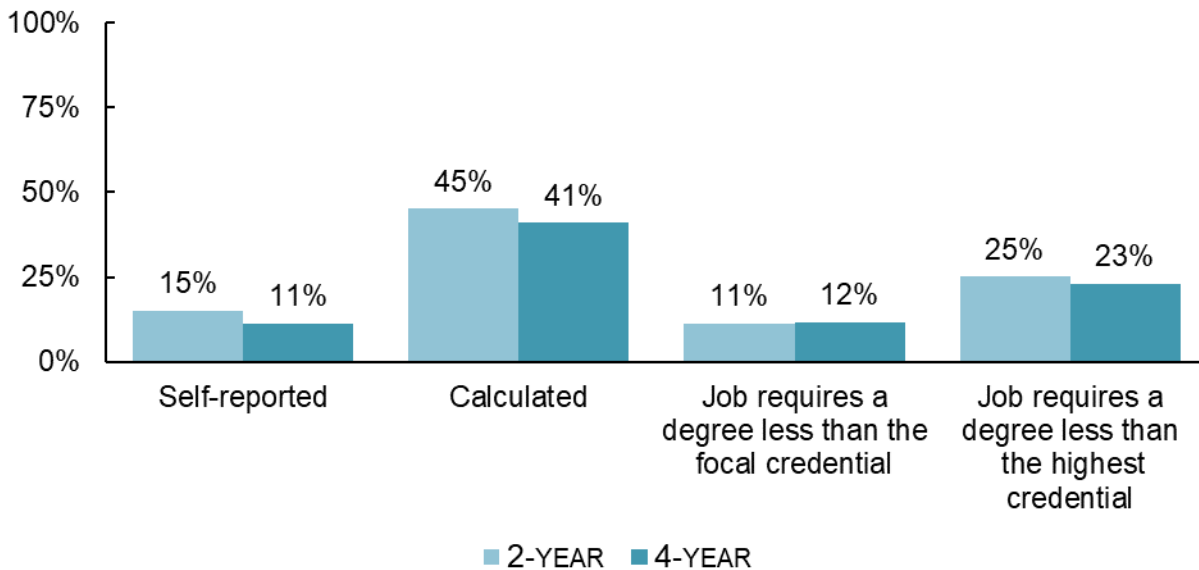
Much of the “disagreement” between the calculated and self-reported measures of underemployment has to do with the graduates’ personal preference for their work/life combination, or their perception that their job makes meaningful use of their education and/or skills. None of these four measures of underemployment show meaningful differences between two-year and four-year graduates. See Figure 5.

*“I would have been better served not attending college, incurring debt, and working on my career I had started prior to attending. I have yet to use my degree specifically for what I wanted to do, although things I learned while in college were very valuable, that has not translated to improved job opportunities, nor others seeing the value therein. The job market is more about who you know than what you know.”*

*– Virginia Educated respondent*

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<sup>5</sup> Employed respondents were considered underemployed if (1) their occupations required less education than the individual possessed, (2) they worked fewer hours than they desired, (3) they worked less than 35 hours per week because of a lack of employment opportunities, a shortage of raw materials, or an inability to find full-time work, (4) they did seasonal work, (5) they worked part-time and would rather work full-time, or (6) they earned less income than they desired.

**Figure 5: Percent Underemployed (Four Measures)**

### Mobility

The literature shows that geographic mobility is related to factors such as age, education level, field of study, elapsed time since graduation, personality, family and social ties, and community connections. *Virginia Educated* respondents, both as students and graduates, were fairly closely tied to their geographic locations, especially among graduates of two-year institutions. Most respondents were in-state students, and most of them lived in Virginia at the time of the survey. More than one-third of out-of-state students (35.0 percent) came to Virginia from five adjacent states and the District of Columbia. An additional 39.1 percent came from five other East Coast states. More than three-quarters of former out-of-state students do not currently live in Virginia.

When they started their undergraduate education, 97.1 percent of two-year graduates and 80.5 percent of four-year graduates were in-state students.

