



**VCU**

L. Douglas Wilder School of  
Government and Public Affairs

Survey and Evaluation Research Laboratory

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

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**Prepared for**



**STATE COUNCIL OF HIGHER  
EDUCATION FOR VIRGINIA**



## **Acknowledgements**

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### **Institutional Review Board Citation**

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**ACRONYM DICTIONARY**

<b>AACU</b>	Association of American Colleges and Universities
<b>AAPOR</b>	American Association for Public Opinion Research
<b>AASCU</b>	American Association of State Colleges and Universities
<b>AASRO</b>	Association of Academic Survey Research Organizations
<b>ACHA</b>	American College Health Association
<b>AGB</b>	Association of Governing Boards of Universities and Colleges
<b>ANES</b>	American National Election Studies
<b>APLU</b>	Association of Public and Land-Grant Universities
<b>BLS</b>	U.S. Bureau of Labor Statistics
<b>BMI</b>	Body Mass Index
<b>BRFSS</b>	Behavioral Risk Factor Surveillance System
<b>CASE</b>	Council for Advancement and Support of Education
<b>CASS</b>	Coding Accuracy Support System
<b>CBHSQ</b>	Center for Behavioral Health Statistics and Quality
<b>CCES</b>	Cooperative Congressional Election Study
<b>CEW</b>	Georgetown University Center on Education and the Workforce
<b>CIP</b>	Classification of Instructional Programs
<b>CLASP</b>	Center for Law and Social Policy
<b>CPS</b>	Current Population Survey
<b>CURA</b>	VCU's Center for Urban and Regional Analysis
<b>FIPS</b>	Federal Information Processing System
<b>GDP</b>	Gross Domestic Product
<b>GED</b>	General Educational Development
<b>GPAC</b>	General Professional Advisory Committee
<b>HEGIS</b>	Higher Education General Information Survey
<b>HERI</b>	Higher Education Research Institute, University of California-Los Angeles
<b>HIPAA</b>	Health Insurance Portability and Accountability Act
<b>IEP</b>	Innovation and Economic Prosperity University
<b>IPAC</b>	Instructional Programs Advisory Committee
<b>IPEDS</b>	Integrated Postsecondary Education Data System
<b>IRB</b>	VCU's Institutional Review Board
<b>LDWSGPA</b>	L. Douglas Wilder School of Government and Public Affairs
<b>NACE</b>	National Association of Colleges and Employers
<b>NAICS</b>	North American Industry Classification System
<b>NCES</b>	National Center for Education Statistics
<b>NCHA</b>	National College Health Assessment
<b>NCHS</b>	National Center for Health Statistics

<b>NCOA</b>	National Change of Address System
<b>NCSES</b>	National Center for Science and Engineering Statistics
<b>NDA</b>	Non-Disclosure Agreement
<b>NESARC-III</b>	National Epidemiologic Survey on Alcohol and Related Conditions-III
<b>NIAAA</b>	National Institute on Alcohol Abuse and Alcoholism
<b>NLSY</b>	National Longitudinal Survey of Youth
<b>NSCG</b>	National Survey of College Graduates
<b>NSDUH</b>	National Survey on Drug Use and Health
<b>NSSE</b>	National Survey of Student Engagement
<b>PEARS</b>	Pathways of Engineering Alumni Research Study
<b>PSLF</b>	Public Service Loan Forgiveness Program
<b>REDCap</b>	Research Electronic Data Capture
<b>RFP</b>	Request for Proposals
<b>RUDA</b>	Restricted Use Data Agreement
<b>QR</b>	Quick Response Code
<b>SAMHDA</b>	Substance Abuse and Mental Health Data Archive
<b>SAMHSA</b>	Substance Abuse and Mental Health Services Administration
<b>SCHEV</b>	State Council of Higher Education for Virginia
<b>SERL</b>	Survey and Evaluation Research Laboratory
<b>SHED</b>	Survey of Household Economics and Decision-Making
<b>SMS</b>	Short Messaging Service
<b>SOC</b>	Standard Occupational Classification
<b>SPSS</b>	Statistical Package for the Social Sciences
<b>STEM</b>	Science, Technology, Engineering and Math
<b>STEM-H</b>	Science, Technology, Engineering, Math and Health Professions
<b>SWLS</b>	Satisfaction with Life Scale
<b>TUS</b>	Tobacco Use Supplement
<b>USDOL/ETA</b>	U.S. Department of Labor – Employment and Training Administration
<b>USED</b>	U.S. Department of Education
<b>USDT</b>	U.S. Department of the Treasury
<b>VCCS</b>	Virginia Community College System
<b>VCU</b>	Virginia Commonwealth University
<b>VEDP</b>	Virginia Economic Development Partnership
<b>VLDS</b>	Virginia Longitudinal Data System
<b>VPN</b>	Virtual Private Network



## I. RESULTS FROM THE SURVEY

### 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. It would be a broader and more nuanced study combining a custom-designed survey with a variety of administrative<sup>1</sup> and secondary data that could describe the quality and value of higher education in Virginia from graduates' points of view while meshing with SCHEV's strategic planning goals.

This report describes knowledge gained from *Virginia Educated*, a unique research vehicle designed to do just that.

There are many kinds of studies that contribute to discussions about the far-reaching effects of higher education. (See Appendix D for an extensive literature review representing some of these studies.) Such research includes, but is not limited to:

1. Introspective studies focused on community impacts, like those occurring under the auspices of the Association of Public and Land-Grant Universities' Innovation & Economic Prosperity University credentialing process (APLU IEP; n.d.)
2. Quantitative studies of the economic impact of specific institutions on their local and regional economies
3. Extensive inquiries about specific topic areas – for instance, the American College Health Association's *National College Health Assessment* (ACHA NCHA; 2021) or the Council for Advancement and Support of Education's *Global Alumni Engagement Metrics Survey* (CASE; 2021)
4. First-destination surveys, such as those conducted by the National Association of Colleges and Employers (NACE; 2021; see also SCHEV, 2019a)
5. Long-term, multi-institution assessments of student activity, pedagogy and high-impact practices like the *National Survey of Student Engagement*, implemented by the Center for Postsecondary Research at Indiana University (NSSE; 2020)

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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.

6. National, recurring surveys with special field of study emphases, economic foci, and/or varying contact methods, such as the National Center for Science and Engineering Statistics' (NCSES) and the U.S. Census Bureau's *National Survey of College Graduates* (NSCG; 2021) and occasional research funded by groups like the Association of American Colleges and Universities (AACU; n.d.)
7. Surveys available for use at different educational milestones, or for gathering more information about campus dynamics, like those managed by the Higher Education Research Institute at the University of California Los Angeles (HERI; 2021)
8. Surveys conducted by colleges and universities themselves, per the remit of alumni offices, career services offices, institutional effectiveness offices, individual departments, or other internal bodies
9. Wage and economic data that can be mined from public domain sources, like the U.S. Bureau of Labor Statistics (BLS) and the U.S. Census Bureau (for an example, see Abel & Dietz, 2014)
10. Enrollment and student debt data that can be mined from public domain sources, like SCHEV

*Virginia Educated* is not an economic impact study, nor does it directly address issues such as pedagogy, curriculum content or campus climate. To the research team's knowledge, however, 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 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.

***Virginia Educated* sought to answer the key question:**

Considering traditional and non-traditional measures, what is the ***overall value proposition*** of certificates, associate degrees, and baccalaureate degrees, ***according to Virginia's recent graduates?***

Value, for the purpose of this project, was not limited to economic terms like employment and wages. It also incorporated social and emotional factors – for instance, satisfaction with life, health, and community engagement.

## Summary of methods

*Virginia Educated* was developed in several stages. Below is a summary of how the project was conducted. Details can be found in Appendix B.

## Funding

After working with an advisory task force formed in spring 2018, SCHEV received an appropriation from the Virginia General Assembly for a research study. SCHEV contracted with

the Survey and Evaluation Research Laboratory (SERL) in the L. Douglas Wilder School of Government and Public Affairs (Wilder School or LDWSGPA) at Virginia Commonwealth University (VCU) to carry out the study. Funding was later supplemented by Virginia public institutions of higher education, the Virginia Economic Development Partnership (VEDP) and SCHEV.

### **Survey advisory committee**

In summer 2019, SCHEV convened a survey advisory committee with representation from several institutions of higher education and the Federal Reserve Bank of Richmond. The advisory committee stayed active throughout the course of the study.

### **Focus groups**

In summer and fall 2019, SERL conducted initial topical research, and designed and executed eight focus groups and two one-on-one interviews around Virginia with members of the study population. A total of 44 participants attended, and their input influenced the content and operationalization strategy for *Virginia Educated* pilot and production phases. Focus group attendees represented more than two dozen colleges and universities. Details about the focus groups can be found in a report previously furnished to SCHEV in September 2019.

### **Cognitive interviews**

From the topical research and the focus group findings, SERL worked with the survey advisory committee to create a draft survey questionnaire. In November and December 2019, SERL recruited nine members of the study population to participate in cognitive interviews. SERL contracted with Well World Solutions to conduct the interviews and assess the overall design, phrasing, flow, comprehension and “cognitive burden” of the instrument among likely respondents. Details about the cognitive interviews can be found in a report which Well World Solutions filed with SERL and SCHEV early in 2020. Feedback from the cognitive interviews led to refinement of survey questions about family, employment, and underemployment and some additional minor changes.

### **Consultations**

As described in the pilot survey report, *Virginia Educated* also benefited from numerous consultations with subject matter and technical experts. Potential survey domains, survey questions, and broad issues such as higher education’s impact on employment outcomes were discussed with researchers located within VCU, Drexel University, Georgetown University, Harvard University, Northwestern University, the University of California-Berkeley, the University of Michigan, and the University of Pennsylvania. These conversations were frequently arranged by Dr. Stephen Moret of VEDP. Beyond this, SERL reached out to colleagues at the Association of Academic Survey Research Organizations (AASRO) and the

American Association for Public Opinion Research (AAPOR) for guidance on methodological concerns like incentives.

### **Pilot survey**

In spring 2020, SERL carried out a pilot survey with a probability-based sample of 3,648 graduates from the study population. The pilot took longer than anticipated because of the impacts of the COVID-19 pandemic, but it was completed in summer 2020. It had both web-based and mail-based components – all sampled graduates had postal mailing addresses and some also had likely email addresses. All contact information was obtained from a commercial matching service by SCHEV and later refreshed using commercially available updates for mailing addresses. The pilot featured methodological experiments concerning stationery type, envelope type, logo type, letter versus postcard reminder, incentive amount and cash gift amount. Pilot data collection continued into May 2020, and analysis concluded by June 2020. The pilot survey ended up with a response rate of 28 percent. Details about the pilot can be found in a report previously furnished to SCHEV in June 2020.

### **Production survey**

#### ***Sampling***

The *Virginia Educated* probability-based sample was designed to represent a study population of 499,665 people who recently received an undergraduate credential from a Virginia state-supported institution between 2007 and 2018, while ensuring enough completed survey cases in key subgroups to support some comparative analyses.

The population for the production survey was reduced to 476,122 individuals by excluding those who had already been sampled for invitations to a focus group, a cognitive interview, or the pilot survey. Graduates who were known to be deceased from automated checks of the mailing addresses were also excluded from the population for the production survey.

The main sampling frame for the production survey was 254,585 graduates with a mailing address. From this frame, 46,474 graduates were selected. A secondary sampling frame was 221,537 graduates without a mailing address. From this frame, 3,000 in-state graduates and 3,000 out-of-state graduates were randomly selected for individual online lookups to try to find mailing addresses. Ultimately 4,021 graduates for whom contact information could be obtained were added to the probability-based sample. Thus, the total sample size for the probability-based sample was 50,495.

The sample of 46,474 cases with contact information was disproportionately stratified – that is, some groups were intentionally oversampled to ensure adequate representation of those participants' experiences in the results. The following strata were used:

1. Institutions (community colleges were grouped by enrollment into six institution-equivalent strata to facilitate sampling and analysis)
2. Discipline groups (areas of study)
3. Race/ethnicity (non-Hispanic Black/African-American or not)
4. In-state resident/out-of-state resident at time of enrollment
5. Email/no email address present on the graduate's case

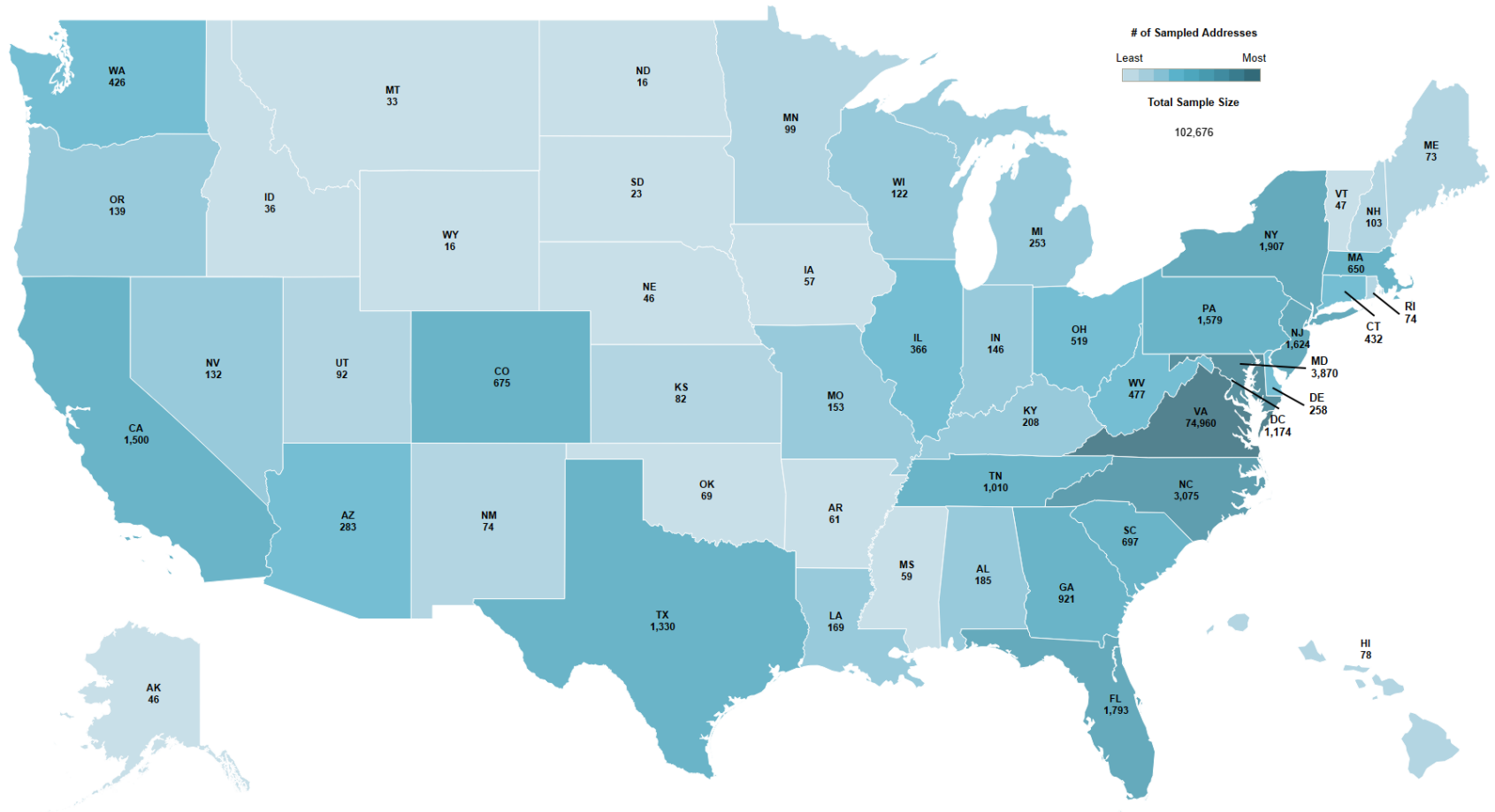
The oversampled groups were graduates who were from the three smallest institutions; had trades credentials; were non-Hispanic Black/African-American; enrolled from out of state; had email addresses; or had credentials in business and communication, education, health professions, and science, technology, engineering, and math (STEM) disciplines.

### ***Email-only census***

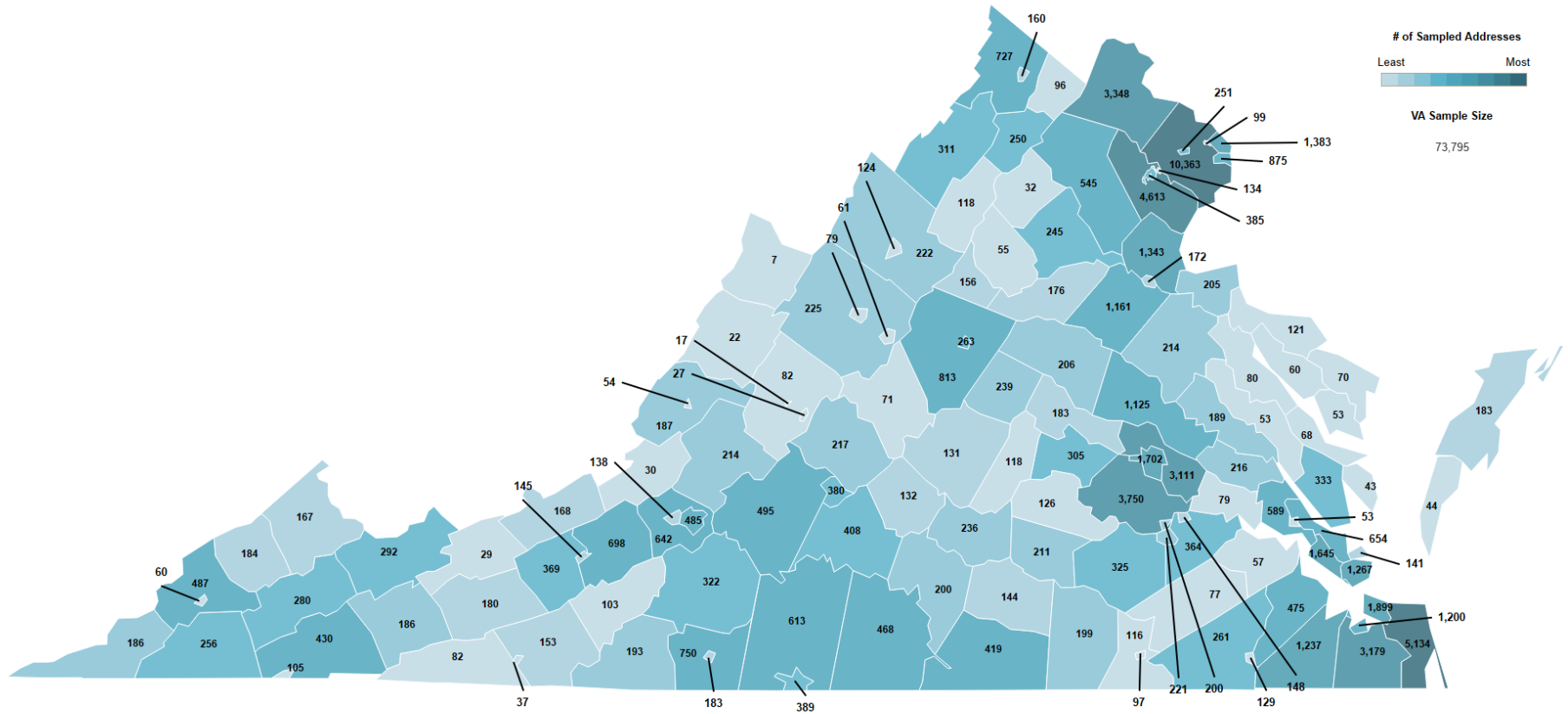
The production stage of *Virginia Educated* also included a census of persons with email addresses not otherwise in the probability sample (n = 52,173 cases). Reaching out to this email-only group was a convenient way to supplement completions in the probability sample, and it provided an opportunity to “soft launch” the survey to a small subsample of the email-only list prior to launching the probability sample. The email-only group received up to five emails scheduled for different days and times. All emails contained an unsubscribe link. Recruits completed the survey via Qualtrics exclusively; they received no postal mail, no \$1 upfront incentive, and were not offered the chance to request paper booklets.

See Figure 1 through Figure 4 for maps showing where the sampled cases for the probability-based and email-only supplement samples were geographically located, as well as the number of out-of-state students originating from each state. See Appendix B (Methods) for more detailed information.

**Figure 1: Virginia Educated Geographic Concentration, Probability-Based Sample and Email-Only Census, by State**

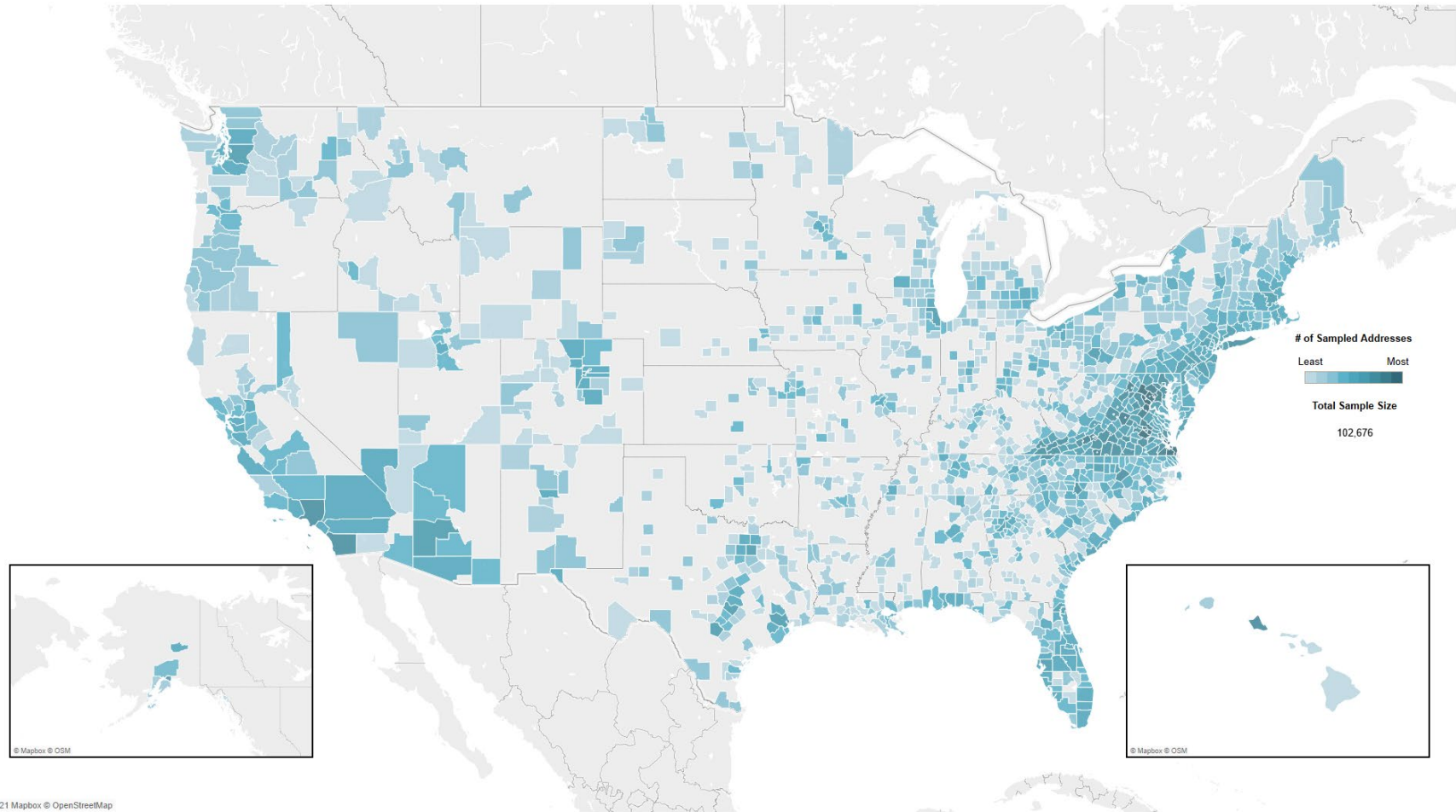


**Figure 2: Virginia Educated Geographic Concentration, Probability-Based Sample and Email-Only Census, Virginia Only**



Note: This map excludes 1,165 cases whose addresses could not be geo-coded to the county level.

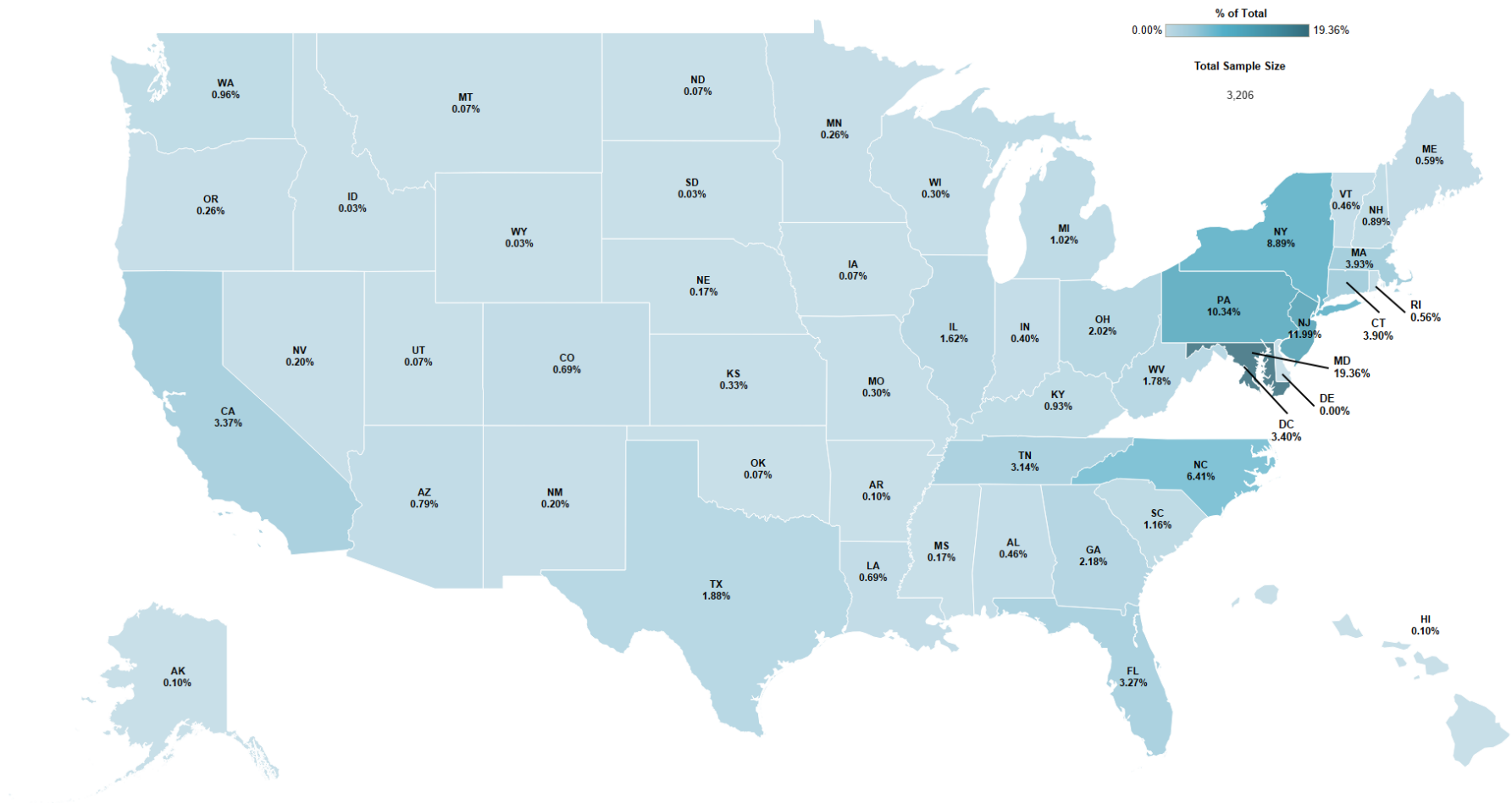
**Figure 3: Virginia Educated Geographic Concentration, Probability-Based Sample and Email-Only Census, by FIPS Code (Locality)**



Note: This map excludes 2,002 cases whose addresses could not be geo-coded to the county level. FIPS codes = Federal Information Processing System codes that translate to geographic areas.



**Figure 4: Virginia Educated Responses, Probability Sample and Email-Only Census – States of Origin for Out-of-State Students**



Note: This map does not show students who came to Virginia from outside the United States (n = 72). It also does not show students who came to Virginia from PO or APO addresses (n = 5).

***Survey incentives***

Graduates in the probability sample received \$1 cash in the advance letters. All graduates, whether in the probability sample or the email-only census, were offered a \$10 gift card if they completed the survey and the chance to be in drawings for 32 gift card prizes, ranging in value between \$50 and \$250 (limit one prize per person).

***Data collection***

The primary mode of communication for the probability sample was postal mail, with email used when the sampled graduate had an email address in the file. The only mode of communication with the email-only census group was up to five email invitations with unique clickable links to the survey. The primary mode of survey response for the probability sample was by web using a Qualtrics survey, with a paper questionnaire also being available by request using a postage-paid reply card. (All 2,125 graduates in the trades discipline group plus a random sample of 3,875 other graduates received a booklet mailing proactively.) The only mode of survey response for the email-only census group was the Qualtrics web-based survey. Due to the size of the probability sample – and also COVID-19 conditions – the production survey’s three mailings were printed off-site and mailed by a third-party vendor. All three mailings traveled with first-class postage and Richmond postmarks.

The first postal mailing to the probability sample, an Advance Letter, contained a \$1 bill to raise interest in the survey.

The second mailing to the probability sample invited participants to return an enclosed business-reply postage-paid postcard if they wanted to complete the survey by paper, change their contact information, or be removed from the distribution list.

The third mailing to the probability sample served as either a paper survey booklet mailing with a cover letter, or just a final reminder letter. A planned fourth mailing was cancelled because the project was on pace with completions projections, time was running short, and the budget did not support collecting many completions beyond the targeted number due to the promised incentives.

Each mailing to the probability sample offered probability sample recruits access to the web-based version of the survey via internet URL, Quick Response (QR) code, or text-back code.

In addition to these three postal contacts for the probability sample, SERL sent as many as five emails to probability sample cases that had email addresses (about 35 percent of the sample). These emails contained individualized clickable Qualtrics survey links. The timing of the emails varied across weekdays, weekends, and times of day. Each email included an unsubscribe link.

The survey opened on December 15, 2020 with a “soft launch” of a sample of 1,976 email-only cases. The advance letters for the probability sample were mailed on December 23, 2020.

Data collection for both groups closed on May 17, 2021.

***Response***

SERL received 13,294 completed surveys from the probability sample (26.3 percent response rate) and 2,054 completed surveys from the email-only census (3.9 percent response rate). The response rates do not attempt to adjust for non-working email addresses or undeliverable mail, as this was a survey of known persons.

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.

***Combining data***

A review of the survey data and demographics among the different sampling strata and across the probability-based sample and the email-only census did not show large differences in how graduates in those groups responded to survey questions. The lack of large differences supported the decision to combine all of the completed surveys and treat them as one sample from the full study population for weighting and analysis purposes.

***Weighting***

The survey dataset was weighted back to selected demographics of the full study population to adjust for disproportionate sampling and differential response rates by various demographic groups.

***Sampling error***

Taking the weighting into account, the responses to questions answered by all 15,348 respondents have a sampling error of +/- 1.2 percentage points at the 95 percent level of confidence. This means that if this survey were administered in the same fashion 100 times to 100 different samples of the study population of the same size, then 95 out of those 100 surveys would produce answers to a given survey item that are within +/- 1.2 percentage points of one another. Additionally, if survey sampling were the only source of error in the survey, we would expect that the true value in the population is within +/- 1.2 percentage points of the survey estimate 95 percent of the time.

Sampling errors are larger for questions not answered by everyone, and for subgroups. For example, the sampling errors for respondents from the individual institutions range from +/- 4.0 percentage points to +/- 8.0 percentage points.

Technically, each question or survey statistic has its own individual sampling error. Different distributions of survey responses will affect the margin of error. Margins of error were calculated for six key survey questions. For the full data file, those margins of error ranged from +/- 0.8

percentage points to +/- 1.2 percentage points. Within institutions, those margins of error ranged from +/- 2.1 percentage points to +/- 8.2 percentage points.

The large numbers of cases overall and within important subgroups provide good statistical precision for analyses.

Note that surveys are subject to errors other than sampling error and those errors may be difficult or impossible to measure.

### **Analysis and reporting**

SERL obtained case-level administrative data from SCHEV for survey respondents who consented to matching (68.6 percent [unweighted]), and added it to the survey dataset. SERL produced descriptive statistics using the survey dataset. The Center for Urban and Regional Analysis (CURA) in the Wilder School at VCU produced multivariate modeling using the survey dataset plus the administrative data from SCHEV. The multivariate analyses were guided by input from VEDP. The multivariate analyses will be released separately from this report.

This report is a starting point. It will almost certainly raise numerous questions for consideration. The *Virginia Educated* dataset should be a resource for further analysis in the coming months.

### **The logic of the questionnaire**

Before reviewing the results of the *Virginia Educated* production survey, it may be useful to understand the logic of the questionnaire.

Broadly, the value and impact 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 effect pathways of higher education: economic/individual, economic/societal, non-economic/individual, and non-economic/societal.<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 estimates of this earnings premium range from \$765,000 to \$1 million or more over the course of a lifetime for graduates of public institutions in the U.S. (see Appendix D). This economic benefit of higher education can be an individual benefit for the college graduate, who will be able to afford a higher quality of life or a wider range of opportunities for themselves and their families. This economic benefit can also be an advantage for society, in the form of greater revenues from income and payroll taxes to support public services, healthcare and pension plans, and collective quality of life.

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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>

Similarly, a non-economic benefit such as a sense of personal growth or achievement can be felt at the individual level. College graduates – because of their education and experiences at college – may be more assertive, positive or entrepreneurial, which benefits themselves and their families in myriad ways. These same benefits can also accrue to society in the form of more civil and productive interactions in public realms, greater entrepreneurship yielding advances for society, and numerous other ripple effects.

Much of the time, these impacts are assumed to be positive, but this way of thinking can also be applied to negative impacts such as student debt.

This model<sup>3</sup> was useful as *Virginia Educated* went through development, and may be worth keeping in mind when considering the results of the study. See Table 1.

**Table 1: A Model of Potential Benefits of Higher Education with Selected Examples**

	Individual	Societal
<b>Economic</b>	<ul style="list-style-type: none"> <li>• Wages – weekly, biweekly, annual, and lifetime</li> <li>• Fringe benefits associated with employment (e.g., health insurance, paid time off, retirement plan)</li> <li>• Personal net worth – property, savings, other</li> </ul>	<ul style="list-style-type: none"> <li>• Philanthropy – monetary, in-kind</li> <li>• Tax revenues – income, property, other</li> <li>• Relative use of public assistance programs or healthcare resources (e.g., cost savings)</li> </ul>
<b>Non-Economic</b>	<ul style="list-style-type: none"> <li>• General knowledge base, specific knowledge base</li> <li>• Perspective-taking</li> <li>• Sense of personal growth or achievement</li> <li>• Career satisfaction, job tenure, professional respect</li> <li>• Education satisfaction</li> <li>• Physical health</li> <li>• Mental health</li> <li>• General well-being; happiness</li> </ul>	<ul style="list-style-type: none"> <li>• Awareness of local, regional, state, national, or global issues</li> <li>• Voting and other forms of political participation</li> <li>• Volunteering, not associated with work</li> <li>• Post-college service (e.g., Peace Corps, military)</li> <li>• More civil, kinder interactions in the public sphere</li> </ul>

<sup>3</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>. For an excellent summary of many of these benefits, see Trostel’s 2015 study, *It’s Not Just the Money: The Benefits of College Education to Individuals and to Society*. The Pew Research Center’s 2014 report, *The Rising Cost of Not Going to College*, and SCHEV’s *Interim Report: Post-College Taskforce* (2019a) are also helpful resources.

**Dimensions covered by *Virginia Educated***

The *Virginia Educated* survey collected data in seven main dimensions directly from graduates:

1. Demographics – including status while an undergraduate student (full-time or part-time, transfer student); additional degrees and credentials obtained; most selective institution applied to; gender; age; race/ethnicity; relationship status; caretaking status currently and during undergraduate education; number of friends from undergraduate education still in direct contact with; first-generation college student status; current residence; rent or own housing; personal and household income; household size.
2. Undergraduate experience and impacts – including satisfaction with various aspects and outcomes of the undergraduate experience; primary reason for starting their undergraduate education; opinions and experiences regarding general education, internships, mentoring, extracurricular activities, job preparation; ways in which they feel successful (or not); employment during undergraduate education; overall impacts of their undergraduate education on their lives; advice they would give undergraduates today.
3. Student debt – including whether they had any debt after their undergraduate education; any debt for any other education; types of debt; how much of a problem paying the debt has been; impacts of student debt on aspects of life; current debt status; level of worry about current undergraduate debt; whether the undergraduate education was worth the cost.
4. Employment – including current employment status; hours worked per week; actively seeking a new job; level of education required to do their job; how closely current job relates to undergraduate field of study; type, industry, number of employees and ZIP code of current primary employer; type of occupation and job title; benefits offered in the primary job; opinions about the primary job; underemployment (malemployment); years of full-time work experience; satisfaction with career progress; and entrepreneurship.
5. Residence and mobility – including residence prior to starting undergraduate education; change in residence after graduating; reasons for relocating; willingness at time of graduation to relocate for a job.
6. Community engagement – including volunteering; donating time or money; voting; interacting with elected officials; attending public meetings or demonstrations, or supporting or avoiding businesses for political or social reasons; and impacts of undergraduate education on engaging with other people.
7. Health and well-being – including overall ratings of physical and mental health; use of alcohol and tobacco in the past 30 days; impacts of COVID-19 on various life aspects; ratings of satisfaction with several aspects of life.

The study also linked survey responses to secondary data for about two-thirds of the cases. The secondary data includes but is not limited to information about class enrollments in higher education, education loans, family income at time of enrollment, financial aid in more than 40 categories, high school GPA and college admissions test scores.

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.

## Demographic characteristics of the respondents

In Virginia from fall 2007 through fall 2017 – a timespan comparable to the one from which graduates were selected for the *Virginia Educated* study – annual undergraduate enrollment at public four-year colleges and universities rose from 150,578 to 173,763 students (an increase of 15.4 percent). In the same time, the Commonwealth’s public two-year institutions saw annual enrollment go from 168,568 to 169,034 students (an increase of 0.3 percent). See Appendix D for details.

In line with trends nationally, racial and ethnic diversity increased among students at Virginia’s public institutions of higher education during this span. In 2007, non-Hispanic White students were 65.6 percent of the student body at all public institutions of higher education, compared to 54.9 percent in 2017. There have been increases in the percentages of non-Hispanic Asian and Hispanic students over that time, with the percentages of non-Hispanic Black/African-American students holding steady at four-year institutions and declining slightly at two-year institutions. See Appendix D for more information. The *Virginia Educated* study population covered those who graduated between 2007 and 2018, so the percent of non-Hispanic White students in the study population is different from the percent found in graduates in 2017.

The demographics of the survey respondents are a good representation of the demographics of the population under study – that is, the 499,665 people who earned undergraduate credentials from a Virginia 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) do not differ from the population percentages by more than 10 percentage points and in most cases differ by only two or three percentage 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 match the comparable demographics of the study population in those categories with great precision. (For more about weighting, see the Summary of Methods above, and Appendix B.)

After weighting the data, *Virginia Educated* respondents taken as a whole tended to be non-Hispanic Whites (68.8 percent) and female (57.5 percent). The comparable figures for the study population taken as a whole were 62.1 percent and 56.6 percent.

Figure 5 (below) shows the weighted data from the survey broken out by two-year and four-graduates. In both groups, respondents were predominantly female, non-Hispanic White,

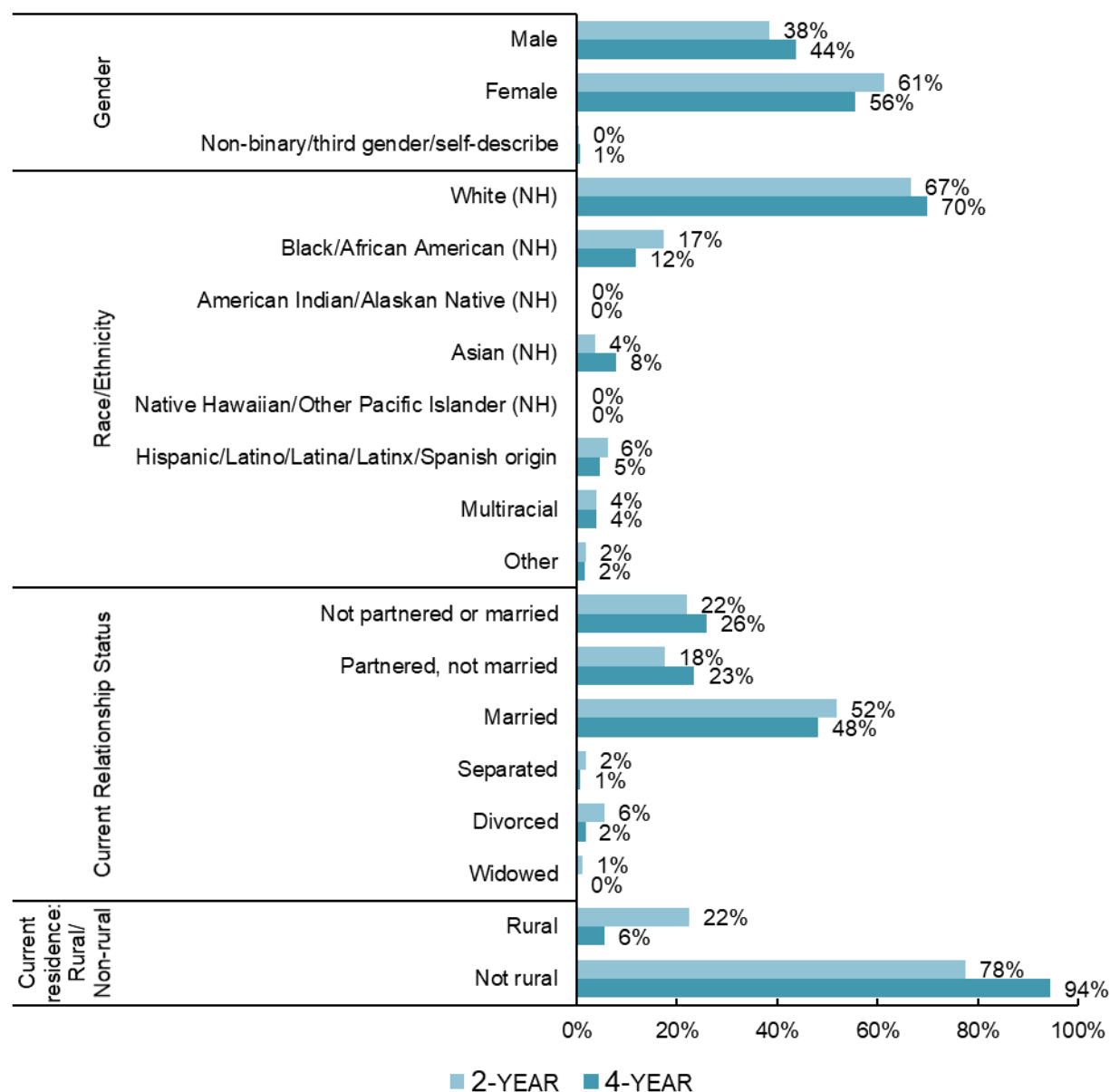
currently married, and living in non-rural areas. Among four-year graduates, 55.6 percent were female, and 61.2 percent of those graduating from two-year institutions were female. In addition, 66.7 percent of graduates of two-year institutions and 69.9 percent of graduates from four-year colleges and universities described themselves as non-Hispanic White only; the next largest group being non-Hispanic Black/African-American (17.3 percent of two-year graduates and 11.8 percent of those graduating from four-year institutions).

Also, 51.9 percent of graduates from two-year institutions and 48.1 percent from four-year institutions were currently married; another 17.6 percent of participants with two-year degrees and 23.5 percent of respondents with four-year degrees were currently partnered but not married. While large majorities of graduates from both types of institutions lived in non-rural areas, those graduating from two-year institutions were more likely to live in rural areas than those graduating from four-year institutions (22.5 percent compared to 5.5 percent). See Figure 5.<sup>4</sup>

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<sup>4</sup> In this report, percentages in the text include a decimal. Figures display percentages rounded to whole numbers for clarity in the displays.



**Figure 5: Gender, Race/Ethnicity, Relationship Status and Current Residence**

Note: NH = Non-Hispanic

Because the survey focused on more recent graduates, the respondents tended to be relatively young – 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.

Additionally, 50.5 percent of the *Virginia Educated* survey respondents taken as a whole – 39.9 percent of two-year graduates and 56.0 percent of four-year graduates – owed money for their education when they graduated. Among those who had student debt when they completed their

undergraduate education, 73.4 percent of graduates of two-year institutions and 62.9 percent of those graduating four-year institutions still carried student loan debt at the time of the survey.

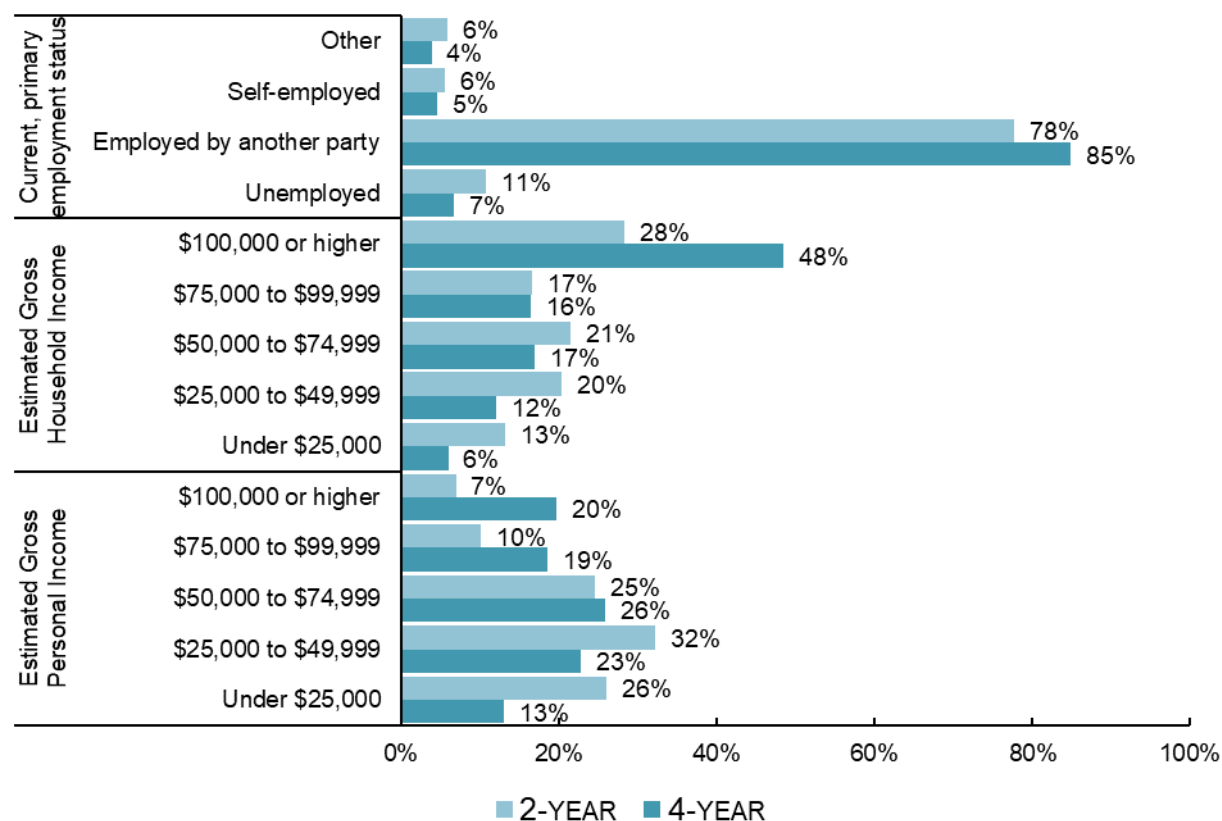
Graduates of two-year institutions were more likely than graduates of four-year institutions to say that their student loan debt was more of a problem than they expected it to be when they took it on (57.7 percent versus 52.4 percent). More two-year graduates (50.8 percent) were at least moderately worried about their current student loan debt situation than four-year graduates (39.0 percent).

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 current student debt situation.

## **Employment and income**

In this section, it is important to note that even though graduates will be described in terms of the two-year and four-year groups that correspond to their focal undergraduate credential, their current wages could be influenced by additional credentials they earned beyond their focal credential.

Most of the respondents, whether graduates of two-year institutions (77.7 percent) or four-year institutions (84.8 percent) reported being currently employed by another party, and a small number in each group (5.6 percent of two-year graduates and 4.6 percent of four-year graduates) reported being self-employed (see Figure 6). Graduates from four-year institutions were more likely to report personal incomes and household incomes before taxes for 2019 of \$100,000 or higher (19.7 percent and 48.5 percent, respectively) compared to those from two-year institutions (7.0 percent and 28.3 percent, respectively). More than half of those graduating from two-year institutions (55.1 percent) reported household incomes for 2019 of less than \$75,000 compared to just over one-third of those from four-year institutions (35.0 percent). Among two-year graduates, 58.2 percent reported personal incomes of less than \$50,000 and 82.9 percent reported personal incomes less than \$75,000. Among four-year graduates, 61.8 percent reported personal incomes of less than \$75,000 and 35.8 percent reported personal incomes less than \$50,000.

**Figure 6: Current Employment Status, Personal and Household Income in 2019**

The median personal income for 2019 reported by those graduating from two-year institutions was \$40,000 compared to \$59,000 for those graduating from four-year institutions. For annual household incomes in 2019 the medians were \$70,000 and \$95,000, respectively.

Among both groups of graduates, men, non-Hispanic Whites and those currently living in non-rural areas were more likely to report higher personal and household incomes compared to women, graduates of other races/ethnicities, and those currently living in rural areas.