Overall, 35.0 percent of out-of-state students came to Virginia from the five adjacent states and the District of Columbia:

- Maryland (19.4 percent)
- North Carolina (6.4 percent)
- District of Columbia (3.4 percent)
- Tennessee (3.1 percent)
- West Virginia (1.8 percent)
- Kentucky (0.9 percent)

Also, 39.1 percent of out-of-state students came from five other East Coast states:

- New Jersey (12.0 percent)
- Pennsylvania (10.3 percent)
- New York (8.9 percent)
- Massachusetts (3.9 percent)
- Connecticut (3.9 percent)

The most frequently cited reason for out-of-state four-year graduates coming to Virginia was the academic reputation of a specific school (60.9 percent). For two-year graduates, it was an “other” response (42.2 percent) which often mentioned their own or a partner’s military status.

Among two-year graduates, 88.2 percent of in-state students are currently living in Virginia. Among four-year graduates, 80.0 percent of in-state students and 19.4 percent of out-of-state students are currently living in Virginia.

Employment was the most common reason for leaving Virginia, cited by 32.5 percent of two-year graduates and 46.6 percent of four-year graduates who relocated out of Virginia since completing their undergraduate education. For moves within Virginia or returns to Virginia from elsewhere, employment (46.5 percent of four-year graduates and 27.6 percent of two-year graduates) and family or personal reasons (33.7 percent of four-year graduates and 47.4 percent of two-year graduates) were the most frequently mentioned reasons.

*“I fell in love with Virginia and plan to live here. The university connected me to friends and professionals and internships that have le[d] to my career now.”*  
– Virginia Educated respondent

### **Impacts and community engagement**

Research shows that college-educated people tend to be more civically engaged. Compared to high school graduates and GED holders, higher percentages of Virginia residents with postsecondary education belonged to civic organizations in the past 12 months, voted in recent local elections, and made charitable contributions in the past 12 months. The *Virginia Educated* survey offered several different places to indicate impacts of the undergraduate experience on different aspects of graduates’ lives. The strongest positive impacts were on personal and professional relationships, becoming more well-rounded, becoming more aware of other cultures, and on careers. The least positive impacts were on understanding how our system of government works, and on the graduate’s financial situation. Four-year graduates generally exceeded two-year graduates in various types of civic engagement, but both groups showed high levels of community involvement.

### ***Perceptions of life***

Large majorities of both two-year (71.7 percent) and four-year (73.3 percent) graduates reported that their perceptions of what they wanted to achieve in life “significantly changed for the better” or “somewhat changed for the better” because of their undergraduate education.

Those graduating from a four-year institution were more likely to say that their view of the world had been positively impacted by their undergraduate education (73.2 percent) compared to those graduating from two-year institutions (56.8 percent).

Those graduating from a four-year institution were also more likely to report positive impacts on how they wanted to live their life (72.3 percent compared to 65.0 percent of their two-year counterparts).

*“It has had a positive impact on my life because it made me feel like I accomplished something. My education has taken me further in life, allowed me to obtain good jobs, and ma[d]e a difference in my well-being and feeling of success.”*

*– Virginia Educated respondent*

### ***Family, social and professional relationships***

Graduates of four-year institutions were more likely to rate the impact on their social relationships positively, with 71.6 percent indicating the relationships had “significantly” or “somewhat” changed for the better. Fewer than half of graduates from two-year institutions gave these ratings (49.8 percent).

When it came to professional relationships, graduates from both types of institutions were closer in their ratings, with 68.2 percent of graduates from four-year institutions and 65.5 percent from two-year institutions grading the impact positively – graduates of four-year institutions were, however, a bit more likely to say “significantly changed for the better” (31.2 percent) compared to two-year graduates (29.2 percent).

Ratings of impact on family relationships were similar between the two groups, with 38.0 percent of graduates of four-year institutions and 38.5 percent of those graduating from two-year institutions rating the impact positively; graduates of two-year institutions were more likely to say their family relationships “significantly changed for the better” (16.8 percent) compared to four-year graduates (13.5 percent).

### ***Financial situation and career***

Graduates of either type of institution were equally likely to rate the impact of their undergraduate education on their financial situation as positive (61.7 percent of four-year graduates and 60.2 percent of two-year graduates).

Graduates of four-year institutions were more likely to rate the impact of their undergraduate education on their careers as positive (82.0 percent) compared to their two-year counterparts (72.4 percent).

***Community, civic and social engagement***

Data shows that voting in both local and national elections increases with education. In the 2012 national election, 62.0 percent of high school graduates voted, while 77.7 percent of associate degree holders and 85.4 percent of bachelor’s degree holders voted (from the 2011 *Civic Engagement Supplement* of the Current Population Survey).

In the *Virginia Educated* survey, self-reported voting in the most recent local, state and national elections was strong: 72.2 percent, 82.5 percent and 92.9 percent, respectively, for four-year graduates and 63.5 percent, 73.8 percent and 84.2 percent, respectively for two-year graduates. Graduates of four-year institutions were more likely than their two-year peers to report voting, and non-Hispanic White graduates were generally most likely to do so.

In the 2012 *Volunteer Supplement* of the Current Population Survey, the proportion of individuals who reported volunteering increased from around 17.4 percent of high school graduates with no college, to 28.0 percent of those with some college but without a degree, to 40.3 percent of those with a bachelor’s degree but no advanced degrees, and to 48.5 percent of those with graduate degrees.

Results from the *Virginia Educated* survey parallel these national findings: 46.6 percent of two-year graduates reported volunteering in their community in the preceding 12 months and 53.5 percent of four-graduates did so. Overall, 67.1 percent of graduates donated in the prior 12 months to a non-profit, civic, tax-exempt or charitable organization, and 29.3 percent belonged to such an organization. Graduates of four-year institutions were more likely to belong to, donate to and volunteer at civic organizations compared to their two-year counterparts. These differences were slightly larger among women than among men but were not always statistically significant.

*“My undergraduate education expanded my world view and made me more tolerant of other viewpoints.”*  
– Virginia Educated respondent

Between 41.0 and 48.9 percent of all respondents said their undergraduate education had “a great deal” or “a lot” of impact on their abilities to express empathy for others or interact with individuals from different races, ethnicities, cultures, economic experiences, or religious affiliations. Four-year graduates were more likely to say their undergraduate experience influenced their ability to engage in various social interactions compared to their two-year peers, and women and non-Hispanic, non-White graduates were also more likely to say this.

*“During my undergraduate education I began to understand my value and how I could contribute to others in a meaningful way.”*  
– Virginia Educated respondent

## **Life circumstances and health**

The literature contains some evidence of better general well-being and better health outcomes for college graduates versus high school graduates. College graduates are more likely to exercise and less likely to use tobacco. However, college graduates may be more likely to drink alcohol.

Overall, 52.6 percent of *Virginia Educated* respondents said their life in most ways is close to ideal and 65.7 percent said the general conditions of their life are excellent. Majorities also agreed that they were satisfied with their life (69.0 percent) and so far, they have accomplished the important things they want to (53.7 percent). Graduates of four-year institutions were generally more positive in these ratings than were two-year graduates.

Graduates of both types of institutions largely defined success in terms of personal growth, career or job satisfaction, financial stability and family relationships.

Graduates of four-year institutions were also more likely to rate their physical health more highly than their two-year counterparts, but similar shares of graduates of both types of institutions rated their mental health positively.

Additionally, 83.9 percent of graduates of two-year institutions and 89.0 percent of those graduating from four-year institutions said they never smoked or chewed tobacco in the past 30 days, indicating that 16.1 percent and 11.0 percent, respectively, did so. In data from the 2019 Behavioral Risk Factor Surveillance System (BRFSS), 15.7 percent of adult Virginians with some post-high school education and 5.9 percent of college graduates were current smokers. (The *Virginia Educated* question asked about tobacco use in all forms, not just smoking.)

Also, *Virginia Educated* respondents who graduated from two-year institutions were less likely to report using alcohol in the last 30 days than were four-year graduates: 36.7 percent of two-year graduates and 20.2 percent of four-year graduates said they never drank in the past 30 days, indicating that 63.3 percent and 79.8 percent, respectively, did so. In BRFSS, 65.6 percent of college graduates and 52.4 percent of those with some post-high school education had at least one alcoholic drink in the last 30 days.

## **Entrepreneurship**

Overall, 10.6 percent of graduates reported starting one or more of their own companies since graduating from their undergraduate institution (10.4 percent of two-year graduates and 10.7 percent of four-year graduates). Nearly three-quarters overall (74.6 percent) reported that the company (or at least one of multiple companies that may have been started) is still in operation, whether under the original ownership or new arrangements. Most of the companies were small – 88.6 percent overall had five or fewer employees including the graduate.