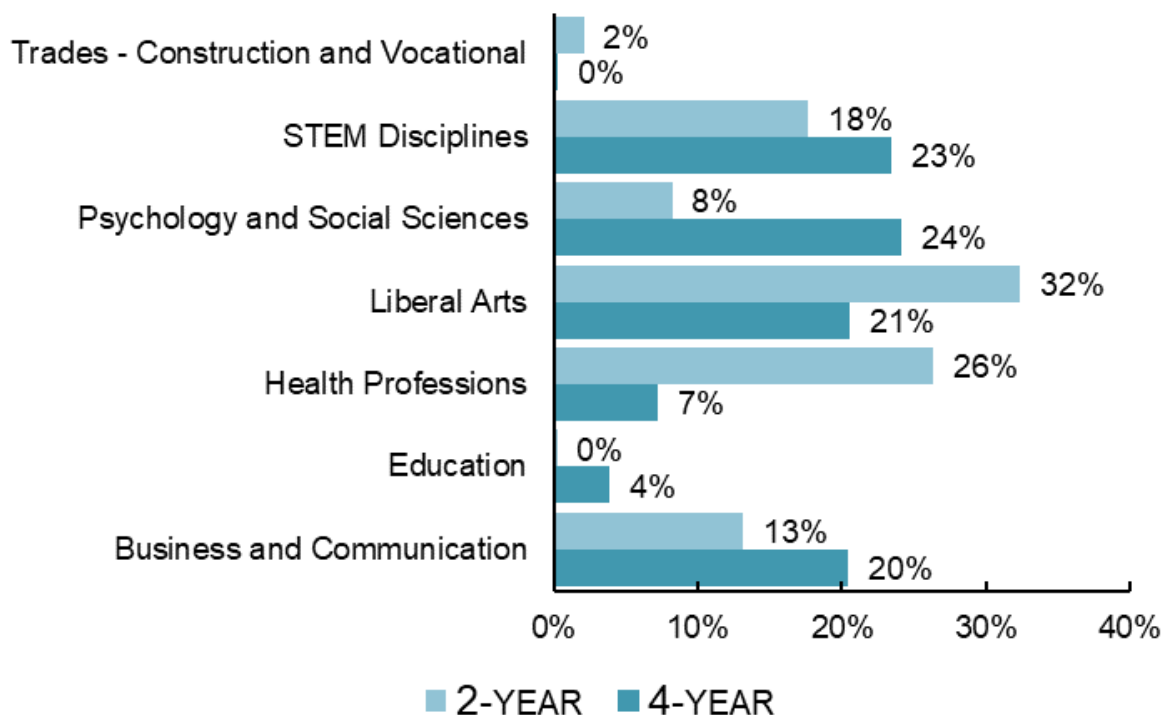
Among all graduates taken as a whole, those STEM (in science, technology, engineering, and math); business and communication; and to some extent health professions enjoyed higher wages than those in other academic disciplines. The differences may not be as stark as one might expect: the percentage of graduates 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.

Graduates of four-year institutions were more likely to attribute all (27.8 percent versus 21.2 percent of their two-year counterparts) or some (50.2 percent and 35.6 percent, respectively) of their current income to the undergraduate certificate or degree they received.

## Educational achievement

Survey respondents were sampled based on receiving an undergraduate degree or certificate from a Virginia state-supported institution between 2007 and 2018. As footnoted on page 1, this credential was the “focal credential” because it was the focus of the survey. The discipline group – as defined by SCHEV – in which they received the focal credential varied between graduates of two- and four-year institutions (see Figure 7). 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 counterparts), 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). (Most of the trades credentials in the sampling frame – 79.4 percent – were awarded by two-year institutions.) 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).

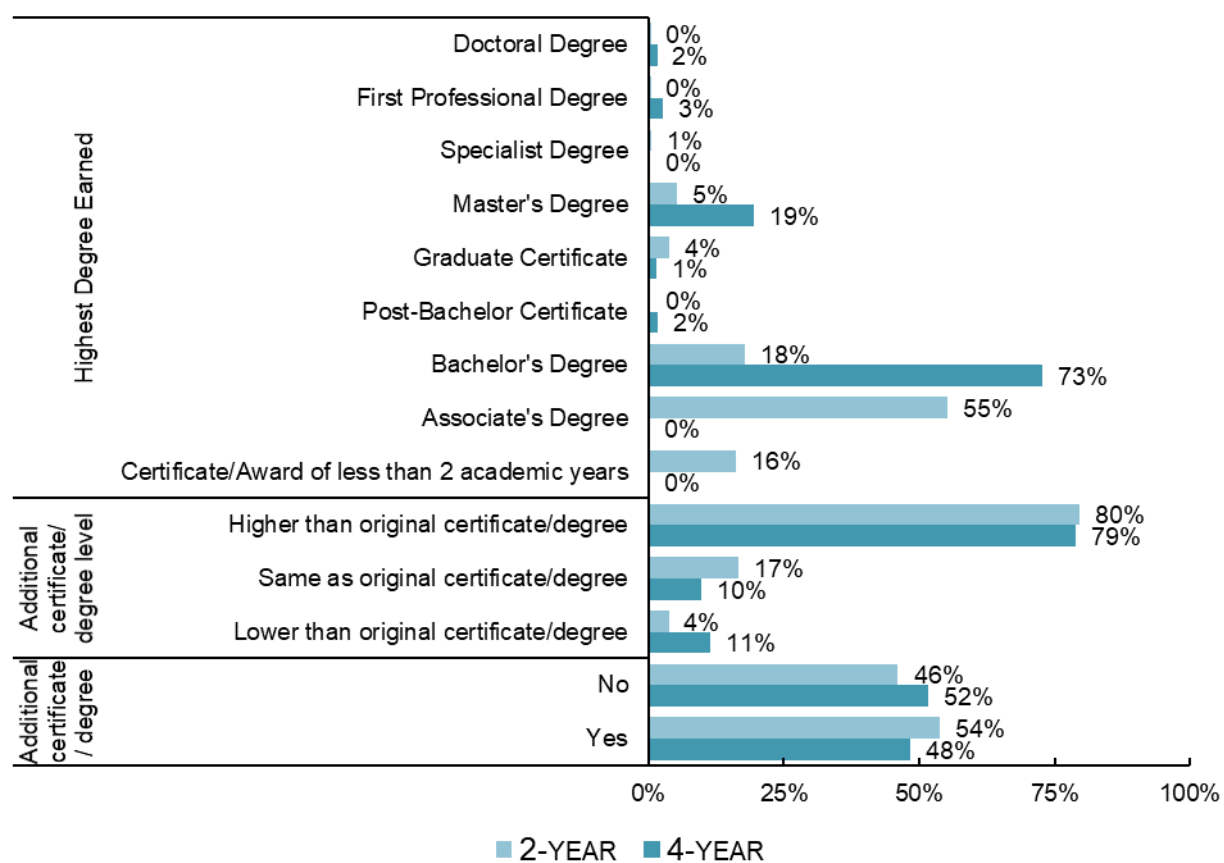
**Figure 7: Discipline Group of the Focal Credential**



While survey respondents were sampled based on the focal credential, they may have earned additional degrees or credentials from other institutions before, during or after the educational experience that was the focal point of the survey. These additional credentials could influence a respondent’s current employment and life situation.

About half of all respondents (50.3 percent overall, 53.9 percent of two-year graduates and 48.4 percent of four-year graduates) reported earning additional credentials beyond the focal credential. Among the respondents who added credentials, most reported a credential at a higher level than their focal credential (79.5 percent of two-year graduates and 79.0 percent of four-year graduates). Expressed as a percentage of all graduates – whether they earned any additional credentials or not – 35.9 percent of all graduates obtained credentials at a higher level than their focal credential. Among two-year graduates who added to their focal credential, 17.8 percent reported adding a bachelor’s degree and 10.8 percent reported a postbaccalaureate credential. Among four-year graduates who added to their focal credential, 19.4 percent obtained a master’s degree and another 7.7 percent obtained other credentials higher than a master’s degree. See Figure 8.

**Figure 8: Highest Level of Education Reported and Additional Education (Among Those Earning Additional Credentials)**

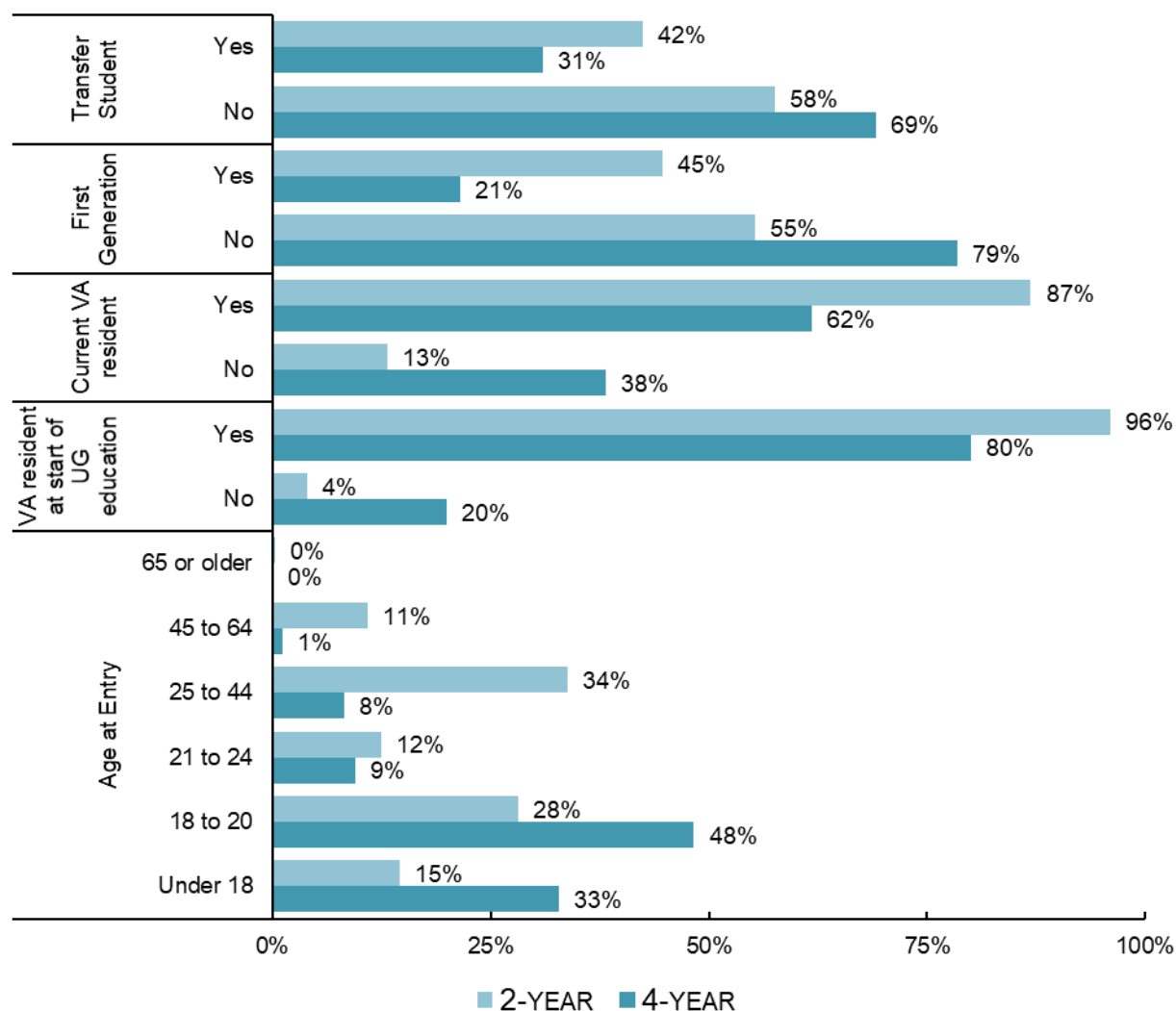


Overall, 35.9 percent of all graduates (36.8 percent of two-year graduates and 35.5 percent of four-year graduates) reported earning an additional credential higher than their focal credential.

## **Student characteristics, enrollment and residency**

Graduates of Virginia's state-supported four-year institutions were more likely to have started their degrees during the traditional ages of 18 to 20 years (48.3 percent), with another 32.9 percent were younger than 18 when they started. Those graduating from two-year institutions were more likely to report starting at an older age, with 44.9 percent starting at age 25 or older. Graduates of two-year institutions were more likely to be the first generation in their families to earn a credential (44.7 percent compared to 21.5 percent of four-year graduates) and to have transferred at some point (42.4 percent versus 30.9 percent of those with four-year degrees). 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

Almost all the graduates (96.0 percent of two-year graduates and 80.1 percent of four-year graduates) were Virginia residents when they started. Most continue to reside in the Commonwealth, though fewer four-year graduates (61.8 percent) live in the state now compared to two-year graduates (86.9 percent). See Figure 9.

**Figure 9: Student Characteristics, Enrollment, and Residency**

Note: UG = Undergraduate

Furthermore, 75.9 percent of those finishing at a two-year institution compared to 68.8 percent of those graduating from four-year institutions reported working for pay while obtaining their degrees. Also, 65.9 percent of those attending two-year institutions attended as full-time students compared to 94.4 percent attending full-time at four-year institutions. Those finishing at two-year institutions were also more likely to be caregivers while completing their degrees (45.4 percent) compared to those in four-year institutions (11.6 percent).

At the time of the survey, graduates of two-year institutions were more likely to be homeowners (60.4 percent compared 51.7 percent of graduates of four-year institutions) while those graduating from four-year institutions were more likely to be renting (33.8 percent versus 23.3 percent of their two-year counterparts).

**In summary**, graduates of Virginia higher education institutions tended to be married, non-Hispanic White females living in non-rural areas who were working for someone else. Most were Virginia residents at the time of enrollment, and they were generally 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. Those graduating from two-year institutions, while less likely to have student debt, were more likely to continue carrying that debt post-graduation. They also may have had a more stressful undergraduate experience generally, as they were more likely to work for pay and/or fulfill caregiving roles while pursuing their education.

Graduates from four-year institutions tended to have higher earnings than graduates from two-year institutions, but two-year graduates were more likely to be homeowners at the time of the survey compared to their four-year counterparts. Additionally, 36.8 percent of two-year graduates and 35.5 percent of four-year graduates went on to obtain higher degrees. Four-year graduates were more likely to receive their focal credential in the fields of psychology and the social sciences, STEM, and business and communication. Those graduating from two-year institutions were more likely to focus on the liberal arts and health professions.

## Reasons for pursuing undergraduate education

Although a majority of graduates overall said they pursued their focal credential for employment-related reasons, a substantial minority cited other reasons. Among those graduating from two-year institutions, 68.8 percent gave employment-related reasons for their education as did 61.9 percent of four-year graduates.

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”).

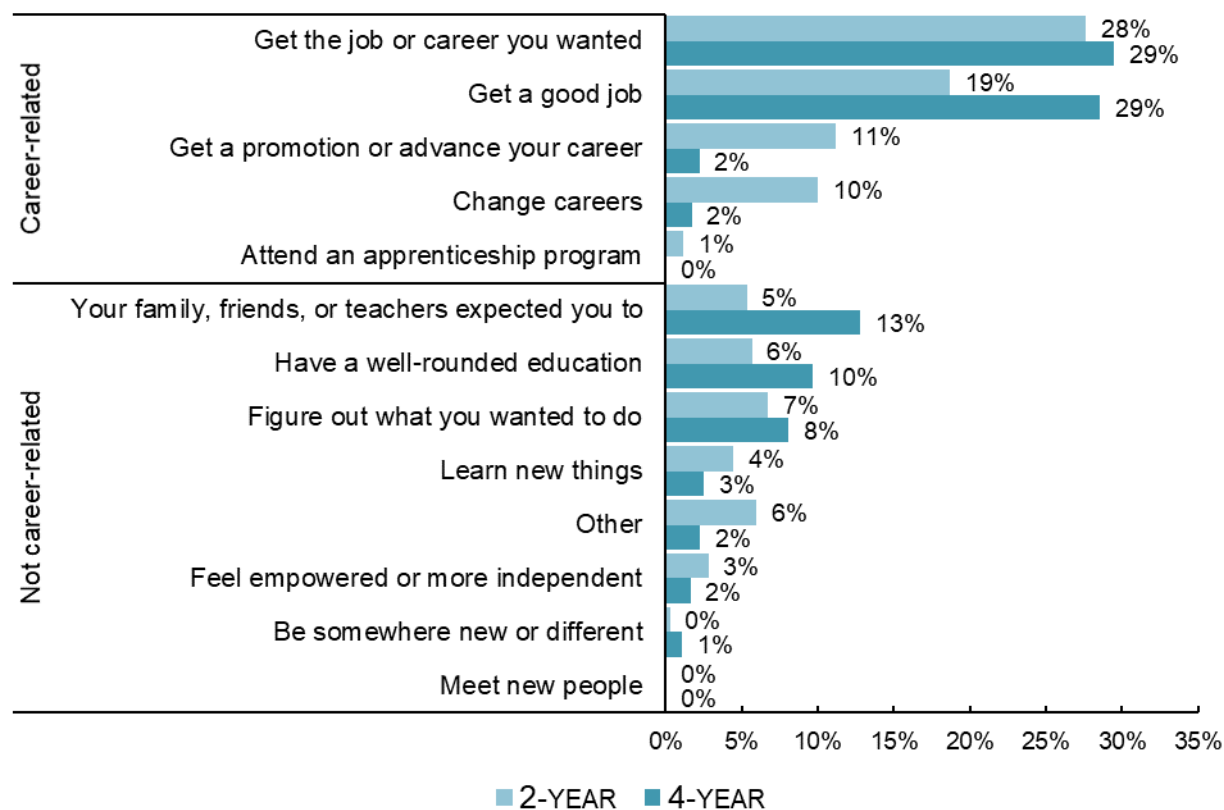
As indicated below in Figure 10, the reasons for starting undergraduate education were grouped into career-related and non-career-related sets. Graduates of four-year institutions who mentioned career-related reasons were more likely than two-year graduates to say they enrolled in order to get a good job (28.6 percent versus 18.7 percent of their two-year counterparts) or to get the job or career they wanted (29.4 percent versus 27.6 percent). Two-year graduates who mentioned career-related reasons were more likely than four-year graduates to say they started because they wanted to change careers (10.0 percent compared to just 1.7 percent of their four-year counterparts) or to get a promotion or to advance their career (11.2 percent versus 2.2 percent). These differences reflect the life situations of two-year graduates when they enrolled,



as they were more likely to be older and have families and an existing job or career compared to four-year graduates.

Graduates of four-year institutions were a little more likely to provide non-employment reasons for enrolling, such as family expectations (12.8 percent versus 5.3 percent of two-year graduates), having a well-rounded education (9.7 percent versus 5.7 percent) and figuring out what they wanted to do (8.1 percent versus 6.7 percent). See Figure 10.

**Figure 10: Primary Reason for Starting Undergraduate Education**

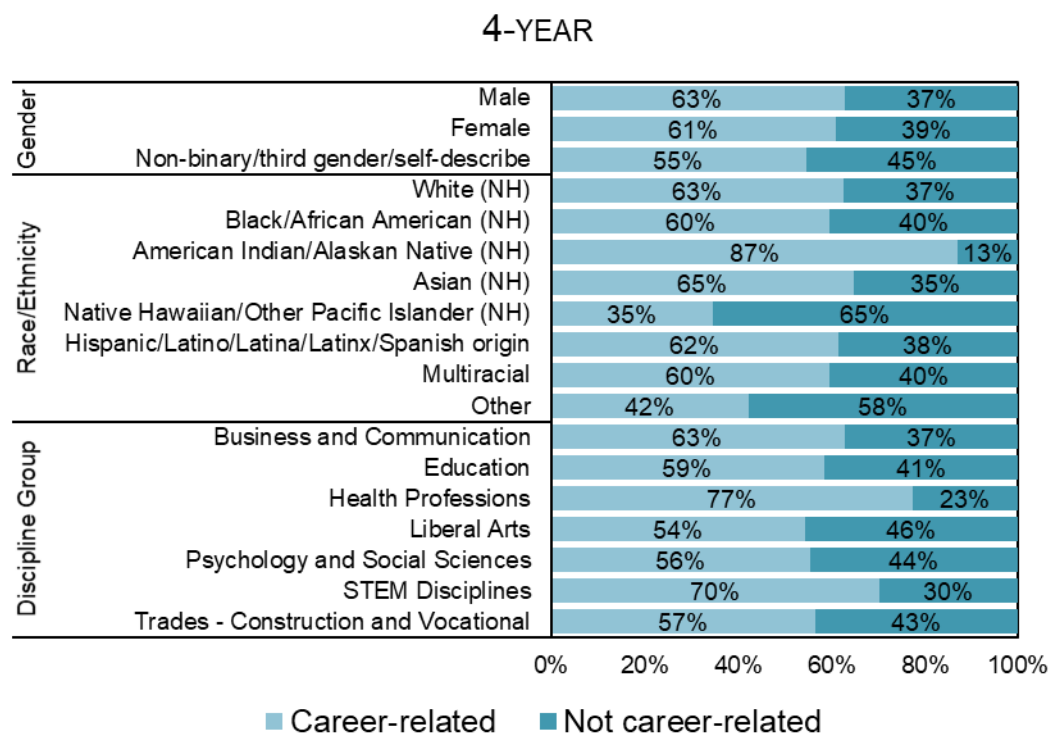
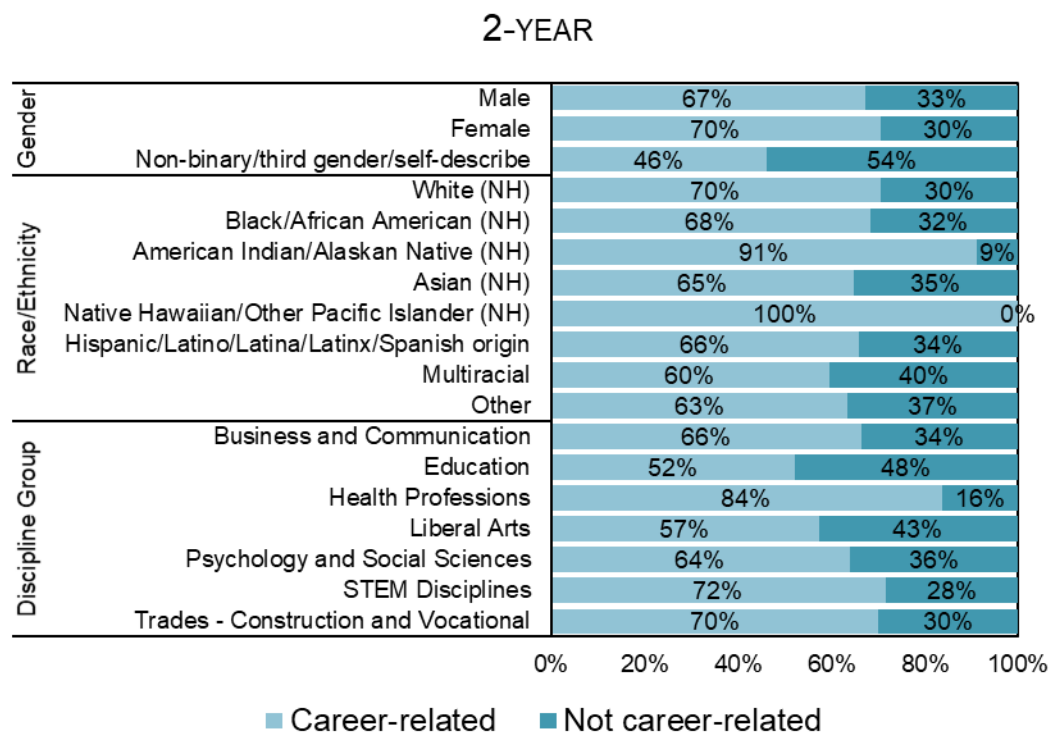


Among two-year graduates, women (70.4 percent) were slightly more likely than men (67.2 percent) to give career-related reasons. Even though only 19 weighted non-binary/third gender/self-described gender respondents gave a response to this question, they were statistically more likely to mention non-career related reasons (54.0 percent compared to 29.6 percent of women and 32.8 percent of men). There were no differences among four-year graduates by gender.

Among four-year graduates, non-Hispanic Asian graduates (64.7 percent) were a little more likely to mention career-related reasons, especially in comparison to non-Hispanic Black/African-Americans (59.7 percent). Additionally, liberal arts graduates from two-year institutions – who were almost one-third of all graduates from the two-year institutions – were more likely to give non-career-related reasons compared to those in other academic disciplines.

Among graduates of four-year institutions, those concentrating in the health professions (77.3 percent) followed by those in STEM (70.2 percent) and in business and communication (62.8 percent) were more likely to offer career-related reasons compared to those in other disciplines. See Figure 11 for details.

**Figure 11: Reason for Attending Two- Or Four-Year Institution by Gender, Race/Ethnicity and Discipline**



Note: NH = Non-Hispanic

Career-related reasons for enrolling in the undergraduate program 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).

Furthermore, among graduates of two-year institutions, those with bachelor's degrees as their highest degree (which could include credentials in addition to the focal credential) were more likely to give career-related reasons, though those with a post-bachelor's certificate, a graduate certificate or a specialist degree as their highest degree were more likely to give non-career related reasons for enrolling in and completing their two-year degree or certificate. Among four-year graduates, however, those residing in rural areas and those with specialist degrees as their highest degree were more likely to give career-related reasons for completing their focal credential. Those with higher incomes in both groups were also more likely to give career-related reasons.

**In summary**, career-related reasons motivated about two-thirds of all graduates to start their focal education, but about one-third of graduates started their focal education for reasons not related to employment. Two-year graduates were a little more likely to have started their focal education for career-related reasons.

## Assessing the undergraduate experience

### Satisfaction with the undergraduate experience

There were six major satisfaction questions on the survey (see Appendix A for the full questionnaire). The full question wording and answer categories for each item were as follows. 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 (Question 97c)
- How satisfied are you with how your undergraduate experience prepared you for the workplace?
  - Very dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Very satisfied (Question 67)
- 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 (Question 91)

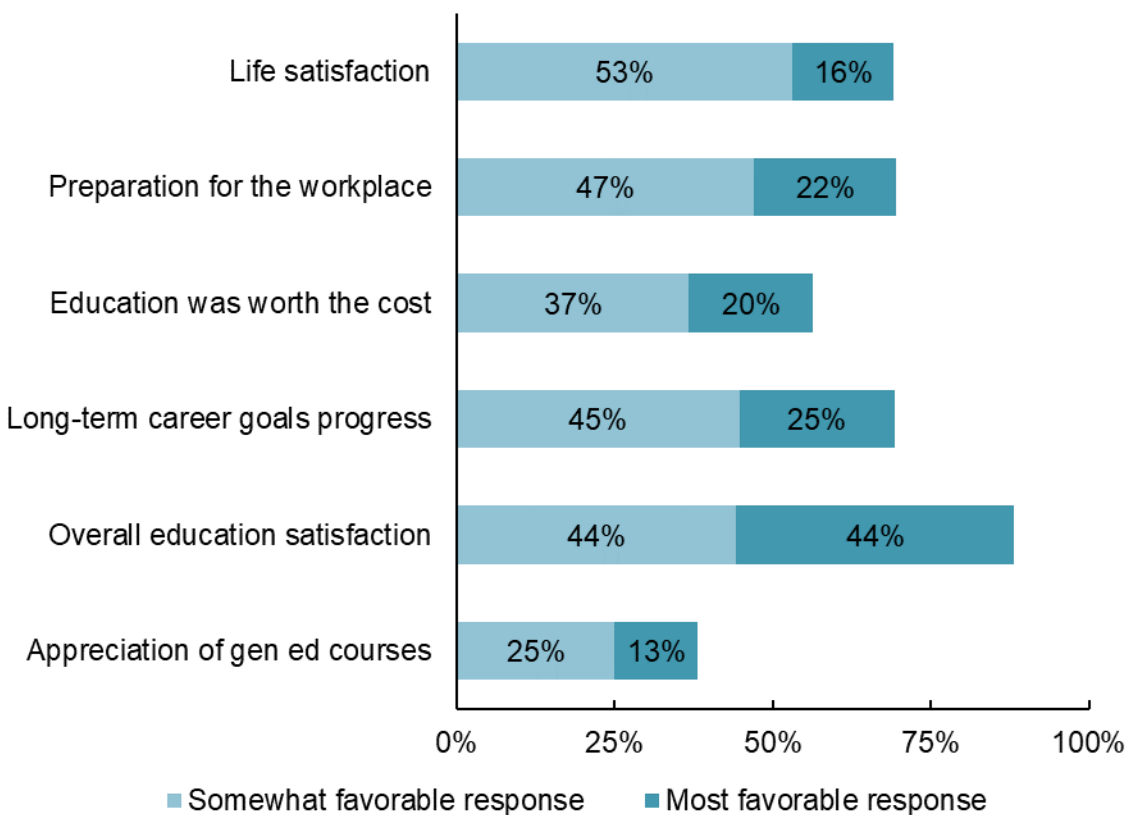
- Think for a moment not just about your job, but about your career. Since completing your undergraduate education, how satisfied are you with the progress you have made toward your long-term career goals?
  - Extremely dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Extremely satisfied (Question 53)
- Overall, how satisfied are you with the undergraduate education you received?
  - Very dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Very satisfied (Question 9)
- 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 (Question 6)

There were high levels of satisfaction overall on three of these measures. In total, 88.1 percent said they were “satisfied” or “very satisfied” with their undergraduate education overall. Similarly, 69.2 percent were “satisfied” or “extremely satisfied” with the progress they have made toward their long-term career goals since completing their undergraduate education. In addition, 69.0 percent said they “agree” or “strongly agree” that they are satisfied with their lives. Also, 69.5 percent said they were “satisfied” or “very satisfied” with how their undergraduate experience prepared them for the workplace.

Graduates expressed moderate satisfaction with the cost of their undergraduate education – 56.3 percent overall said they “agree” or “strongly agree” with the statement “your undergraduate education was worth the cost.”

Graduates were less enthusiastic when reflecting on general education courses. Only 38.1 percent said they were “very” or “extremely” appreciative of their general education courses. Two-year graduates were more appreciative (45.8 percent) than four-year graduates (34.8 percent). Figure 12 shows this information.

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 were not worth the cost or time. These concerns from the survey data echo comments that were heard in the questionnaire development focus groups.

**Figure 12: Favorable Responses to Six Satisfaction Questions, All Graduates**

### Satisfaction by graduation year

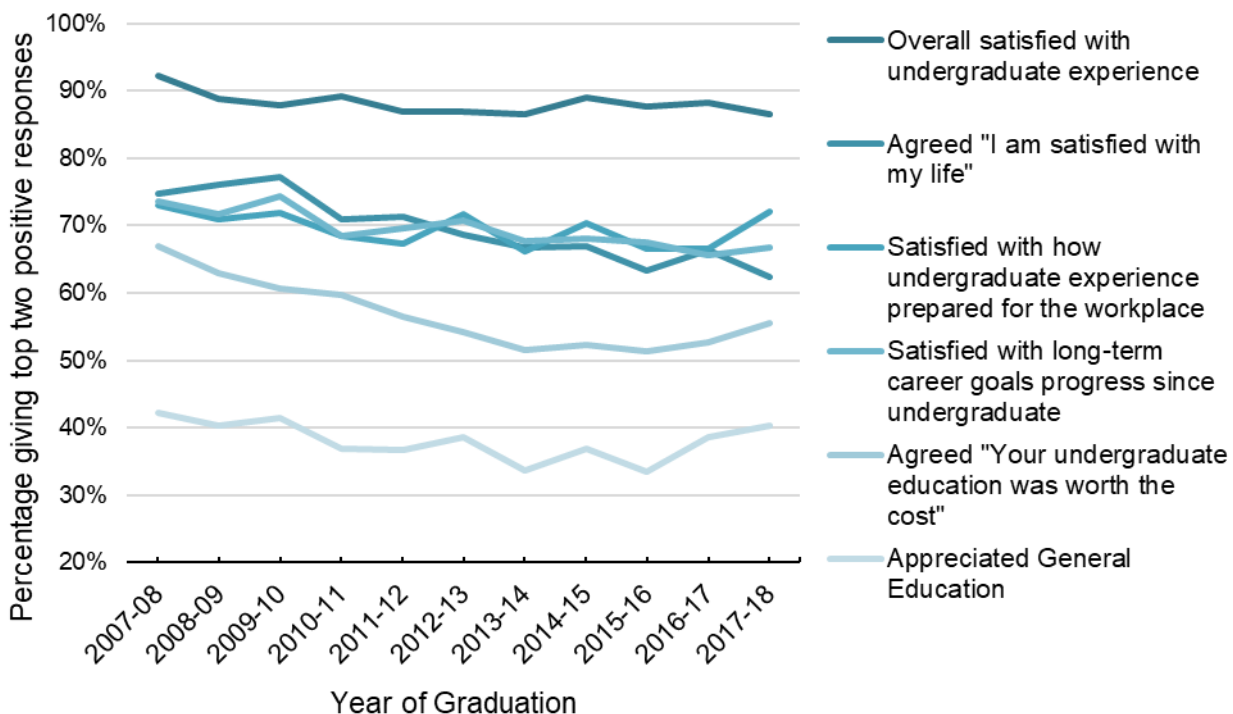
Generally, graduates from the earliest cohorts included in the study (those graduating in 2007-08, 2008-09 and 2009-10) gave higher satisfaction ratings than those graduating in 2010-11 through 2014-15. Those in the most recent cohorts starting with the graduates of 2015-16 show moderately better ratings. Figure 13 shows the percentages of positive responses for each of the six satisfaction measures over the 11 graduation cohorts. Although the figure looks like it is presenting trend 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 in the past. See Figure 13.

Of the six measures, agreement with the statement “I am satisfied with my life” saw the largest drop over the 10 graduating cohorts, going from 74.8 percent of 2007-08 graduates agreeing to 62.3 percent in the 2017-18 cohort.

For three measures – appreciation of the undergraduate general education experience, agreement with the statement “Your undergraduate education was worth the cost,” and satisfaction with how the undergraduate experience prepared one for the workplace – there was a shift to a slight upward trend in the percentage of satisfied respondents from the 2015-16 graduating cohort to

the 2017-18 cohort (33.5 to 40.3 percent, 51.3 to 55.5 percent, and 66.5 to 72.1 percent, respectively).

**Figure 13: Percent of Graduates Who Were Satisfied by Year of Graduation**

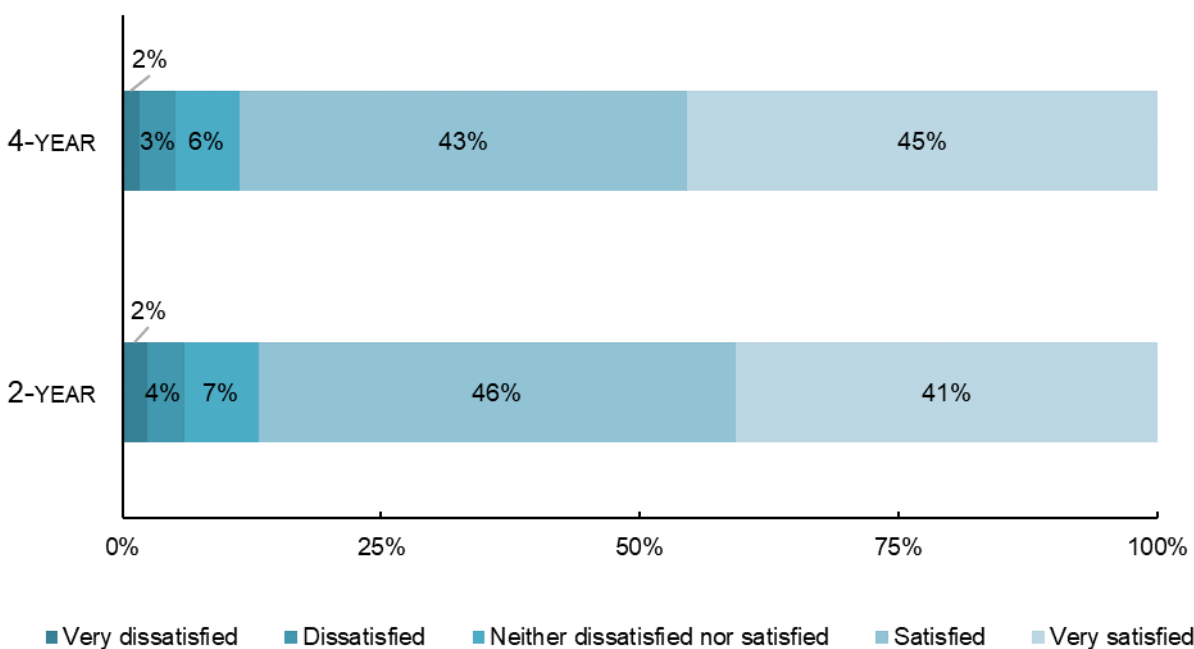


(Not trend data - the data were collected at one point in time from people who graduated in different years in the past.)

### Overall satisfaction with the undergraduate experience

Respondents were asked “Overall, how satisfied are you with the undergraduate education you received?” Figure 14 shows the breakdown of responses from two-year and four-year graduates to this question about overall satisfaction: 86.9 percent of two-year graduates and 88.7 percent of four-year graduates were satisfied (that is, they said they were either “satisfied” or “very satisfied”

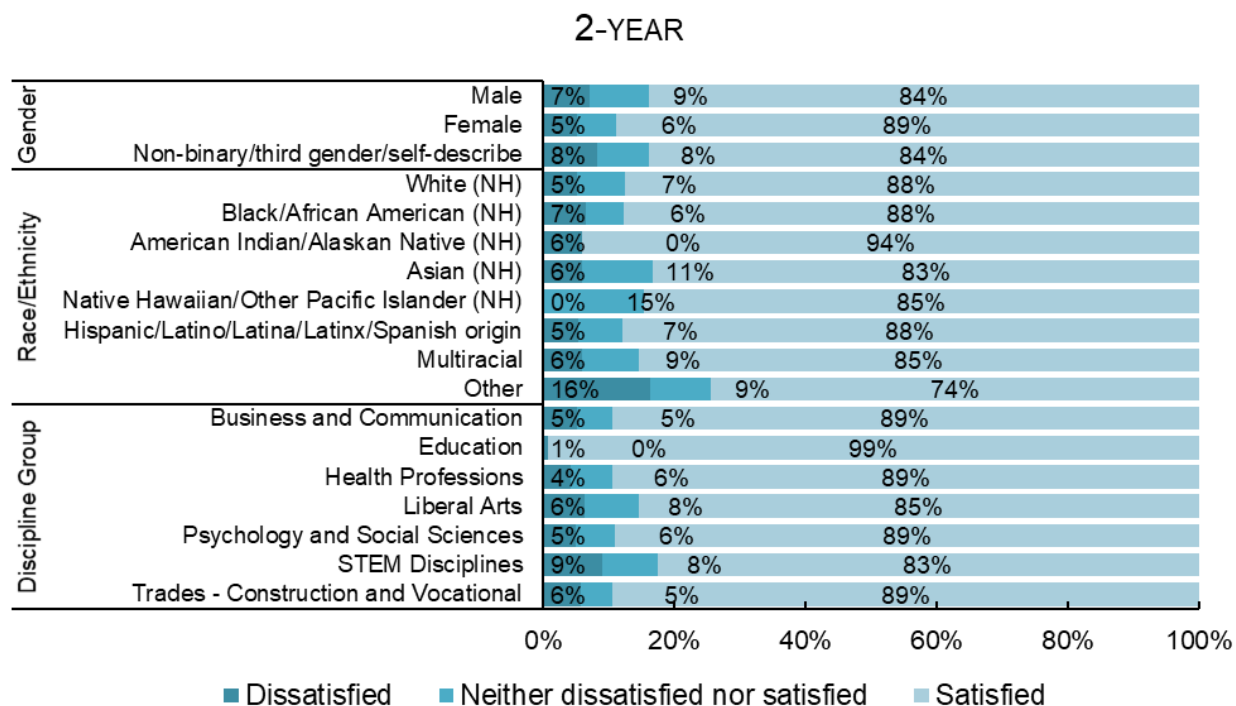
**Figure 14: Overall Satisfaction with Undergraduate Experience**



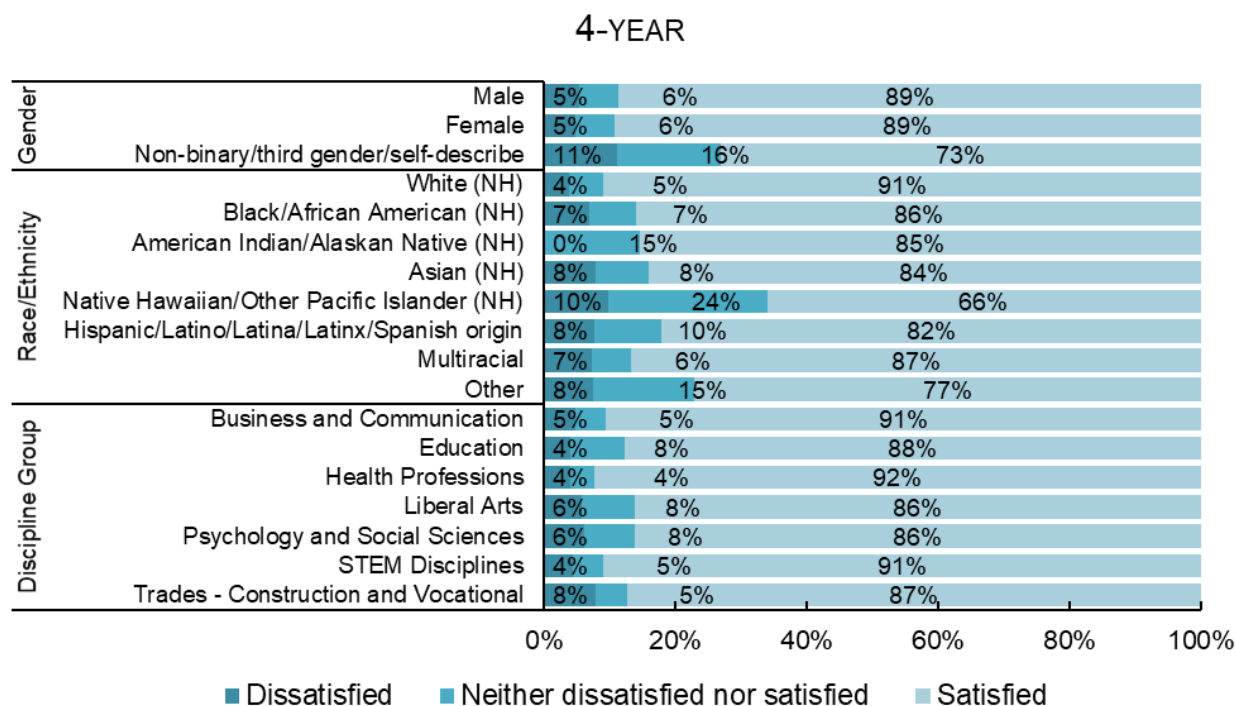
There were few striking differences in overall satisfaction among demographic subgroups. Among four-year graduates, non-Hispanic Whites were most likely to express satisfaction (91.0 percent, while other race/ethnic groups ranged from 77.1 to 86.7 percent), as were women (89.3 percent) compared to those of non-binary/third gender/self-described gender identities (73.1 percent). Among two-year graduates, women were more likely to express overall satisfaction (88.9 percent compared to 83.8 percent of men), though overall satisfaction varied less by race/ethnicity. Two-year graduates in business and communication (89.5 percent) were more satisfied compared to those in the liberal arts (85.4 percent) or the STEM disciplines (82.5 percent). When it came to graduates of four-year institutions, those concentrating in the health professions (92.3 percent), in the STEM disciplines (91.0 percent), and in business and communication (90.6 percent) were more likely to be satisfied than graduates of liberal arts (86.2 percent) or psychology or social science (86.1 percent) programs. Additionally, among four-year graduates, those currently living outside Virginia were a little more likely to express satisfaction (91.5 percent versus 87.2 percent of those currently living in-state). See Figure 15.



**Figure 15: Overall Satisfaction with Undergraduate Experience by Selected Demographics for Two-Year Graduates**



**Figure 16: Overall Satisfaction with Undergraduate Experience by Selected Demographics for Four-Year Graduates**

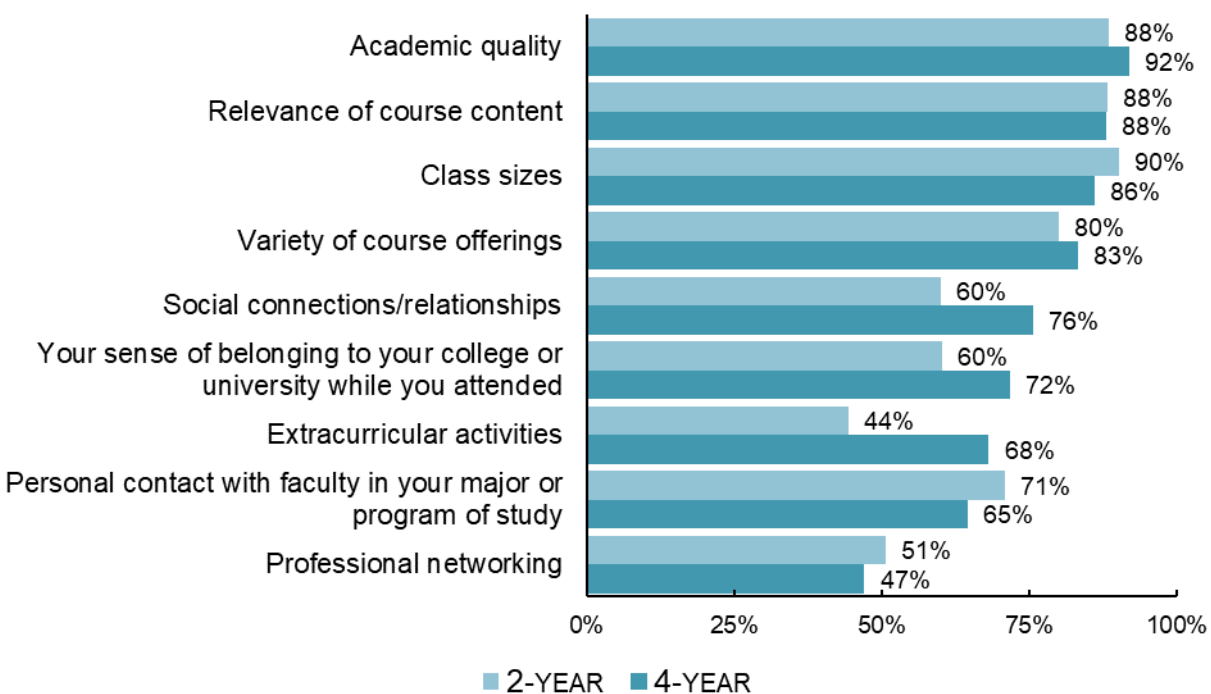


Note: NH = Non-Hispanic

### Satisfaction with sub-components of the undergraduate experience

In addition to the six major satisfaction questions described above, respondents provided their satisfaction with nine specific sub-components of their undergraduate experience. A five-point response scale was used. The top two categories – “very satisfied” and “satisfied” – were combined as “satisfied.” The four highest-rated sub-components of the undergraduate experience for graduates of both two- and four-year institutions were academic quality (92.0 percent of four-year graduates and 88.4 percent of two-year graduates were satisfied), class size (90.2 percent of four-year graduates and 86.1 percent of two-year graduates were satisfied), relevance of course content (88.0 percent of four-year graduates and 88.2 percent of two-year graduates were satisfied) and variety of course offerings (83.3 percent of four-year graduates and 80.1 percent of two-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 specific sub-component of the undergraduate experience with favorable ratings below 60 percent. See Figure 17.

**Figure 17: Satisfaction with Aspects of Undergraduate Experience (Percent Satisfied)**



Four-year graduates were more likely to be satisfied with social connections and relationships (75.7 percent compared to 59.9 percent of their two-year peers), their sense of belonging to the college or university (71.8 percent versus 60.3 percent) and with extracurricular activities (68.2 percent versus 44.4 percent). Graduates of two-year institutions were more likely to be satisfied with their personal contact with faculty in their major (71.0 percent versus 64.5 percent of their four-year counterparts).

When the ratings for these nine aspects are averaged on a scale of 1 to 5 where 1 was “very dissatisfied” and 5 was “very satisfied,” graduates of two-year institutions were less likely to be satisfied with their undergraduate education, giving them a combined average rating of 3.91 compared to 4.00 for those graduating from four-year institutions.

For simplicity, the following findings about how satisfaction with these nine aspects of the undergraduate education relate to demographic variables are based on the respondents as a whole, combining two-year and four-year graduates.

Male (4.02) and non-Hispanic White graduates (4.05) from four-year institutions were a little more likely to be satisfied, on average, with the nine aspects compared to females or other genders (3.99 and 3.64, respectively) and those from other race/ethnicities (less than 4.00 average rating).

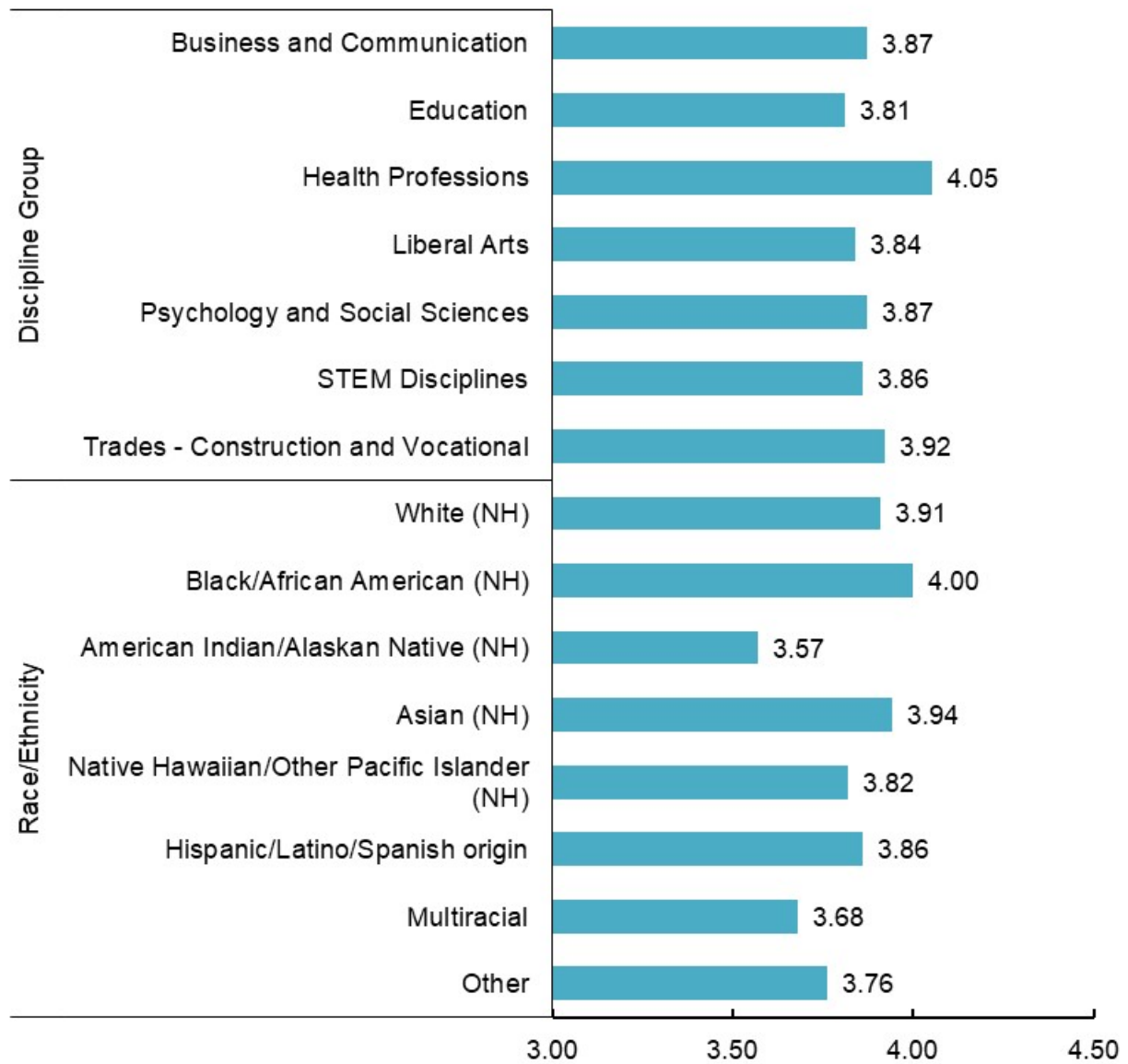
Graduates concentrating in the liberal arts (3.95) and in psychology and social sciences (3.94) were slightly less likely to be satisfied with the various aspects of their undergraduate education compared to those in other disciplines (4.02 to 4.10). These differences were statistically significant but small in magnitude.