### **Recommending Virginia to others**

Overall, 18.5 percent of respondents said they had helped convince someone to move to Virginia from out of state, usually to join family or friends living in Virginia or to start employment in the Commonwealth. Among two-year graduates, 15.3 percent had helped convince someone to move to Virginia for any reason, and 20.2 percent of four-year graduates had done so. Additionally, 15.5 percent of graduates who started as out-of-state students (almost all out-of-state students were four-year graduates) said they have convinced someone to move to Virginia to attend higher education here, compared to 4.7 percent of those who started as in-state students.

### **Transfer status**

Among two-year graduates, 42.4 percent reported transferring at some point in their education compared to 30.9 percent of four-year graduates. Usually this was a transfer from a community college to a four-year institution – 29.6 percent of all two-year graduates indicated this (presumably those who answered this way were thinking of a transfer after they earned their two-year credential) and 22.6 percent of all four-year graduates said this (25.0 percent overall).

### **Additional education**

Overall, 50.3 percent of all graduates reported earning higher education credentials in addition to the focal credential, and 35.9 percent of all graduates obtained credentials at a higher level than the focal credential. Among two-year graduates, 17.8 percent obtained a bachelor's degree and another 10.8 percent obtained credentials higher than that. Among four-year graduates, 19.4 percent obtained a master's degree and another 7.7 percent obtained other credentials higher than a master's degree.

### **Written comments from respondents**

The research team reviewed more than 40,000 written answers to five main open-ended questions in the survey and assigned thematic codes for quantitative analysis. Examples of these responses are featured in text boxes throughout the report. They often described positive impacts on employment, social relationships, personal growth and resilience. The negative impacts frequently involved student debt and the cost of higher education. Career and financial issues were frequently cited reasons for feeling unsuccessful.

The five main open-ended questions in the *Virginia Educated* survey asked respondents about impacts of their undergraduate experiences and solicited their feedback and advice. The five main questions are listed and discussed below.



***In what ways do you not feel successful?***

Respondents who indicated that they did not feel successful were asked why. Although only 8.5 percent of two-year graduates and 7.0 percent of four-year graduates volunteered that they did not feel successful, it is important to understand the experiences involved: 53.6 percent of these respondents cited career- or job-related reasons and 37.2 percent mentioned financial reasons.

*“I have not been able to obtain any type of employment since I graduated. I feel helpless and almost to the point where I feel like my family and I wasted all this money on college and I could have done something else with all of the time I spent on college.”*

*– Virginia Educated respondent*

***What could your college or university have done differently to prepare you for the workplace?***

Recommendations included more hands-on training (17.3 percent), more focus on skills like navigating workplace culture and engaging in workplace communication (13.3 percent), career services (11.5 percent), providing financial literacy education (10.7 percent), and offering life skills or “adulting” preparation for the real world (5.5 percent).

***What are the biggest impacts your undergraduate education has had on your life – positive or negative? What would your life be like today without your undergraduate education?***

Among those who responded, reports of positive effects far outnumbered reports of negative effects. Positive career and employment impacts were the most frequently mentioned (40.9 percent), followed by positive impacts on social relationships (18.4 percent) and positive impacts on personal growth (17.0 percent).

*“I believe my undergraduate education opened doors for me (employment-wise) that would have otherwise been closed or taken much longer to open with relevant work experience.”*

*– Virginia Educated respondent*

Numerous testimonials can be found from graduates describing the beneficial, life-changing impacts of their undergraduate education.

*“I was able to form friendships and relationships that have lasted and will last a very long time in my life.”*

*– Virginia Educated respondent*

The most frequently mentioned negative impacts (8.2 percent) were financial ones, focused heavily on student debt and the cost of higher education.

*“Breaking the cycle of generational poverty.”*

*– Virginia Educated respondent*

*“I would be working a minimum wage job and probably relying on government assistance to take care of my family.”*

*– Virginia Educated respondent*

***What advice would you give undergraduate students today?***

Advice to today’s undergraduates ran the gamut from practical matter such as working hard (16.0 percent), choosing one’s major carefully (11.3 percent), concentrating on job/career readiness (9.4 percent), minimizing borrowing (8.7 percent) and networking (7.7 percent) to other matters such as taking advantage of all the opportunities offered (10.5 percent) and having fun (6.0 percent). Additional advice pointed out that college is not the only path to success (6.8 percent).