Additionally, greater satisfaction was expressed by those earning higher incomes, those who did not have student loan debt at graduation or had paid off their debt since graduation, graduates who attended the institution full-time, those who did not work while obtaining their degree, graduates who no longer live in the state, and those who live in rural areas.

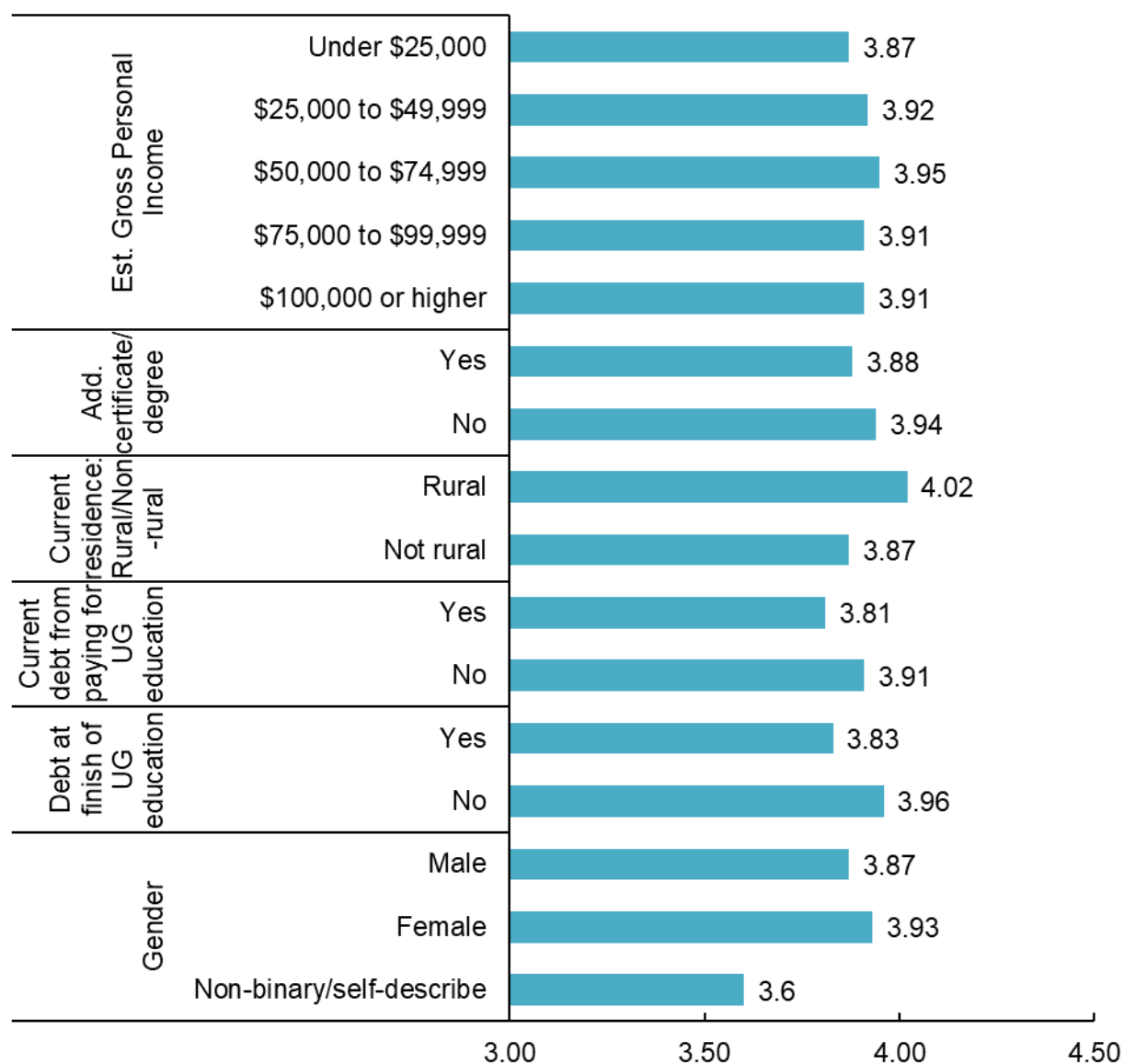
Notably, those with additional degrees or certifications were less likely to express satisfaction. Income levels did not have as much of an impact on average satisfaction across these nine aspects of the undergraduate experience.

See Figure 18 and Figure 19.

**Figure 18: Mean of Satisfaction Across Nine Undergraduate Experience Items by Demographics, All Respondents - Part A**



Note: UG = Undergraduate, NH = Non-Hispanic

**Figure 19: Mean of Satisfaction Across Nine Undergraduate Experience Items by Demographics, All Respondents - Part B**

Note: UG = Undergraduate

Also (not shown), among two-year graduates, women were more likely to express satisfaction (3.93) with the nine aspects compared to male or other gender participants (3.87 and 3.6, respectively); non-Hispanic Black/African-American graduates were more likely to express satisfaction (average rating of 4.00) compared to their non-Hispanic White (3.91) and Hispanic (3.86) counterparts; and those concentrating in the health professions (4.05) were more likely than those in other disciplines (ranging from 3.81 to 3.92) to be satisfied with the various aspects of their undergraduate education. Among both two- and four-year graduates, those who did not have student loan debt at the time of graduation and those who lived in rural areas generally

expressed slightly greater satisfaction with the nine different aspects of their undergraduate education.

### Opinions about general education courses

Almost all graduates at four-year institutions (92.6 percent) and more than three-quarters of graduates of two-year institutions (77.6 percent) reported taking general education classes as a part of their undergraduate experience.

Overall, graduates of two-year institutions were more likely to be “very” or “extremely” appreciative of their general education experience (45.5 percent) compared to their four-year counterparts (34.7 percent). Those graduating from four-year institutions were more likely to appreciate their general education experience at the “moderate” or “slight” levels (56.0 percent compared to 47.1 percent of their two-year counterparts). Refer to Figure 20 for details.

*“As a full-time student and full-time employee, I felt held down by my numerous Gen Ed courses. I was at school to get in and get out and I felt those provided 0 value to my life.”*

– Virginia Educated respondent<sup>5</sup>

*“I learned useful skills, both with my general education and degree focused courses. Though I am not using my degree, I do use skills I learned daily.”*

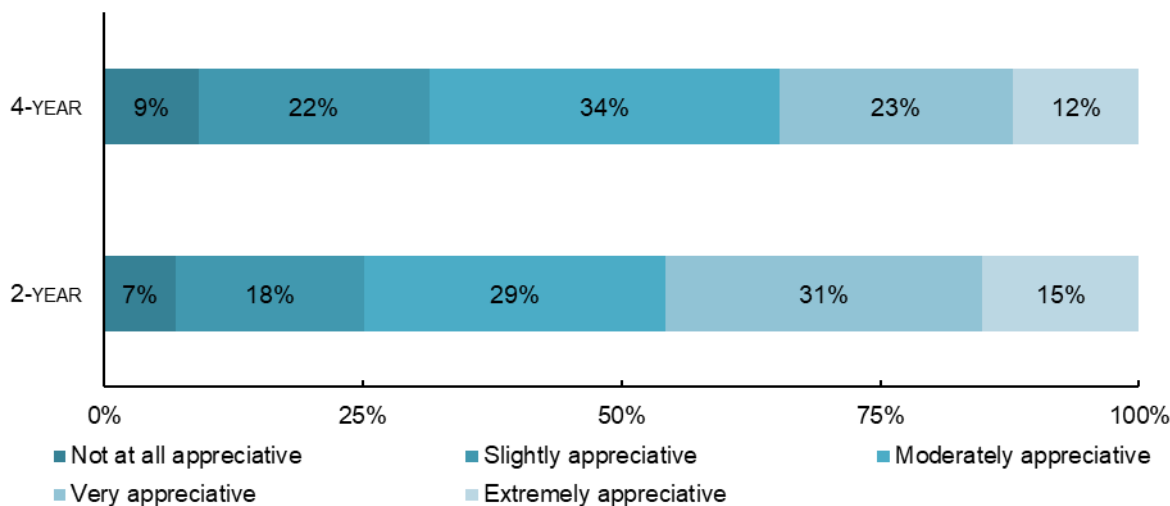
– Virginia Educated respondent

<sup>5</sup> In this report, 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?”

**Figure 20: Appreciation of General Education Experience**

The top three reasons why graduates of both two- and four-year institutions appreciated their general education experience was that it exposed them to other areas of study outside their degrees (31.6 percent and 52.2 percent, respectively), made them more well-rounded (40.2 percent and 49.6 percent, respectively) and it was interesting to them (29.4 percent and 40.1 percent, respectively). Graduates of four-year institutions were also more likely to mention that the general education experience gave them a greater appreciation of other cultures and disciplines (34.7 percent) compared to their two-year counterparts (20.7 percent) and both groups mentioned that the foundation they received promoted their overall growth (28.4 percent each).

Among respondents who were “not at all” appreciative or only “slightly” appreciative, the four most common reasons respondents gave for their lack of appreciation were:

1. Did not get much value, knowledge, or skills from their general education classes (45.1 percent of two-year graduates and 53.6 percent of four-year graduates)
2. It was not relevant to career path/Don’t use the information now (42.5 percent of two-year graduates and 47.7 percent of four-year graduates)
3. It took time away from major, concentration, or field of study (44.7 percent of two-year graduates and 39.3 percent of four-year graduates)
4. It was not worth the cost or time (37.8 percent of two-year graduates and 38.1 percent of four-year graduates)

**In summary**, satisfaction with the undergraduate experience was high among graduates of both two- and four-year institutions. Overall, women were more likely to be satisfied than men or those identifying with other genders. Among four-year graduates, non-Hispanic Whites were more likely to be satisfied with their undergraduate experience, while satisfaction among two-year graduates varied less by race/ethnicity. Within both groups of graduates, those in liberal arts, and psychology and social sciences were less satisfied with their undergraduate education overall and with its various components compared to those in other academic discipline groups.

### **Personal/Social impacts of the undergraduate experience**

Survey respondents were asked about the impact of their undergraduate education on their views of their life and the world, relationships (including those with their community), career and financial situation. They were asked to rate impact on a five-point scale of “significantly changed for the worse” to “significantly changed for the better.”

As Figure 21 indicates, majorities of both two-year graduates (71.7 percent) and four-year graduates (73.3 percent) reported positive impacts (“significantly changed for the better” or “somewhat changed for the better”) on “what I wanted to achieve in life.” Those graduating from a four-year institution were more likely to say that their “view of the world” had been positively impacted (73.2 percent) compared to those graduating from two-year institutions (56.8 percent), and they were more likely to report positive impacts on “how I wanted to live my life” (72.3 percent compared to 65.0 percent of their two-year counterparts).

*“Positive – bigger world view, prepared me for my field, gave me a chance to grow up. Negative – exposed to racism (faculty and students), strenuous culture that thrived on academic toxicity.”*

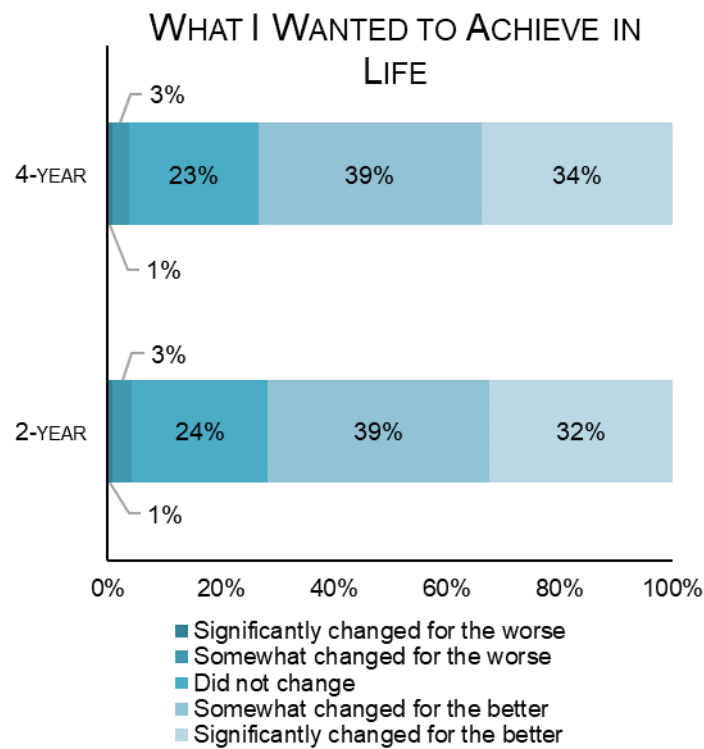
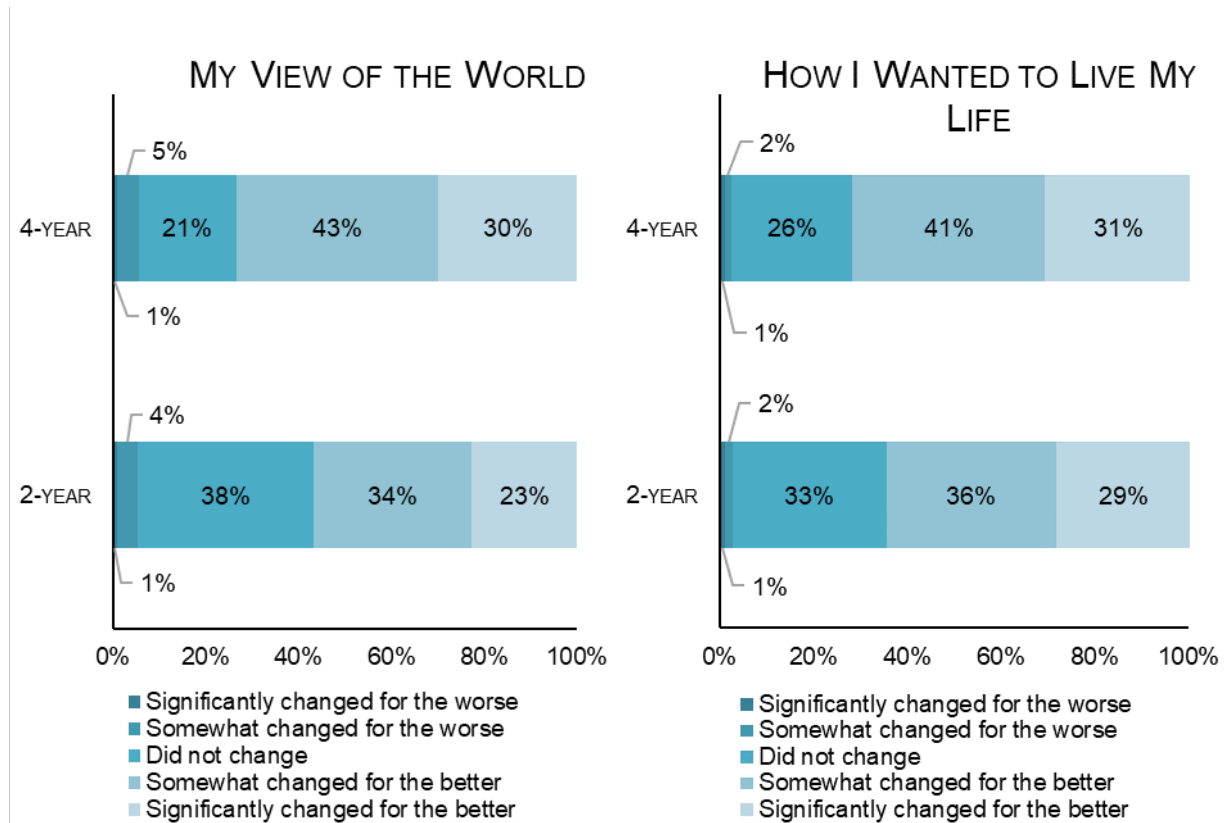
*– Virginia Educated respondent*

*“I’m from a bubble and it exposed me to world views that I previously was not privy to. Expanded my own worldview and opened my mind. This has more to do with the social scene than my actual education.”*

*– Virginia Educated respondent*



**Figure 21: Impact of Undergraduate Education on Views of the World and Life**



Respondents were also asked to rate the impact of their undergraduate education on their family, social, professional relationships and on their community engagement. As Figure 22 suggests, graduates of four-year institutions were most likely to rate the impact on their social relationships positively, with 71.6 percent saying their social relationships changed “significantly” or “somewhat” for the better, while fewer than half of two-year graduates gave these ratings (49.8 percent).

When rating the impact on professional relationships, graduates from both types of institutions reported similar influence, with 68.2 percent of graduates from four-year institutions and 65.5 percent from two-year institutions reporting a positive effect. Graduates of four-year institutions were, however, slightly more likely to say “significantly changed for the better” (31.2 percent) compared to their two-year counterparts (29.2 percent).

Impacts on family relations were very 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 a little more likely to say those relationships changed “significantly for the better” (16.8 percent), compared to four-year peers (13.5 percent).

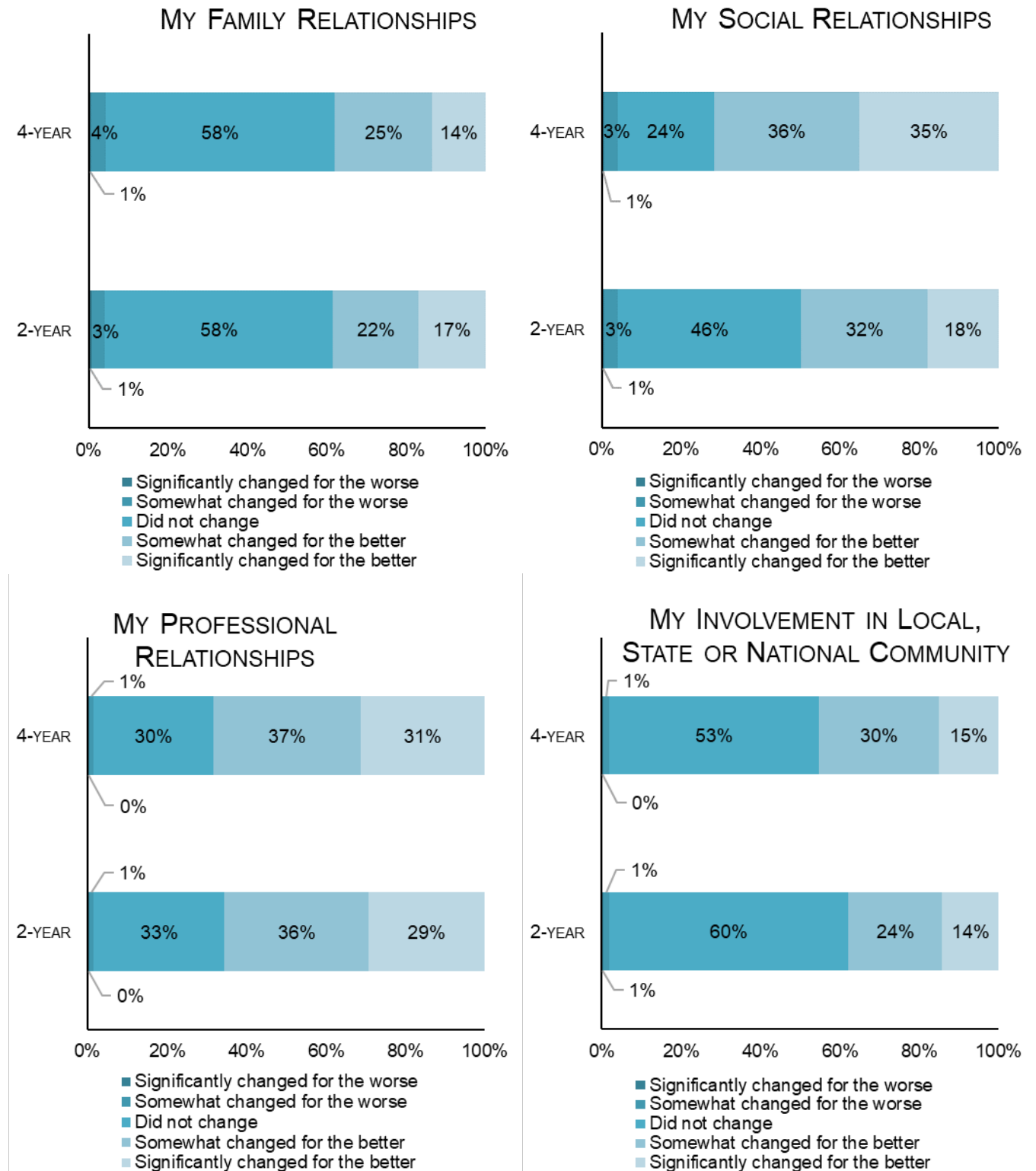
When it came to impact on their involvement in their local, state or national community, graduates of four-year institutions were more likely to give a positive rating, with 45.4 percent of them doing so, compared to two-year respondents (38.0 percent). See Figure 22.

*“The biggest impact was that I never would have been in Virginia, met my partner or had my children.”*  
– Virginia Educated respondent

*“Biggest positive would be social development beyond high school. I do think I would be even more stuck in a rut if I hadn't gone to undergrad.”*  
– Virginia Educated respondent

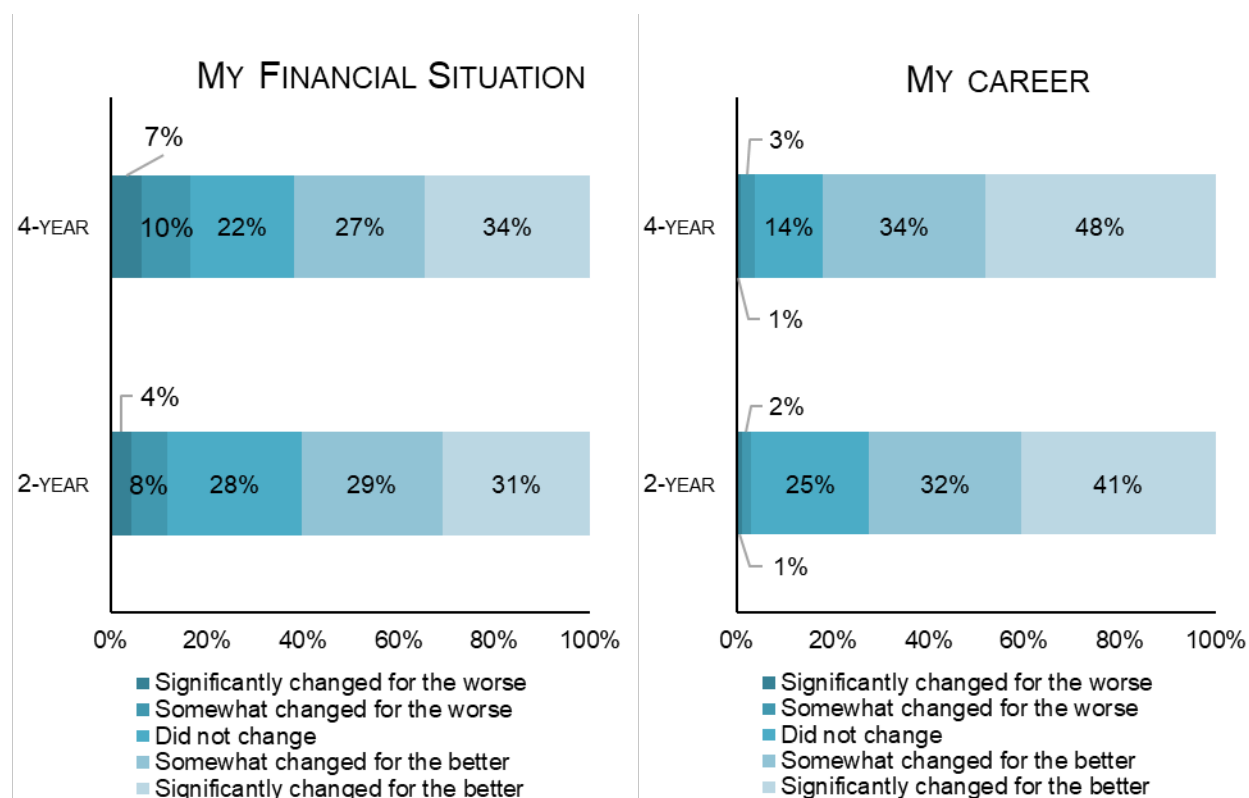
*“The relationships I made at college were the best thing to come from my education. From friendships to networking for work, I would not be where I am mentally, emotionally or physically without the opportunities my education and the people I was exposed to gave me.”*  
– Virginia Educated respondent

**Figure 22: Impact of Undergraduate Education on Relationships**



Graduates were also asked to rate the impact on their financial situation and their career. Graduates of both types of institutions gave similar positive ratings regarding the effect on their financial situation (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 on their careers positively (82.0 percent) compared to their two-year counterparts (72.4 percent). See Figure 23 for details.