*“Take your work seriously but not too seriously. Your life won’t be that impacted by graduating with a 3.0 vs a 4.0 if you have drive and ambition. Take advantage of all the extracurriculars that your school has to offer. Make as many friends as possible because participating in extracurriculars and creating long term friendships will be much more difficult after graduation.”*

*– Virginia Educated respondent*

***What should Virginia’s colleges and universities focus on to make students more successful?***

In addition to the five main open-ended questions reviewed above, there was a sixth question that functioned much like an open-ended question. Respondents were asked what kinds of information, opportunities or skills Virginia’s colleges and universities should focus on to make students more successful.

This question presented a list of possible answer choices with an “Other, write in” option. The list of answer choices for this question was developed in an unfiltered and organic way from exploratory focus groups and an entirely open-ended version of the question in the pilot survey. Thus, this question gave graduates answer choices that were not pre-determined by the researchers.

*“Student loan debt and personal financial education should be a topic that is covered in much more detail with the undergraduate population.”*

*– Virginia Educated respondent*

Among both types of graduates, the most common response was “personal financial education” (58.2 percent of graduates of two- and 72.6 percent of graduates from four-year institutions). This was followed by “workplace skills” (55.9 percent and 65.3 percent, respectively); “more apprenticeships, internships, externships, or other hands-on opportunities” (55.5 percent and 62.7 percent, respectively); “preparation for life outside school” (50.3 percent and 55.9 percent, respectively); and “critical thinking skills” (47.8 percent and 53.6 percent, respectively).

### Closing comments

Graduates were provided with space at the end of the survey for closing comments. Responses included complaints about the excessive cost of higher education, requests for greater access and equity for historically marginalized groups, concerns that higher education is not meeting the mental health needs of students, and a variety of other topics including both compliments and critiques of the survey itself, and expressions of thanks for having the opportunity to provide feedback.

*“Stuck in a dead-end job and my degree doesn't provide me with any advantage or ability to obtain a better career. It was a waste of money.”*

– Virginia Educated respondent

*“Thank you for the opportunity to participate in the survey. I can see that there is value in the outcomes of this survey!”*

– Virginia Educated respondent

*“This was a very insightful survey and helped me sit back and consider how far I have come in my profession. Thank you!”*

– Virginia Educated respondent

*“Without my undergraduate degree, I would still be in a small, rural town in Texas with little hope of leaving. Because of my degree, I was able to meet people from around the world and learn new perspectives that I would never have even imagined.”*

– Virginia Educated respondent

*“You're taking the first step – it's long, it's arduous, it's full of memories you'll never forget. Be the change. Be kind. And above all, call home and let everyone see the incredible things you're doing.”*

– Virginia Educated respondent

### Comparing two-year and four-year graduates

As noted throughout this executive summary and the main report, differences between two-year and four-year respondents emerged in the analysis of the survey data. In summary, two-year graduates were generally older and more closely tied to their geographic locations than were four-year graduates. Their survey responses were similar to those of four-year graduates in some topic areas but different in others. Because these two types of institutions have different missions and often serve students from diverse backgrounds and life situations, there are too many contextual differences to support direct inferences from the survey results about the effectiveness and impact of two-year and four-year institutions.

### Selected differences by academic discipline

Graduates from two-year institutions were more likely to be in liberal arts, health professions and trades. All graduates in science, technology, engineering, and math (STEM); business and communication; and to some extent health professions enjoyed higher wages than those in other academic disciplines, but one-third or more in every discipline reported personal annual incomes in 2019 above \$100,000.

Those graduating from a two-year program were more likely to concentrate in the liberal arts (32.4 percent compared to 20.6 percent of their four-year peers), the health professions (26.3 percent versus 7.3 percent), and in trades such as construction and other vocational studies (2.1 percent versus 0.3 percent). Graduates of four-year institutions, on the other hand, were more likely to concentrate in psychology and social sciences (24.1 percent versus 8.2 percent of their two-year counterparts); STEM disciplines (23.5 percent versus 17.6 percent); business and communication (20.4 percent versus 13.1 percent); and education (3.8 percent versus 0.2 percent).

Career-related reasons for enrolling were most often cited by graduates (taken as a whole) in health professions (81.5 percent) and STEM disciplines (70.6 percent), and least often by those in liberal arts (55.7 percent) and education (58.3 percent).

Across graduates of both two- and four-year institutions, the survey respondents most likely to say that their financial situation significantly changed for the better because of their undergraduate education were those who graduated in the health professions (44.2 percent), STEM disciplines (39.7 percent overall, although 42.9 percent for four-year graduates and 31.7 percent for two-year graduates) and four-year graduates in business and communication (43.1 percent).