**Figure 23: Impact of Undergraduate Education on Financial Situation and Career**

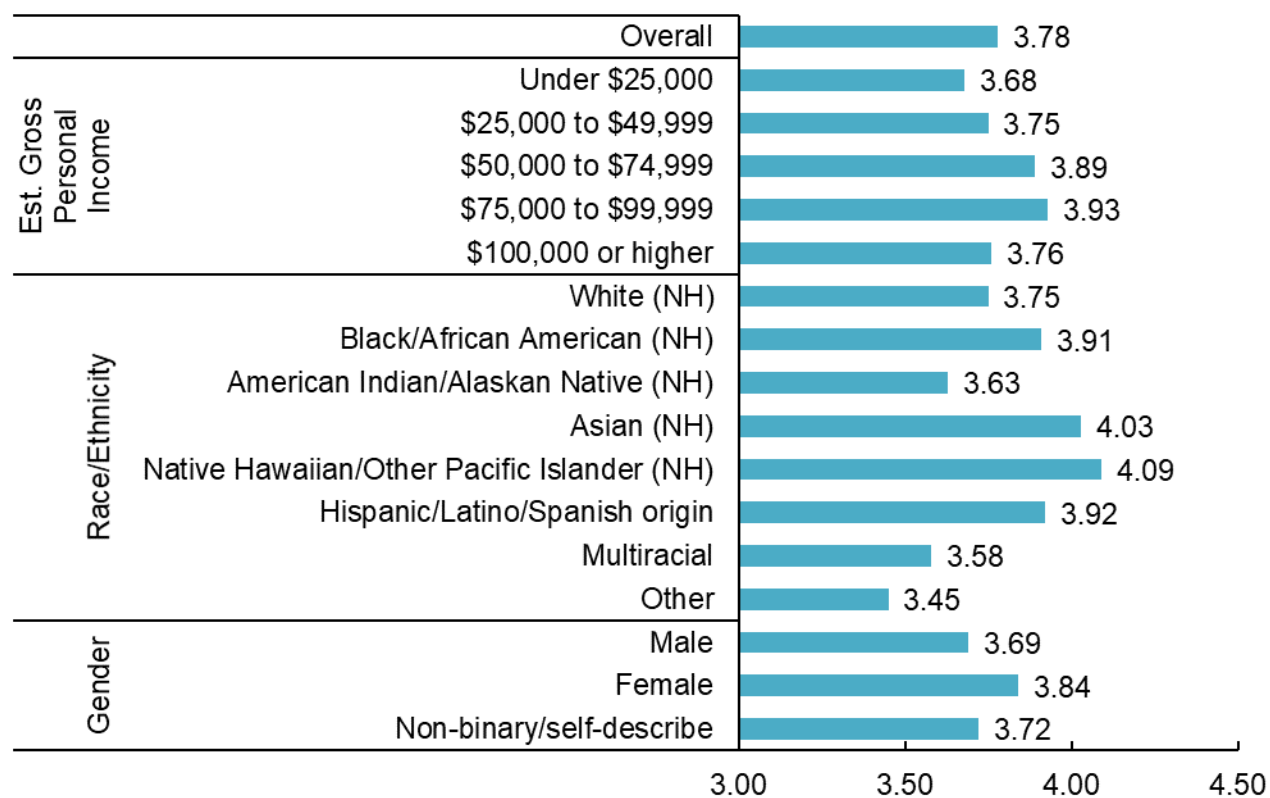


Looking at academic discipline across graduates of both two- and four-year institutions, the survey respondents most likely to say that their financial situation significantly changed for the better because of their undergraduate education were those who graduated in the health professions (44.2 percent), 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).

To calculate an overall impact score of undergraduate education, the ratings from the nine topic areas were treated as numerical scales and averaged. “Significantly changed for the worse” was set to 1 and “significantly changed for the better” was set to five so that higher scores indicate greater positive impacts. Overall, graduates of two-year institutions reported an average rating of 3.78 while four-year graduates reported an average of 3.89.

Among graduates of two-year institutions, women were more likely than men to report a positive overall impact (3.84 versus 3.69). Non-Hispanic Asians (4.03), Hispanics (3.92) and non-Hispanic Black/African-Americans (3.91) were more likely than non-Hispanic Whites (3.75) to report a positive overall impact. Graduates in the middle-income groups (\$50,000 to less than \$100,000 personal income reported for 2019) were also more likely to report positive impact compared to those in the lowest- or highest-earning income groups. See Figure 24.

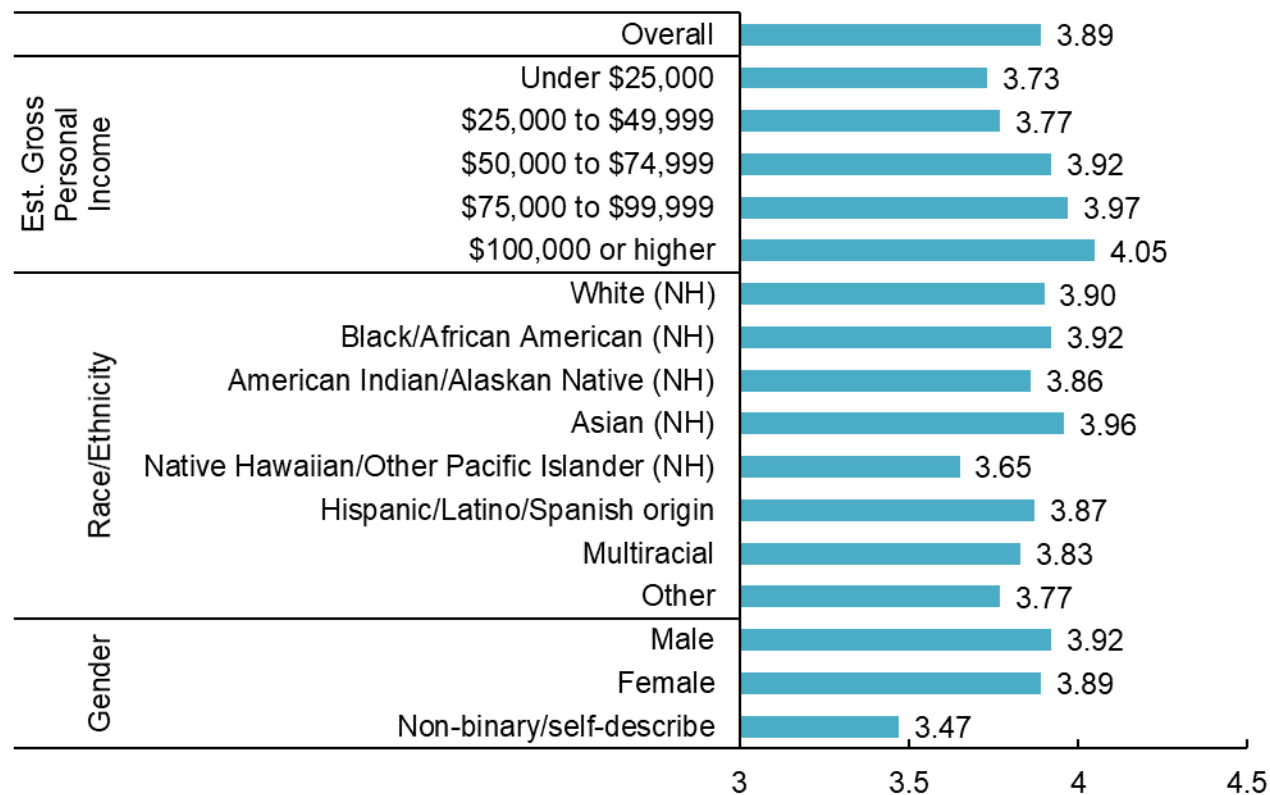
**Figure 24: Mean Impact of Undergraduate Experience Across Nine Items by Demographics - Two-Year Institutions**



Note: NH = Non-Hispanic

Among graduates of four-year institutions, men (3.92) and women (3.89) were more likely than other-gendered respondents (3.47) to report a positive overall impact. Non-Hispanic Asians (3.96) were slightly more likely to report a positive overall impact compared to non-Hispanic White (3.90) and Hispanic (3.87) respondents. Positive ratings of the overall impact of their undergraduate education also increased by income level for four-year graduates. See Figure 25.

**Figure 25: Mean Impact of Undergraduate Experience Across Nine Items by Demographics - Four-year Institutions**



Note: NH = Non-Hispanic

**In summary**, graduates of four-year institutions were more likely to report positive impacts of their undergraduate education when it came to their view of the world, the way they wanted to live their life, their social relationships, and their career. Graduates of two-year institutions were more likely to report positive impact on their financial situation and what they wanted to achieve in life.

## Community engagement

Several questions in the survey asked about various types of community engagement. They are grouped for discussion below into two categories – community involvement/philanthropy, and political involvement.

### Impact of undergraduate experience on community involvement/philanthropy

When asked if they had belonged to, donated to (monetarily or in-kind) or volunteered with a non-profit, civic, tax-exempt or charitable organization in the last 12 months, 29.3 percent of graduates overall belonged to such an organization, 67.1 percent donated in the prior 12 months and 51.1 percent volunteered in the prior 12 months at least a minimal amount of time. Four-year graduates were more likely to report belonging to one of those organizations (31.7 percent versus 24.7 percent of two-year graduates), donating to one of them (70.9 percent versus 59.6 percent of two-year graduates) or volunteering (53.5 percent versus 46.6 percent of two-year graduates). See Figure 26.

For context, the 2012 *Volunteer Supplement* of the *Current Population Survey* (CPS) suggests educational attainment was positively related to volunteer behavior. The proportion of individuals who reported volunteering increased from around 17.4 percent of high school graduates with no college, to 28.0 percent for 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. Refer to Appendix D.

Among *Virginia Educated* respondents who volunteered, the top three volunteer activities for graduates of both two- and four-year institutions were collecting, preparing, distributing or serving food (30.5 percent and 29.5 percent, respectively); mentoring youth (22.1 percent and 25.4 percent, respectively); and collecting, making or distributing clothing, crafts or goods other than food (21.1 percent and 21.4 percent, respectively).

Among graduates of four-year institutions, women (33.3 percent) were slightly more likely to belong to a non-profit, civic, tax-exempt or charitable organization in the last 12 months compared to men (30.0 percent) and they were a little more likely to donate to one of these organizations (73.3 percent of women versus 68.5 percent of males). Among graduates of two-year institutions, such gender differences were smaller and not statistically significant, but non-

*"My undergraduate education helped me realize that I have the capacity to work hard and produce work that impacts my community. That confidence in my abilities was the most important thing my education gave me."*

– Virginia Educated respondent

*"The social aspects of undergrad were most important to my growth, particularly the diversity within campus and the ability to make friends and hear perspectives from people with different backgrounds. Further, the opportunities to step up and shape activities as a philanthropy chair for one organization and to get involved in community volunteering with another helped me career-wise."*

– Virginia Educated respondent

*"I think the biggest positive impact of my undergraduate education on my life has been increasing in my socio-economic status and my ability to recognize and leverage opportunities to positively impact the communities that make up my demographic."*

– Virginia Educated respondent

Hispanic Black/African-American graduates (29.4 percent) were more likely to belong to one of these organizations compared to non-Hispanic Whites (24.2 percent), and were more likely to volunteer in the community (53.4 percent versus 45.0 percent). See Figure 26.

*“My undergraduate education changed my views on the possibilities of life in general. My parents were not college educated so I wasn't sure what impact having a degree would do. I was able to meet so many different people and come out of my shell. I was able to have a sense of independence away from my family. Most importantly, I was able to become educated and confident in the pathways of life. Overall, I've become a well-rounded person who, because of my college education, was able to provide for myself with a well-paying job that challenged my growth each day.”*

– Virginia Educated respondent

**Figure 26: Community Involvement/Philanthropy in Past 12 Months**



**In summary,** *Virginia Educated* graduates of four-year institutions, especially women, were more likely to belong to, donate to and volunteer at civic organizations compared to their two-year counterparts. But significant proportions of both four-year and two-year graduates are engaged in these ways, and national data sources show that they do so at higher rates than the non-college educated population in general.

### Impact of undergraduate experience on political involvement

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 reported voting, while 77.7 percent of

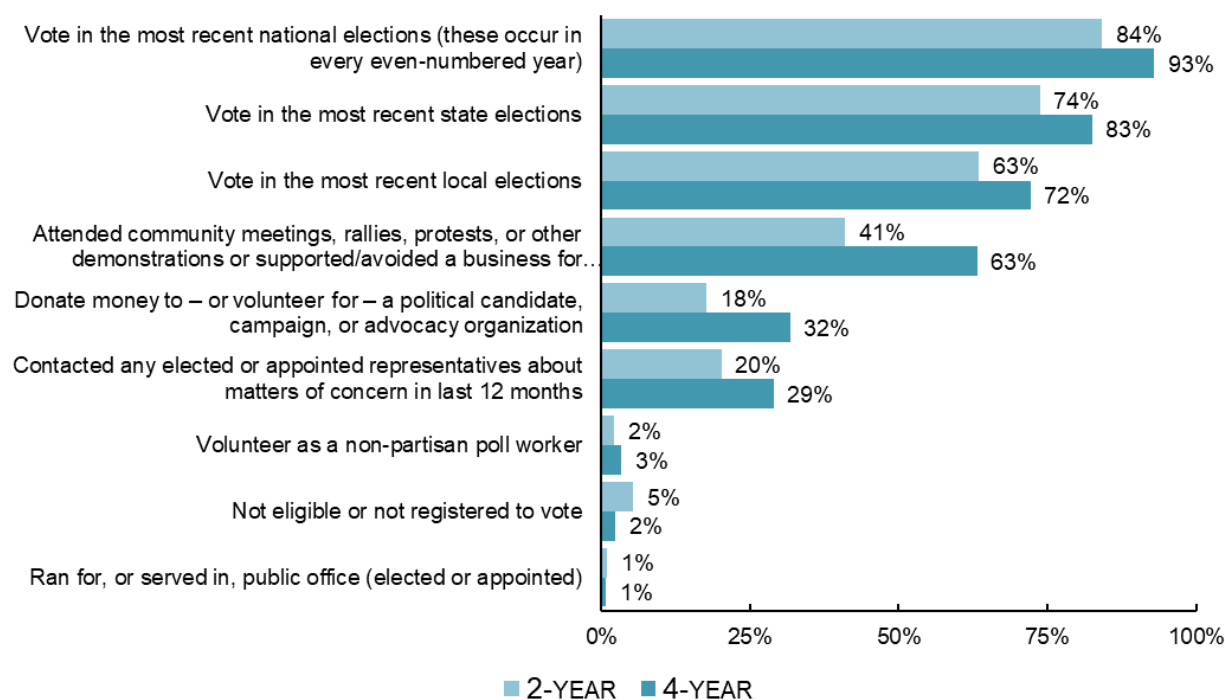


associate degree holders and 85.4 percent of bachelor's degree holders reported voting (2011 *Civic Engagement Supplement* of the CPS). See Appendix D for details.

In the *Virginia Educated* survey, graduates of four-year institutions appeared more likely to be politically engaged compared to two-year graduates. For example, four-year graduates were more likely to vote in local, state or national elections (72.2 percent, 82.5 percent and 92.9 percent, respectively) compared to two-year graduates (63.5 percent, 73.8 percent and 84.2 percent, respectively). Graduates of two-year institutions were more likely to be unregistered or not eligible to vote (5.3 percent versus 2.4 percent for four-year graduates).

Respondents were asked if they had engaged in any of four activities since graduating: Attended community meetings about important issues; attended rallies, protests, or demonstrations; supported a business for political or social reasons; and avoided a business for political or social reasons. To protect their privacy, respondents were not asked to identify which of these activities they had done, they were just asked if they had done any of them. As demonstrated in Figure 27, graduates of four-year institutions were more likely to have done one or more of these activities (63.3 percent versus 41.0 percent of graduates from two-year institutions). Four-year graduates were also more likely to donate money to or volunteer for a political candidate, campaign, or advocacy organization (31.7 percent versus 17.7 percent). They were also more likely to have contacted an elected or appointed representative about matters of concern in the last 12 months (29.0 percent) compared to their two-year counterparts (20.2 percent).

**Figure 27: Percent of Graduates and Political Involvement**



In the *Virginia Educated* survey, among graduates of two-year institutions, men were slightly more likely to contact their elected representative (21.5 percent), donate money or volunteer for political campaigns (20.2 percent), and to vote in the most recent state (76.3 percent) and local (66.4 percent) election compared to women (18.9 percent, 16.2 percent, 72.2 percent and 61.3 percent, respectively). Non-Hispanic White graduates of two-year institutions were also more likely to have contacted their elected officials in the last 12 months (20.3 percent) compared to non-Hispanic Black/African-Americans (16.3 percent), though non-Hispanic Black/African-Americans were more likely to donate money or volunteer for political campaigns (20.5 percent versus 16.5 percent of non-Hispanic White graduates). Non-Hispanic White graduates of two-year institutions were also more likely to vote in national elections compared to respondents of color (85.8 percent versus 80.7 percent, respectively).

*"Don't be stuck in the bubble of your school. Go out into the community. Explore beautiful Virginia!"*  
– Virginia Educated respondent

Among graduates of four-year institutions, women (31.9 percent) were more likely to have contacted an elected or appointed official in the last 12 months compared to men (25.1 percent) as were non-Hispanic White graduates (31.2 percent) compared to non-

Hispanic Black/African-American participants (20.0 percent). Non-Hispanic White non-Hispanic graduates were also more likely to donate money to or volunteer for a political campaign (32.9 percent) compared to their non-Hispanic Black/African-American counterparts (26.0 percent). White non-Hispanic graduates were also more likely (94.1 percent) to vote in national elections especially when compared to respondents of color (88.5 percent).

**In summary**, graduates of four-year institutions were a little more likely than their two-year counterparts to be politically engaged, in line with data from the *Current Population Survey*.

### Impact of undergraduate experience on social efficacy

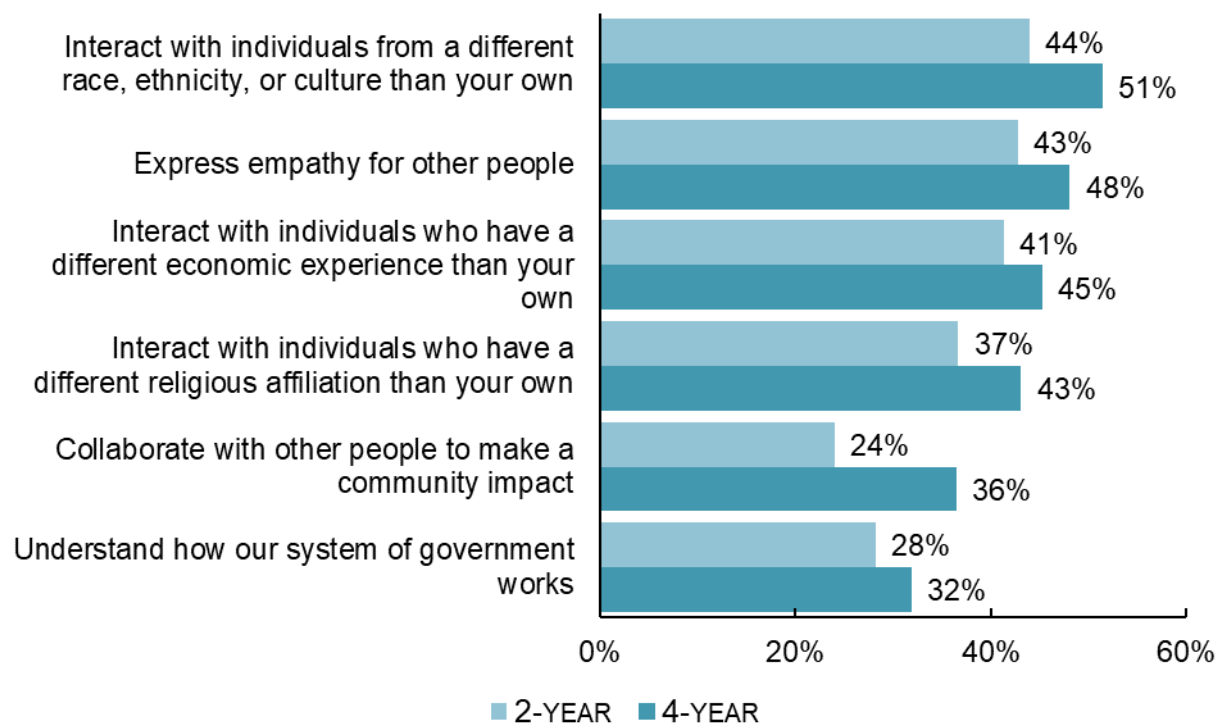
Anywhere from 41.0 to 48.9 percent of respondents taken as a whole said their undergraduate education had “a great deal” or “a lot” of impact on their abilities to express empathy for others or interact with individuals from different races, ethnicities, cultures, economic backgrounds and religions.

Across all indicators of social efficacy, graduates of four-year institutions were more likely than two-year graduates to rate the influence of their undergraduate experience as having “a great deal” or “a lot” of impact. As Figure 28 reveals, these graduates were somewhat more likely to positively rate the influence on

*"I believe attending an historically black university is life changing. I was being educated by professionals in the field that also looked like me. I believe representation matters and I am proud to have experienced it. As an early education educator, I understand how impressionable minds are and the importance we have in the lives in our students lives. I hope I...impact my students the way I was."*  
– Virginia Educated respondent

their ability to “collaborate with other people to make a community impact” (36.5 percent versus 24.1 percent of their two-year counterparts), “express empathy for others” (48.1 percent versus 42.8 percent), interact with individuals from different races, ethnicities, or cultures (51.5 percent versus 43.9 percent); interact with individuals who have different economic experiences (45.3 percent versus 41.4 percent), and interact with individuals who have different religious affiliations (43.1 percent versus 36.7 percent).

**Figure 28: Percent Reporting Impacts on Social Efficacy**



Social efficacy was measured using six questions - the answers were converted to a numerical scale where “not at all” was set to 1 and “a great deal” was set to 5. A high score reflects a higher level of social efficacy. The average social efficacy score for 4-year graduates was 3.23 and 2.97 for 2-year graduates.

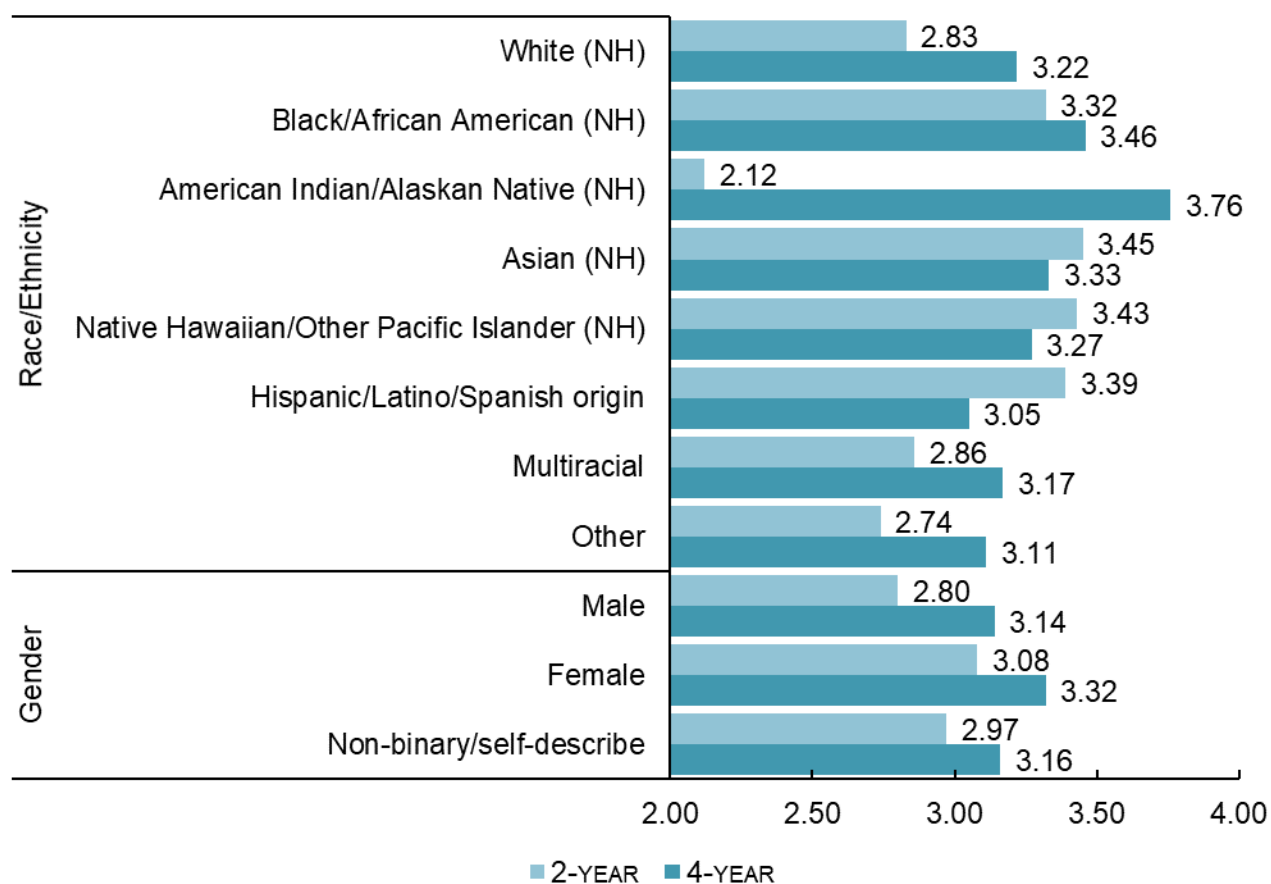
Among graduates of two-year institutions, women were more likely to have higher overall average ratings for the impact of their undergraduate education on these six social efficacy items (3.08) compared to

*“My degree and education gave me a better understanding of other[s] with different life circumstances than my own.”*  
– Virginia Educated respondent

*“In Virginia? I would speak to students of color and tell them that the segregation and expectations are not normal. Focus on your own situation and experience and surround yourself with others that feel the same. Change your scenery if needed (tran[s]fer).”*  
– Virginia Educated respondent

men (2.80). Non-Hispanic Black/African-American (3.32), non-Hispanic Asian (3.45) and Hispanic (3.39) graduates were more likely to have found their undergraduate education influential on these aspects compared to non-Hispanic White graduates (2.83). Among graduates of four-year institutions, a similar pattern held with women (3.32), non-Hispanic Black/African-American (3.46) and non-Hispanic Asian (3.33) graduates finding their education to be more influential on these aspects compared to men (3.14), non-Hispanic White (3.22) and Hispanic (3.05) graduates. See Figure 29.

**Figure 29: Impacts on Social Efficacy – Mean Ratings Across Six Items**



**In summary**, four-year graduates, women, and non-Hispanic Asian and non-Hispanic Black/African-American graduates were more likely to report positive influences on six aspects of social interactions.

## Employment

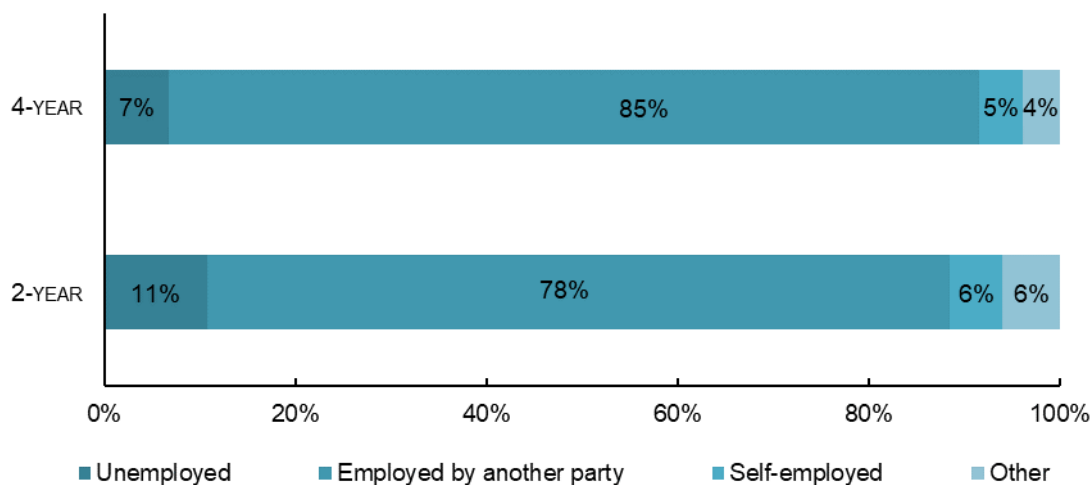
This section of the report provides details on the survey respondents' current work status, satisfaction with how their institution prepared them for the workplace, employer (where applicable) and whether they ever started a business.

### Current employment status

Overall, 87.3 percent of survey respondents were currently employed, with the vast majority working 40 or more hours per week. 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.”

Employment status varied by type of institution. 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 (see Figure 30). In total, 87.3 percent reported being currently employed, either by another party or self-employed.<sup>6</sup>

**Figure 30: Current Employment Status**



Across institution types, men (81.8 percent of graduates of two-year institutions and 87.3 percent of four-year institutions) were more likely to be employed by another party compared to women (75.3 percent and 83.5 percent, respectively). Male graduates of four-year institutions were slightly more likely than their female counterparts to be self-employed (5.0 percent versus 4.1 percent). A significantly larger share of non-working women (34.2 percent) said they were not working in order to attend to family duties compared to non-working men (11.6 percent). These percentages were almost identical for women and men in the two-year and four-year groups.

<sup>6</sup> In addition, many of the 4.6 percent who gave an “Other – Write In” response indicated being employed, but those responses are not included in these figures.

Non-Hispanic White two-year graduates (79.3 percent) were more likely to be working for another party compared to non-Hispanic Black/African-Americans (74.8 percent) and non-Hispanic Asians (71.4 percent). Two-year graduates living in non-rural areas (5.9 percent) were slightly more likely to be self-employed compared to graduates living in rural areas (4.3 percent). Among four-year graduates, being employed by someone else did not vary much by race/ethnicity, but non-Hispanic White graduates (4.7 percent) were slightly more likely to be self-employed in comparison to their non-Hispanic Black/African-American (3.3 percent), non-Hispanic Asian (3.8 percent) and Hispanic (2.7 percent) graduates.

*“Seek opportunity. It’s out there. Ask your professors, staff, the recreation facilities keepers, everyone. Asking ‘How do I become a team manager?’ changed my entire life for the better.”*  
– Virginia Educated respondent

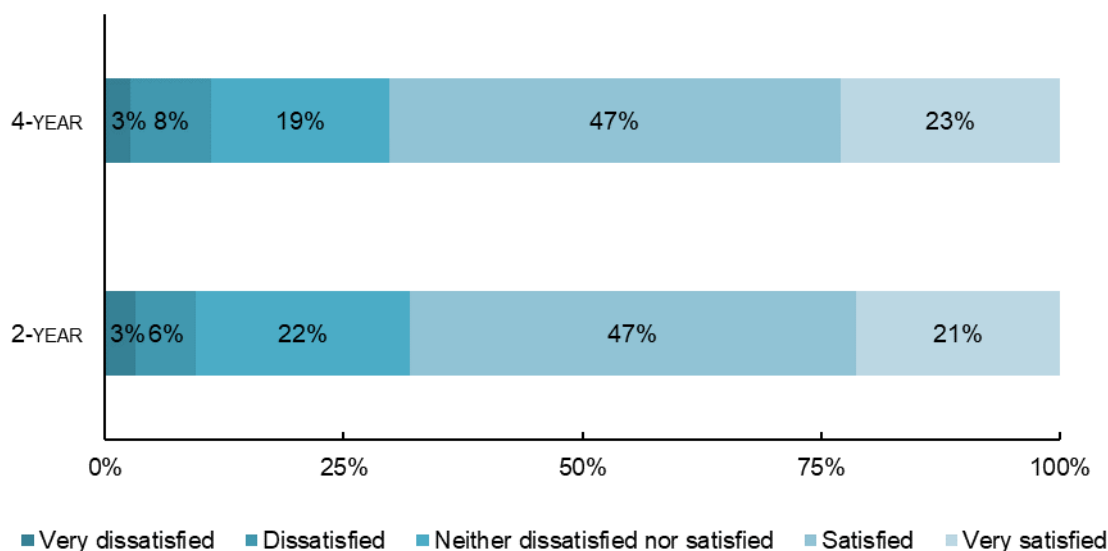
Most graduates who were currently employed worked 40 or more hours per week (73.0 percent of graduates of two-year institutions and 81.5 percent of graduates of four-year institutions). Of those who worked fewer than 35 hours per week, the top three reasons for doing so were the COVID-19 pandemic (28.1 percent of graduates of two-year institutions and 29.2 percent of graduates of four-year institutions), no desire for full-time work (28.5 percent and 24.3 percent, respectively), and caregiving responsibilities (22.5 percent and 21.7 percent, respectively). Most of these graduates were not actively seeking other employment (82.8 percent of graduates of two-year institutions and 82.7 percent of graduates of four-year institutions). Additionally, among those who are currently not working, 46.2 percent of graduates of two-year institutions and 44.8 percent of those graduating from four-year institutions reported not actively seeking work.

*“It was definitely easier to find jobs, most entry to mid-level job require either a bachelor’s degree or a HS degree with 10 years of experience. So straight out of college it was less stress.”*  
– Virginia Educated respondent

For some graduates, the COVID-19 pandemic resulted in layoffs and reduced hours. Of the 8.2 percent of unemployed graduates, 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.

### **Satisfaction with preparation for the workplace**

Graduates of four-year and two-year institutions expressed similar levels of satisfaction with how their undergraduate experience prepared them for the workplace – 70.2 percent of four-year graduates and 68.1 percent of two-year graduates said they were either “satisfied” or “very satisfied” (see Figure 31).

**Figure 31: Satisfaction with How the Undergraduate Experience Prepared Respondent for the Workplace**

Among graduates of two-year institutions, women (69.6 percent) were slightly more likely to express satisfaction than men (66.7 percent), as were non-Hispanic Asian graduates (74.4 percent) compared to Hispanic graduates (65.6 percent) and those currently living in rural areas (71.5 percent) compared to those living in non-rural areas (67.1 percent). Additionally, those concentrating on the health professions (81.1 percent) were more likely to express satisfaction compared to those who studied business and communication (69.0 percent), the STEM disciplines (69.5 percent), and psychology and social sciences (59.1 percent).

Among those who graduated from four-year institutions, men (71.6 percent) and women (69.9 percent) expressed similar levels of satisfaction. Non-Hispanic White graduates were more likely to be satisfied (72.7 percent) compared to non-Hispanic Black/African-American (68.6 percent), non-Hispanic Asian (64.0 percent) and Hispanic (61.8 percent) graduates. Similar to two-year respondents, graduates of four-year institutions currently living in rural areas (75.2 percent) reported slightly higher levels of satisfaction with their workplace preparation compared to their non-rural counterparts (69.9 percent). Moreover, those who studied the health professions (80.1 percent) were most likely to express satisfaction compared to other disciplines with those studying business and communication (74.4 percent) and STEM disciplines (74.2 percent) ranking next – graduates from liberal arts programs were least likely to express satisfaction (64.0 percent). Furthermore, those earning higher incomes (based on 2019 personal income) generally tended to express higher levels of satisfaction.

## Work experience

Respondents were asked how many years of work experience in full-time jobs they have had since they finished the focal undergraduate credential that made them eligible for the survey. Only those graduating between 2007 and 2018 were eligible for the survey, but some older students may have included work experience completed after a previous undergraduate experience prior to the focal credential that made them eligible for the survey.

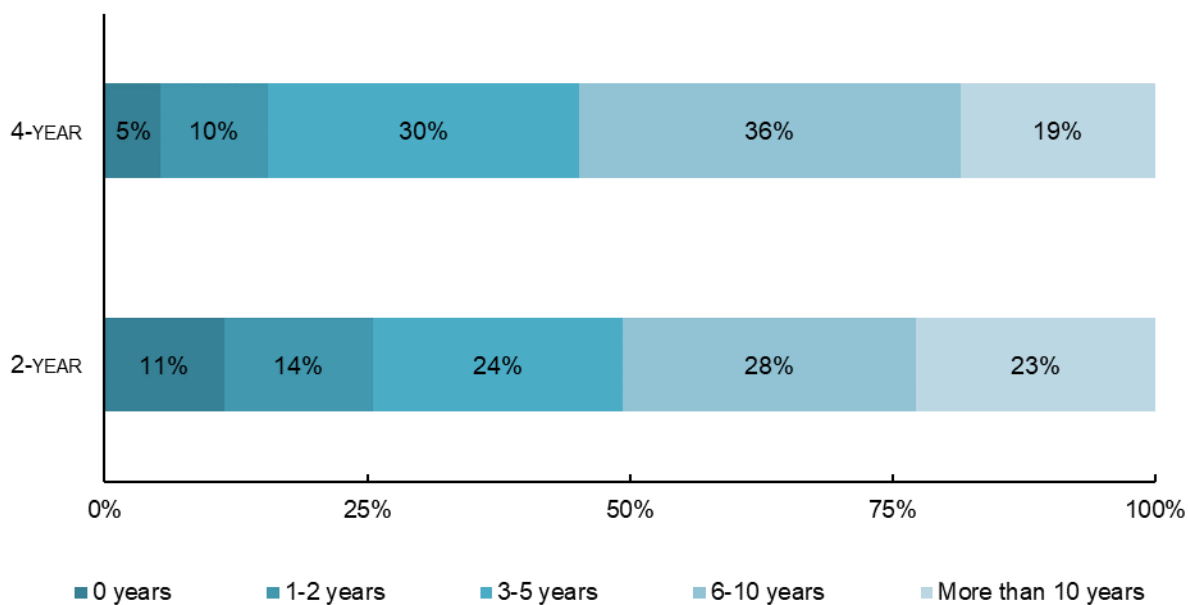
Full-time work experience for graduates of two- and four-year institutions was similar – 50.7 percent of two-year graduates and 54.8 percent of four-year graduates reported more than five years of full-time work experience since graduation. Graduates of two-year institutions in comparison to four-year graduates were more likely to have 10 or more years of full-time experience. See Figure 32.

Among graduates of both types of institutions, male and non-Hispanic Black/African-American graduates were more likely than women and graduates of other race/ethnicity to have 10 years or more of full-time work experience.

*“I think having a mandatory general education course about knowing what to possibly expect in the professional world, i.e., interviewing, rejection, typical job salaries, red flags in job descriptions, tips to secure a job, learning about personal finance, what to expect in the workplace, etc. This type of class would have helped me a lot during my time in undergrad mainly because it would be 1) mandatory and 2) I would save any notes/books from the class for future use. I know there was a career center on my campus, but I don’t think I went there to take advantage of the services offered.”*

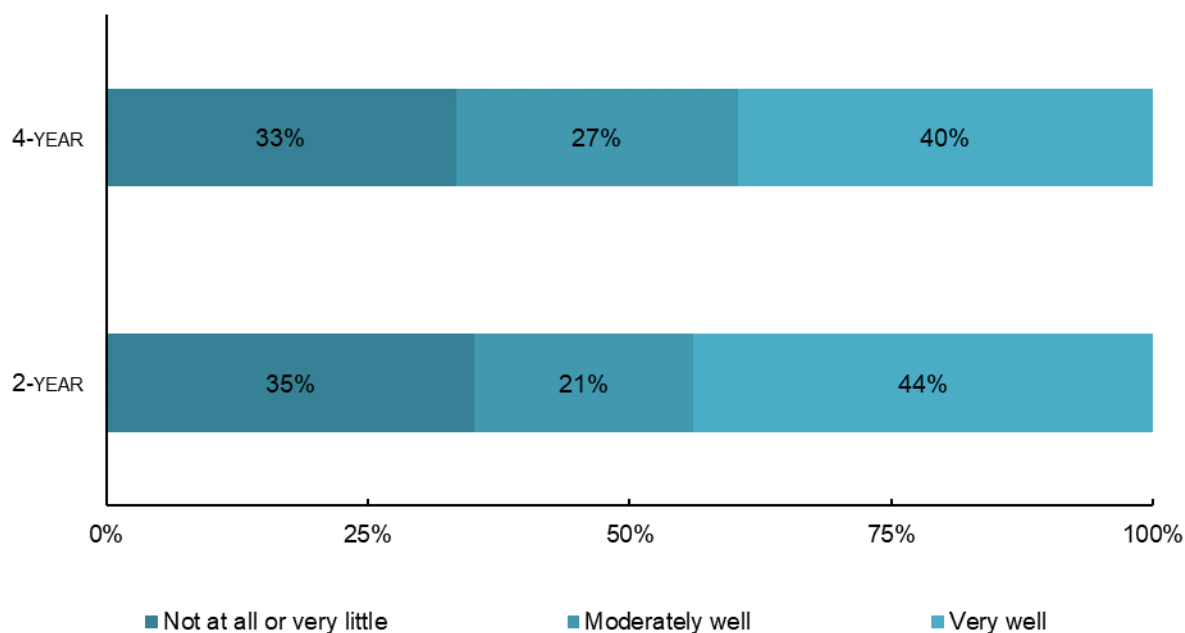
– Virginia Educated respondent



**Figure 32: Approximate Years of Full-Time Work Experience**

### Relevance of the undergraduate credential to the current job

Those who are currently working were asked how closely their current job related to the academic discipline in which they obtained their focal undergraduate credential (the credential that made them eligible to be sampled for the survey). Graduates of two-year institutions were slightly more likely to be working in an area that related to their discipline (43.9 percent said their current job related “very well”) compared to four-year graduates (39.7 percent). About one-quarter of four-year graduates (26.9 percent) said their jobs “moderately” reflect their academic discipline compared to about one-fifth of two-year graduates (20.9 percent); and more graduates of two-year institutions (35.2 percent) responded with “not at all” or “very little” compared to four-year graduates (33.4 percent). See Figure 33.

**Figure 33: How Closely Current Job Relates to Discipline of Concentration**

Non-Hispanic White graduates across institution types (46.1 percent of two-year and 40.6 percent of four-year graduates) were more likely than non-Hispanic Black/African-American (41.8 percent and 34.8 percent, respectively) graduates to say “very well” as were female graduates of two-year institutions (48.5 percent) in comparison to male graduates (37.9 percent). Those currently living in rural areas (47.2 percent of two-year graduates and 44.3 percent of four-year graduates) were more likely to say “very well” compared to non-rural graduates (43.0 percent and 39.4 percent, respectively). Those concentrating in education among graduates of two-year institutions (13.5 percent) and those concentrating in psychology and social sciences among graduates of four-year institutions (24.3 percent) were least likely to say “very well.”

*“Have a plan and work your plan. A college degree is an investment in yourself, and you want to have a plan to ensure that investment in yourself is a successful one (however one defines success). As the cost of higher education continues to increase, a working understanding of future earnings based on your desired career field will go a long way in helping select a school and determining how to finance your education. As many students grapple with student loan debt on a daily basis, this knowledge, and thought process will hopefully help (not solve) you avoid being in the same situation. For Virginia residents, the Commonwealth of Virginia has some of the best institutions of higher education in the country. With this said, think long and hard about taking on the added cost of attending an out-of-state college/university (especially if you are financing your own education).”*

*– Virginia Educated respondent*

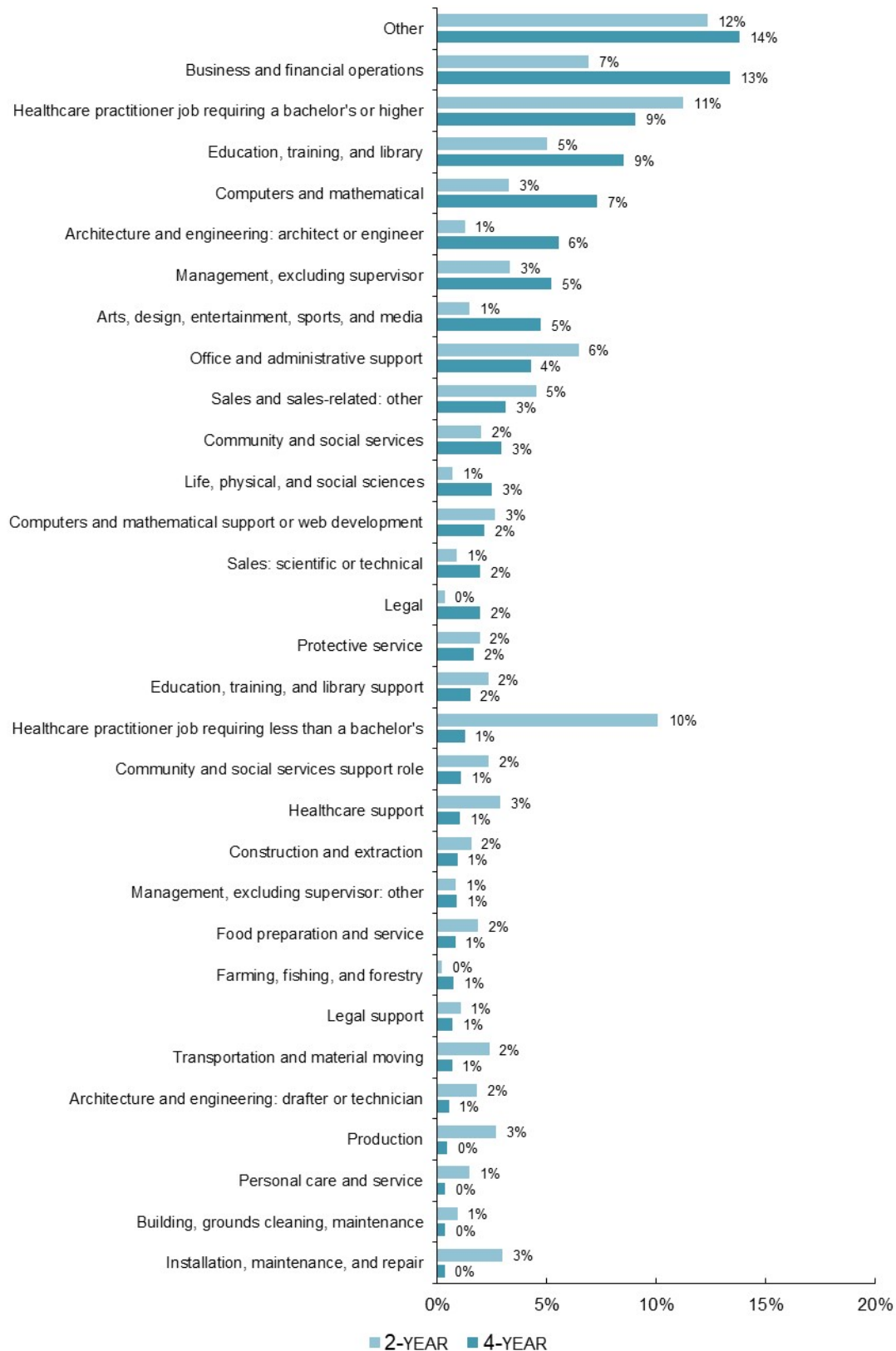
When it came to their current primary job, graduates of two-year institutions were most likely to be in “other” jobs that they could not characterize from the list presented in the survey questionnaire (12.3 percent), a healthcare practitioner job that required a bachelor’s degree (11.2 percent), or a healthcare practitioner job that required less than a bachelor’s degree (10.1 percent). (Among two-year graduates, 28.6 percent 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 (see Figure 34).

*“Without going back to school for a degree in nursing, I would be living in poverty. My nursing degree has improved my financial stability considerably. But I had to continue on to complete a BSN for working in the hospital. It has brought me both financial stability, work security, and respect. I was 59 when I started as an undergraduate nursing student. It was the best decision I ever made.”*

*– Virginia Educated respondent*

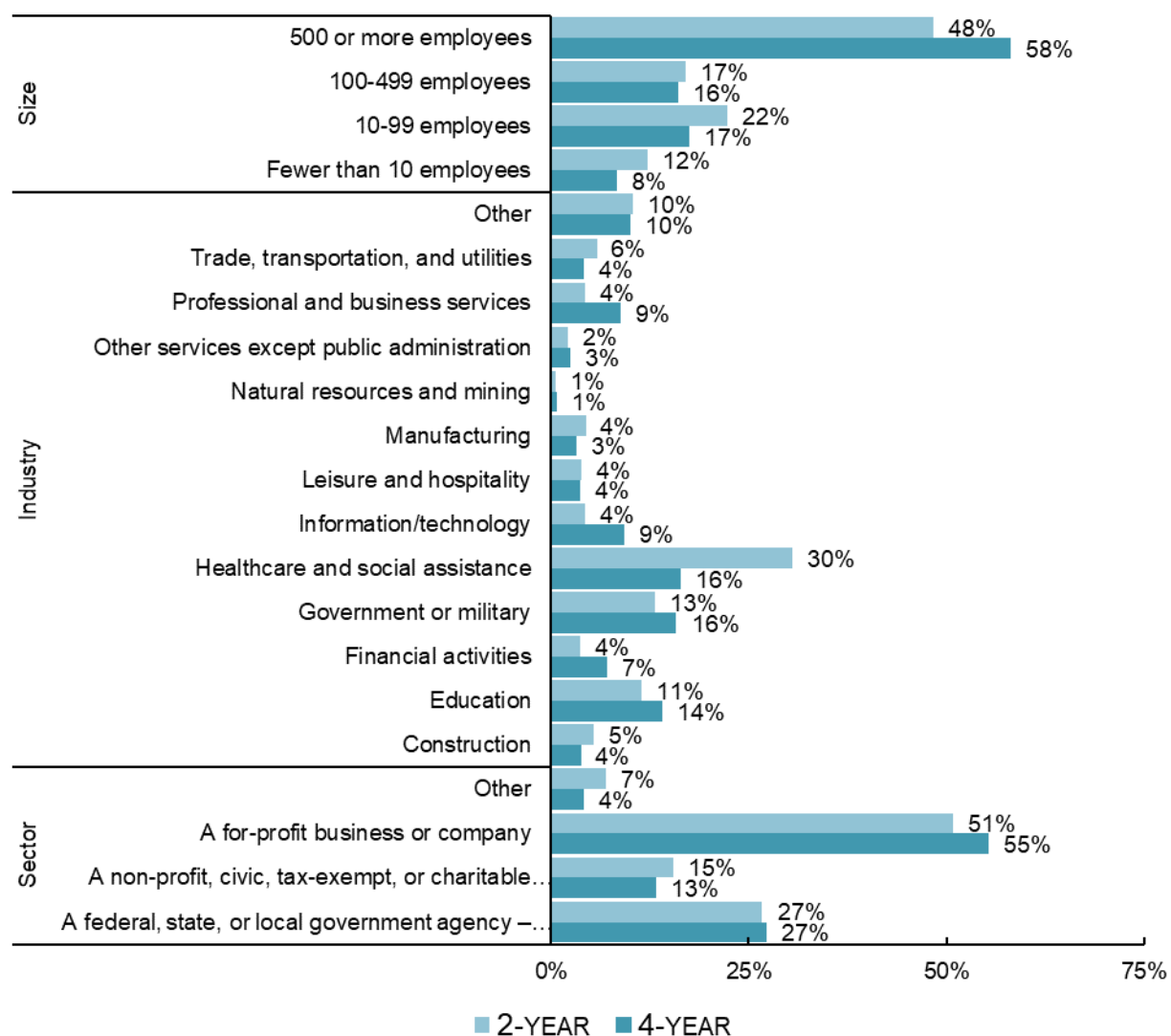
**Figure 34: Type of Current Primary Job**



Currently employed graduates of both two- and four-year institutions were most likely to be working for a for-profit business or company (50.8 percent and 55.3 percent, respectively), and they were mostly working in organizations with 500 or more employees (48.4 percent and 58.1 percent, respectively). Graduates of four-year institutions were more likely to be working for large, for-profit corporations compared to their two-year counterparts.