Self-reported incomes for graduates in STEM, business and communication, and health professions were somewhat higher than for graduates in other academic disciplines, but the differences may not be as stark as one might expect. The percentage of graduates overall who reported personal incomes of \$100,000 or more in calendar year 2019 ranged from 32.2 percent of liberal arts graduates to 50.8 percent of business and communication graduates.

### **Satisfaction by institution**

Virginia's institutions of higher education have diverse missions and organizational cultures. Collectively, they provide a broad range of opportunities to students with different backgrounds and educational goals. Graduates from different institutions gave different satisfaction ratings. Unique contextual, organizational and structural variations that are beyond the scope of this study influence those ratings. Such factors could include institutional funding, student characteristics (income, race, location), student experiences and opportunities prior to enrolling, and other factors. Thus, readers should avoid making simplistic inferences about institutional merit or worthiness on the basis of the survey results alone.

Keeping in mind the caveats described above – for example, that the results by institution reflect unique characteristics of students that attend each institution rather than institutional merit or worthiness – it may still be useful to summarize some key survey indicators by institution. Individual community colleges were excluded from this summary because they were treated in six groups for sampling and analysis.

The percentages of favorable responses offered by the graduates of each institution were tallied by institution for the following items (the list is repeated here from earlier in this summary for convenient reference):

- Please indicate your agreement or disagreement with the next few items. Remember, there are no right or wrong answers. (Item c in this list of items was “I am satisfied with my life.”)
  - Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree
- How satisfied are you with how your undergraduate experience prepared you for the workplace?
  - Very dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Very satisfied
- Please indicate your level of agreement or disagreement with the following statement: Your undergraduate education was worth the cost.
  - Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree
- Think for a moment not just about your job, but about your career. Since completing your undergraduate education, how satisfied are you with the progress you have made toward your long-term career goals?
  - Extremely dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Extremely satisfied
- Overall, how satisfied are you with the undergraduate education you received?
  - Very dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Very satisfied
- What level of appreciation do you have now for the general education classes you took as part of your undergraduate experience?
  - Not at all appreciative, Slightly appreciative, Moderately appreciative, Very appreciative, Extremely appreciative

These data are shown in Table 1 for the four-year institutions and Richard Bland College (Virginia’s only public two-year institution that is not a community college). When the percentages for the six opinion items were averaged within each institution, favorable responses by institution ranged from 56.7 percent to 73.9 percent.

Graduates showing the greatest appreciation across these measures tended to be from the William & Mary, the University of Virginia, Virginia Military Institute, the University of Virginia's College at Wise, Virginia Tech and James Madison University.

**Table 1: Summary of Opinions for Six Key Survey Questions by Institution**

	Satisfied with overall undergrad experience	Appreciation for general education now	Satisfied with long-term career goals progress since undergrad	Agreeing that undergrad education was worth the cost	Satisfied with how your undergrad prepared you for the workplace	Agree: "I am satisfied with my life"
<b>Christopher Newport University</b>	89.1%	32.1%	69.8%	44.8%	62.0%	68.5%
<b>George Mason University</b>	83.7%	30.0%	67.4%	46.1%	61.3%	67.2%
<b>James Madison University</b>	92.3%	30.6%	78.1%	58.6%	78.4%	78.9%
<b>Longwood University</b>	91.1%	27.3%	69.8%	47.0%	71.4%	72.0%
<b>Norfolk State University</b>	84.6%	44.8%	61.1%	38.5%	72.4%	62.4%
<b>Old Dominion University</b>	86.2%	32.8%	68.0%	47.6%	66.1%	70.5%
<b>Richard Bland College</b>	84.7%	36.3%	58.4%	45.7%	59.5%	55.6%
<b>Radford University</b>	89.7%	31.9%	66.3%	45.4%	69.8%	71.0%
<b>University of Mary Washington</b>	89.1%	45.1%	70.9%	55.4%	62.3%	71.4%
<b>University of Virginia</b>	92.6%	53.0%	78.1%	67.2%	75.4%	76.9%
<b>University of Virginia at Wise</b>	91.5%	38.1%	76.0%	63.7%	77.9%	77.4%
<b>Virginia Commonwealth University</b>	82.5%	24.8%	67.0%	40.9%	58.7%	66.9%
<b>Virginia Military Institute</b>	91.7%	36.3%	79.2%	68.0%	85.6%	77.9%
<b>Virginia State University</b>	88.7%	41.0%	58.9%	36.3%	75.0%	57.2%
<b>Virginia Tech</b>	93.4%	29.5%	77.2%	62.6%	79.5%	77.3%
<b>William &amp; Mary</b>	91.6%	58.1%	77.3%	67.9%	75.1%	73.5%

## **Who were the graduates in the survey?**

The largest demographic subgroups of graduates in the survey were those who were married, non-Hispanic Whites, females, living in non-rural areas and working for someone else. Most graduates were Virginia residents at the time of enrollment, and were residents of the Commonwealth at the time of the survey. Those graduating from four-year institutions were more likely to leave the state. They were also more likely to earn more income. They were less likely to be still carrying student loan debt after graduation. The demographics of the respondents – especially after weighting the dataset – represented the full study population well, lending confidence to the results.

The demographics of the 15,348 survey respondents were a good representation of the demographics of the population under study – that is, the 499,665 people who earned undergraduate credentials from a Virginia public institution of higher education between fall 2007 and spring 2018. The percentages of respondents by race (non-Hispanic Black/African-American or other), gender (male or female) and academic discipline (seven categories) did not differ from the population percentages by more than 10 percentage points and in most cases differed by only two or three points.

After weighting the survey data to account for oversampling that ensured representation from small institutions as well as graduates who were non-Hispanic Black/African-American, attended from out of state, had email addresses on file and earned credentials in the trades, the demographics of the survey data used in the weighting matched the comparable demographics of the study population in those categories with great precision. This contributes to confidence in the validity of the survey as a representation of the broader study population.

Because the survey focused on more recent graduates, the respondents tended to be younger – 88.0 percent were age 44 or younger when they took the survey. This means that many of the graduates have not reached their peak earning years or concluded their career trajectories, and they may add more education credentials in the future.

At the institutional level, the number of completed surveys from the four-year colleges and universities ranged from 351 to 943. There were 162 completed surveys from Richard Bland College's 787 eligible graduates. The community colleges were collapsed into six groups by enrollment for sampling and analysis, and the number of completed surveys in those six groups ranged from 500 to 883.

For more details, see in the main report “Summary of Methods” and Appendix B.

## **Key things we have learned so far**

Graduates of Virginia public institutions of higher education are overwhelmingly satisfied with the education they received overall, but they are significantly less satisfied with general

education courses. Agreement that their undergraduate education was worth the cost is markedly reduced among those who completed it with any student debt, which suggests that many graduates view their education in terms of a value proposition.

There is a strong tendency for graduates to mention the improvement of career prospects as their original purpose for pursuing their undergraduate education. The employment rate among the graduates is high. The extent of underemployment is less clear, at least according to the analyses performed so far. A calculation of underemployment using more objective measures in the survey indicates a potentially extensive problem, but this is not the case when using graduates' own impressions as to whether they are underemployed. Further investigation is warranted here.

For perhaps 10 to 20 percent of all graduates, education-related debt is proving to be a major life obstacle. The *Virginia Educated* dataset – perhaps supplemented by new data collection from selected cases who gave permission to be re-contacted – could be used to understand how some of these difficult scenarios arose, and how to prevent them in the future.

When graduates offered their suggestions for what Virginia's colleges and universities could do to make graduates more successful, the strong tendency was to suggest personal finance education and more "hands on" experiences – responses that may be consistent with graduates' reported motivation for pursuing higher education in the first place.

*"You can seek out a good education anywhere – DO NOT take on more debt than you can handle. Getting to know your professors is the best thing you can do for your grades and your career goals. Try every kind of internship or part-time job you can; companies look for practical experience more than grades or club memberships."  
– Virginia Educated respondent*

Transfer emerges as a crucial issue in two converging ways. First, the study demonstrates the substantial prevalence of inter-institutional student mobility, indicating that this mobility should be viewed as more than just a peripheral aspect of the student experience in Virginia. Second, given this prevalence in conjunction with four-year graduates reporting higher levels of life satisfaction and engagement than two-year graduates, it may be useful to eliminate or reduce barriers to transfer-as much as possible. Doing so could enhance the effectiveness of Virginia's higher education system at improving the lives of its graduates.

Finally, the *Virginia Educated* dataset is complex and rich. More work should be done with it to formulate additional insights and answer new questions.