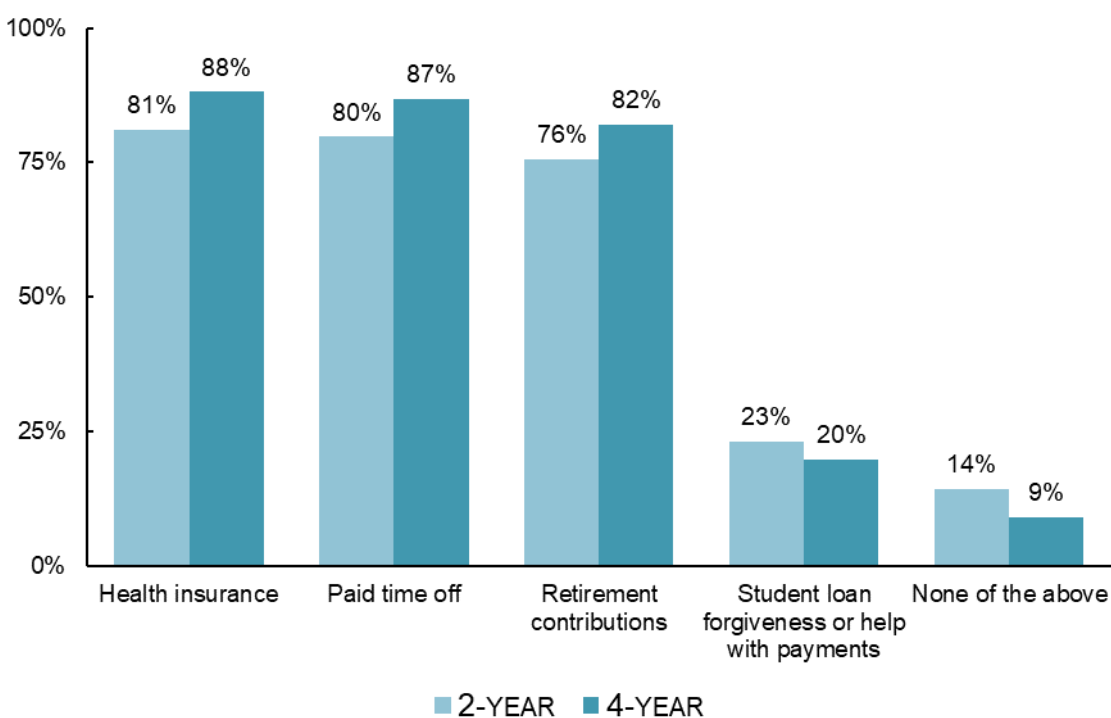
The most common industry sector in which they were currently working, for both two-year and four-year graduates, was healthcare and social assistance (30.5 percent and 16.4 percent, respectively) followed by government and military (13.1 percent and 15.9 percent, respectively), education (11.4 percent and 14.2 percent, respectively) and “other” sectors (10.4 percent and 10.0 percent, respectively). See Figure 35 for details.

**Figure 35: About the Current Primary Employer**



Most currently employed respondents from both types of institutions received benefits from their employers in the form of health insurance (81.0 percent of two-year graduates and 88.1 percent of four-year graduates), paid time off (79.8 percent and 86.7 percent, respectively), and retirement contributions (75.7 percent and 82.1 percent, respectively). See Figure 36. Graduates of four-year institutions were more likely to be receiving all three of these benefits. Two-year and four-year graduates were much less likely to receive student loan forgiveness or help with student loan payments from their employers (23.1 percent and 19.6 percent, respectively). More graduates of two-year institutions (14.3 percent compared to 9.0 percent of those graduating from four-year institutions) reported receiving none of the four benefits listed in the questionnaire.

**Figure 36: Percent of Employed Respondents Receiving Benefits from Primary Employer**

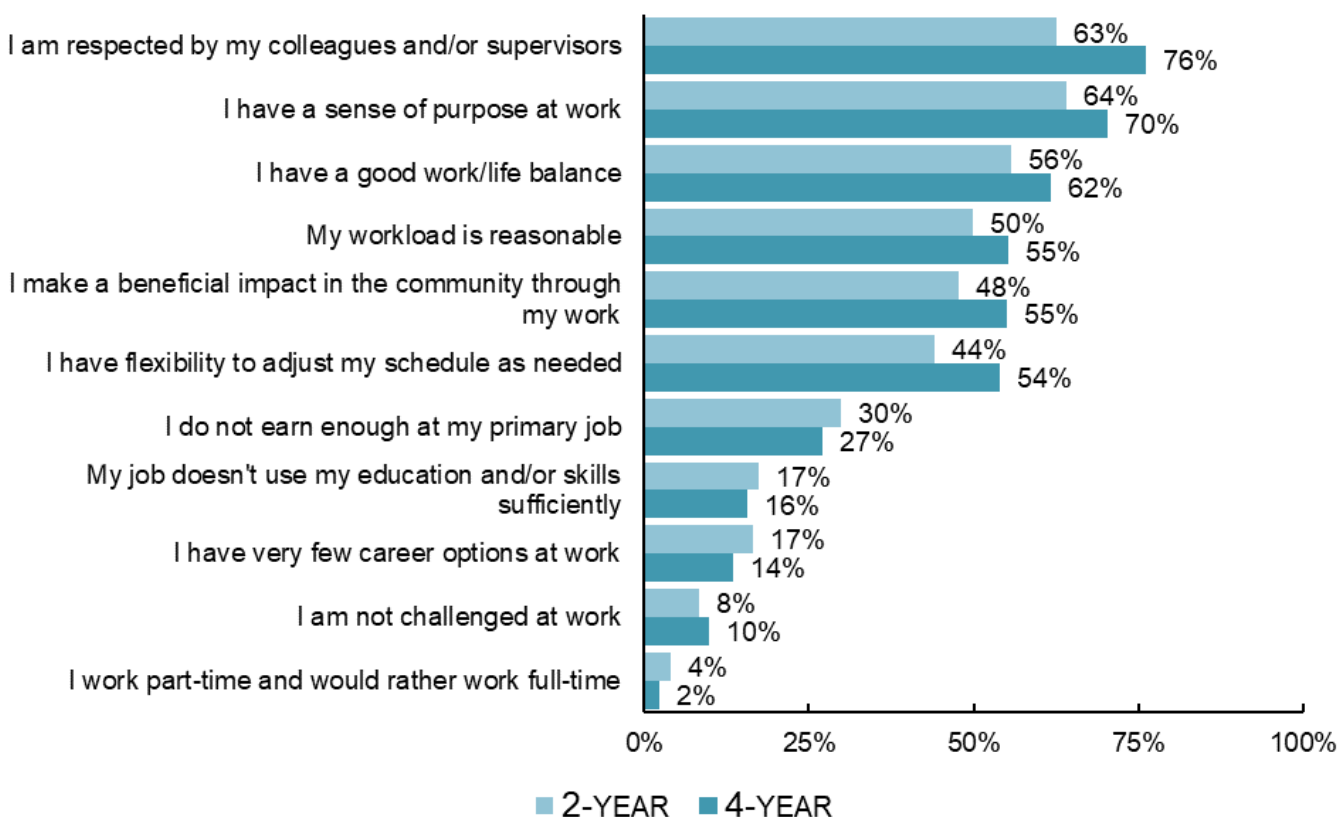


### Opinions about the current primary job

Respondents were presented with a list of positive and negative attributes that might apply to their current primary job and asked to indicate which ones applied. Graduates of four-year institutions, as Figure 37 suggests, checked each of the positive attributes at higher rates than did two-year participants. They were most likely to indicate that they were respected by their colleagues and supervisors (76.0 percent compared to 62.5 percent of those graduating from two-year institutions), had a sense of purpose at work (70.3 percent and 64.0 percent, respectively) and had a good work/life balance (61.7 percent and 55.7 percent, respectively).

Of the five negative attributes listed, graduates of two-year institutions were slightly more likely to indicate four of them compared to four-year participants. The most common negative attributes checked were that they did not earn enough at their primary job (29.8 percent of graduates of two-year institutions compared to 27.1 percent of those graduating from four-year institutions), their job did not use their education or skills sufficiently (17.3 percent and 15.6 percent, respectively), they have fewer career options at work (16.6 percent versus 13.6 percent) and they wanted to work full-time but they were currently working part-time (4.0 percent versus 2.4 percent). Graduates of four-year institutions were slightly more likely to say they were not challenged at work (9.9 percent) compared to their two-year counterparts (8.4 percent).

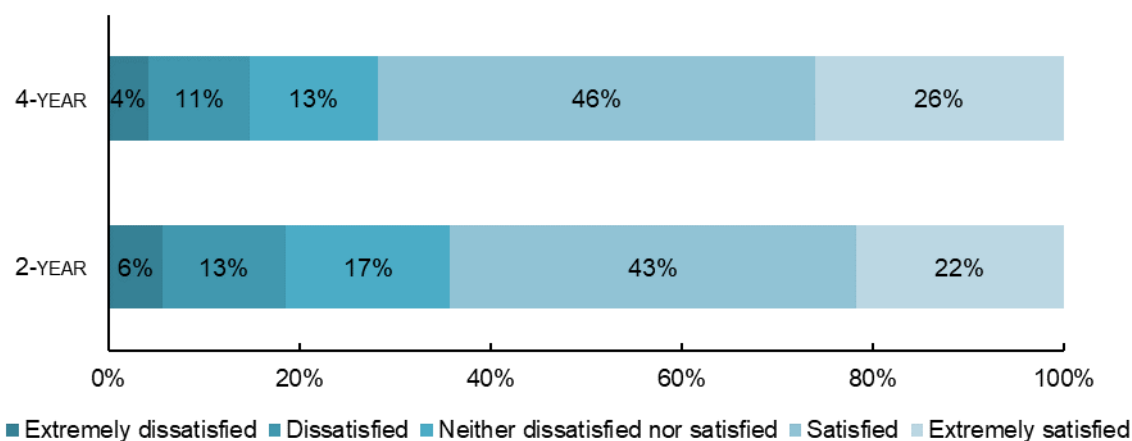
**Figure 37: Perceptions of Current Primary Job**



### Satisfaction with progress toward long-term career goals

Graduates of four-year institutions were more likely to indicate satisfaction with progress toward their long-term career goals since completing their focal undergraduate experience (71.8 percent) compared to their two-year counterparts (64.2 percent). Graduates of two-year institutions were more likely to indicate dissatisfaction (18.6 percent) compared to their four-year peers (14.8 percent). See Figure 38.

**Figure 38: Satisfaction with Progress Toward Long-Term Career Goals Since Undergraduate Experience**



Among graduates of both types of institutions, men (67.3 percent of graduates of two-year institutions and 74.3 percent of graduates of four-year institutions) compared to women (63.2 percent and 70.3 percent, respectively) and non-Hispanic Whites (67.3 percent and 74.3 percent, respectively) compared to non-Hispanic Black/African-Americans (60.6 percent and 60.7 percent, respectively) expressed a little more satisfaction with their progress toward their career goals since their undergraduate experience. Those who had concentrated in the health

*“My undergraduate education allowed me to find a decent entry level job that allowed me to gain experience over the years which has led to better job opportunities with higher pay and a more manageable workload. I still think I could have found a good paying job without my undergraduate education but I would be working more hours per week and would not have as much flexibility. However, I’m glad that I attained [m]y bachelor’s degree because it is something I worked very hard for and am very proud of.”*

– Virginia Educated respondent

professions (72.5 percent of graduates of two-year institutions and 81.9 percent of graduates of four-year institutions) and in the STEM disciplines (67.9 percent and 78.2 percent, respectively) were most likely to express satisfaction among both groups of graduates. The share of those expressing satisfaction rose with the level of personal income reported.

Graduates who were dissatisfied with their career progress since their undergraduate experience were asked to indicate the

reasons for their dissatisfaction – the most common reason among both groups of graduates was “feel stuck, no career advancement or upward mobility, progress is too slow,” given by 46.5 percent of graduates of two-year institutions and 57.0 percent of those graduating from four-year institutions. Other common reasons included “desired job/career requires more education or experience” (44.5 percent of graduates of two-year and 38.4 percent of graduates of four-year institutions), “difficulty finding a job,” (42.5 percent and 48.8 percent, respectively), and “job/career does not pay enough” (36.1 percent and 47.1 percent, respectively).



## **Underemployment**

One important focus of the study was underemployment – situations in which people’s jobs do not require their full education and/or skills, or provide fewer hours than desired. 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. Just 14.9 percent of graduates of two-year institutions and 11.3 percent of those graduating from four-year institutions (12.5 percent overall) reported themselves to be underemployed. 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 underemployment measure was calculated using responses to various survey items.<sup>7</sup> Based on this measure, a far greater share of graduates (45.1 percent of those graduating from two-year institutions and 41.0 percent from four-year institutions) were considered underemployed (42.4 percent overall).

Third, only 11.6 percent of the four-year graduates said their current primary job functions required less than a bachelor’s degree to perform, which would indicate possibly being underemployed. Similarly, only 11.4 percent of the 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 assessment 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 additional credentials they earned. In this measure, 25.0 percent of two-year graduates and 23.0 percent of four-year graduates were possibly underemployed (23.7 percent overall). See Figure 39.

Much of the “disagreement” between the calculated and self-reported measures 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.

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<sup>7</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.

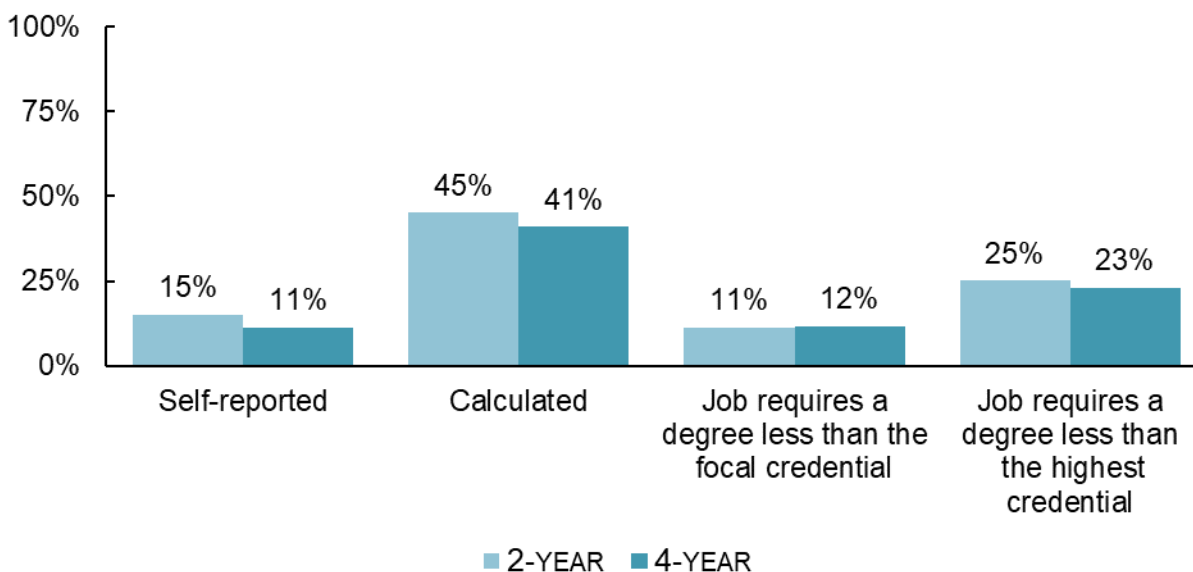
**Figure 39: Percent Underemployed (Four Measures)**

Figure 40 and Figure 41 (below) show the share of graduates reporting they are underemployed versus the share who were calculated to be underemployed for both graduates of two- and four-year institutions by various demographic variables. Male graduates of four-year institutions (9.6 percent) were less likely to report being underemployed compared to their female counterparts (12.5 percent) with there being no significant difference by gender among graduates of two-year institutions – but, male graduates of two-year institutions (42.7 percent) were less likely to be considered to be underemployed based on calculations than their female counterparts (46.1 percent). There were no differences on this calculated measurement by gender for those graduating from four-year institutions.

Among graduates of both two- and four-year institutions, non-Hispanic Whites (12.6 percent self-report and 42.2 percent calculated among graduates of two-year institutions and 10.4 percent and 39.5 percent, respectively, for graduates of four-year institutions) were less likely to self-report and to be calculated as underemployed compared to their non-Hispanic Black/African-American counterparts (19.9 percent, 51.3 percent, 16.4 percent and 47.3 percent, respectively). Furthermore, among graduates of two-year institutions those who studied psychology and social sciences (28.4 percent) were most likely to

*“A degree is just about required for any job opportunity beyond an entry level retail or basically any job. College is well worth the investment in my opinion/case.”*  
– Virginia Educated respondent

*“My mentoring from professors in both of my majors (psychology and music) was excellent. I was able to attend research conferences and conduct my own research, which contributed to earning my PhD and beginning a career in psychological research.”*  
– Virginia Educated respondent

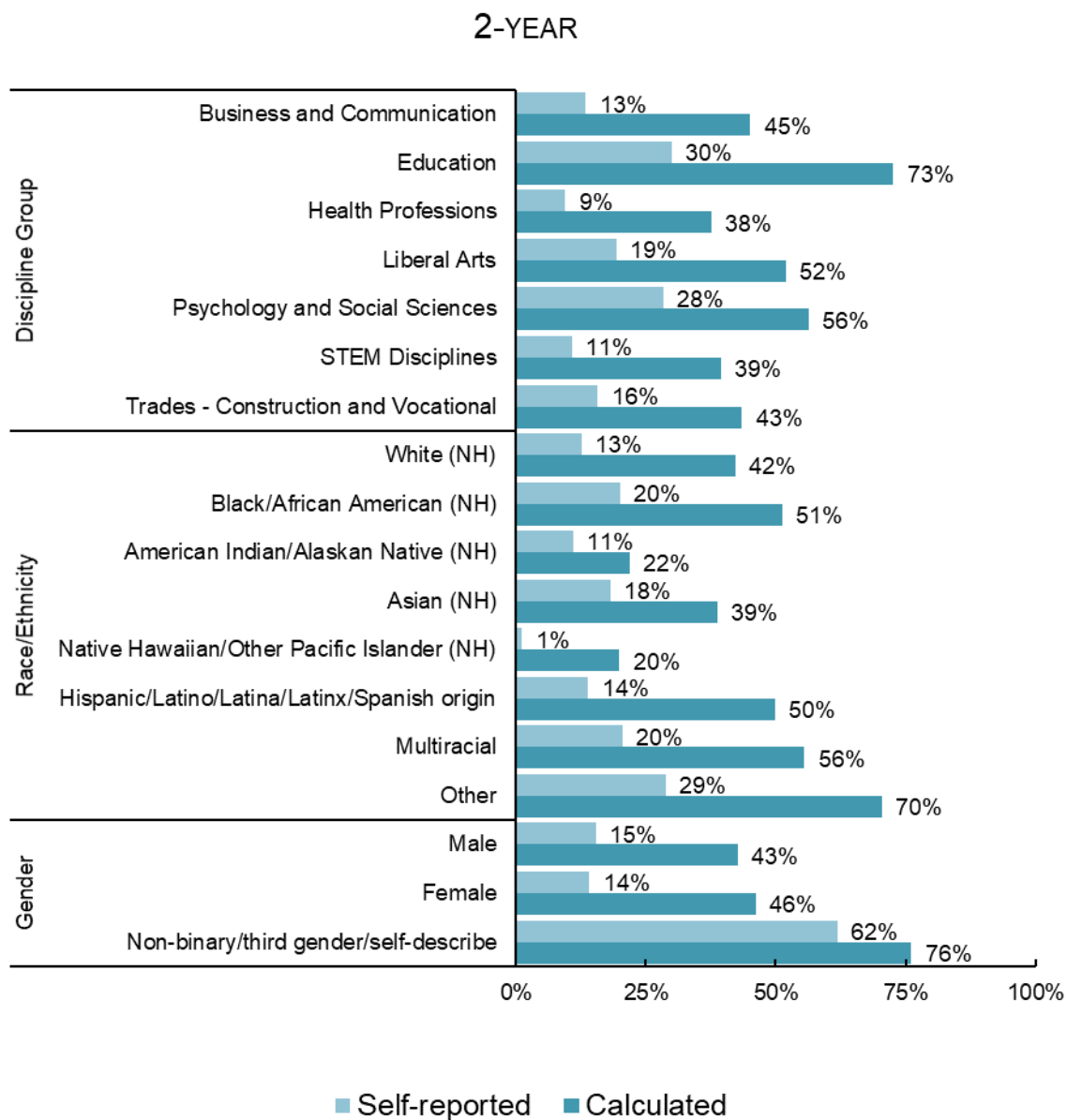
consider themselves to be underemployed while those who studied education were to be most likely to be measured as underemployed (72.6 percent). Among graduates of four-year institutions those who studied psychology and social sciences (15.3 percent) were most likely to consider themselves to be underemployed while those who studied liberal arts were most likely to be measured as underemployed (51.4 percent).

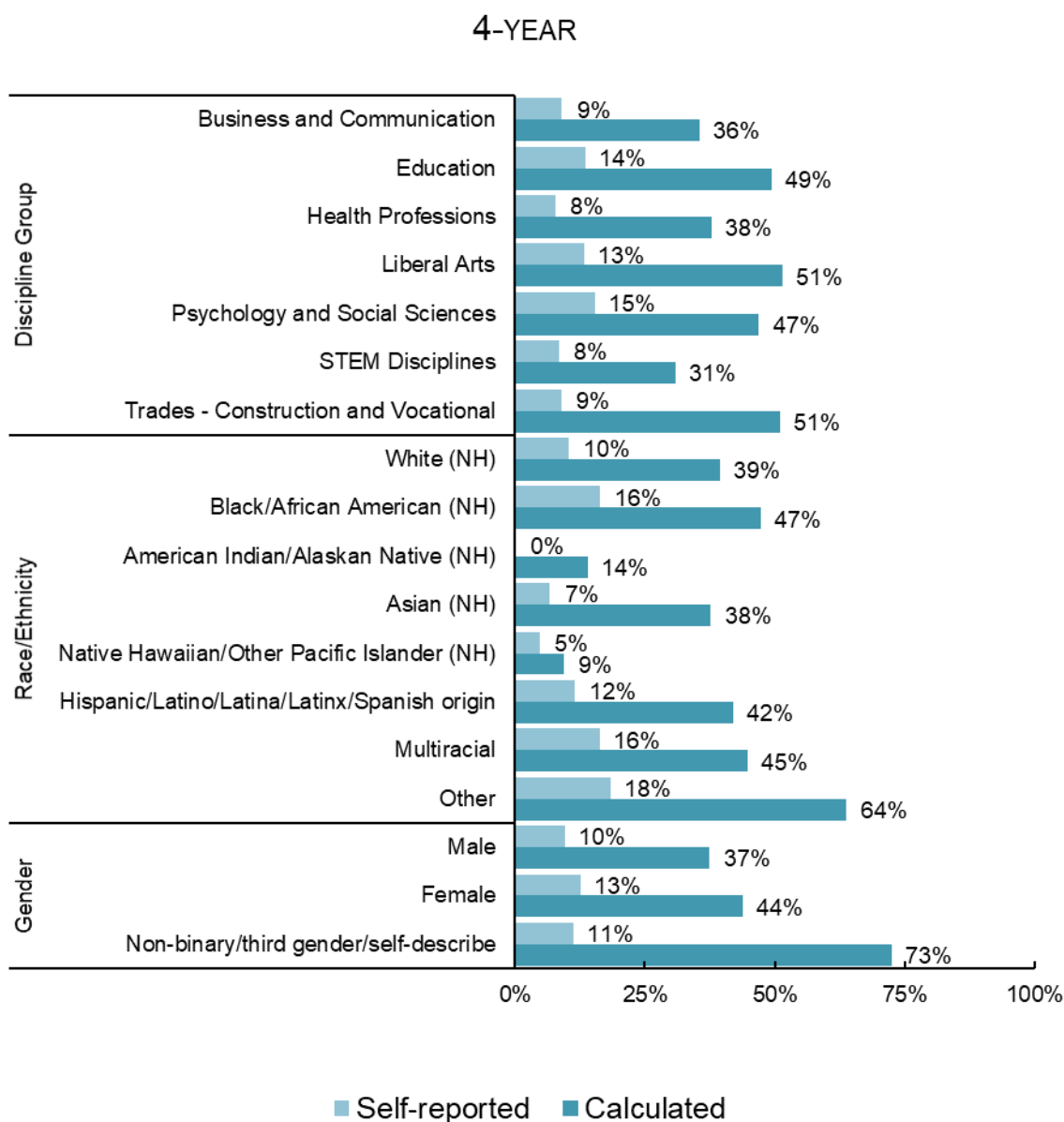
Additionally, among two-year graduates, those currently living in rural areas (19.1 percent compared to 13.7 percent of non-rural residents) were more likely to say they were underemployed. Among graduates of four-year institutions, those currently living in rural areas (48.2 percent versus 40.6 percent of those not) were more likely to be calculated as underemployed.

*“My undergraduate degree got me into an internship that turned into a job after college. I have been with the company for over 10 years. I have financial stability and a wonderful work life balance.”*  
– Virginia Educated respondent

*“My undergraduate education was a ticket to getting any job that paid over \$30K a year, which was a positive. A negative is that many of these jobs should not require an undergraduate degree, and the value of undergraduate education (earnings, upward mobility) has significantly gone down. After graduating my undergraduate education, the jobs I was able to pursue were not enough to cover the cost of living and upward mobility proved nearly impossible. The biggest positive of my undergraduate degree is that it allowed me to pursue a career change and get a master's degree.”*  
– Virginia Educated respondent

**Figure 40: Percent Underemployed (Self-reported and Calculated) by Demographics, Part A**



**Figure 41: Percent Underemployed (Self-reported and Calculated) by Demographics, Part B**

### Internships, mentoring and extracurricular activities

As Figure 42 shows, graduates of four-year institutions were more likely than graduates of two-year institutions to have engaged in a host of activities and opportunities, although the different missions and resources of the two types of institutions will influence these experiences. In the list below – which displays percentages for four-year graduates first, then percentages for two-year graduates – four-year graduates were more likely to have:

- Been mentored while at the institution (46.1 percent versus 43.2 percent);

- Completed a paid or unpaid internship (58.0 percent versus 24.4 percent);
- Accessed other job- or career related opportunities and services, such as attending job or career fairs (59.2 percent versus 35.2 percent), getting help with their job interview skills or resume (44.4 percent versus 24.6 percent), attending job or career presentations (38.5 percent versus 18.2 percent), actively participating in on-campus job recruitment opportunities (27.9 percent versus 8.4 percent), and actively participating in a professional or occupational extracurricular organization (39.9 percent versus 20.6 percent);
- Engaged in study abroad programs and research activities (16.6 percent versus 1.7 percent), conducting research in field of study (27.4 percent versus 12.0 percent), and completing a capstone course or undergraduate thesis (35.3 percent versus 8.5 percent);
- Volunteered while at the institution, (30.6 percent versus 7.1 percent), volunteered off-campus (42.6 percent versus 20.0 percent), held a leadership position in an extracurricular organization (34.6 percent versus 9.6 percent), and served in the Reserve Officers' Training Corps (ROTC) during those years (3.0 percent versus 0.5 percent); and
- Participated in social activities such as an extracurricular social organization like a fraternity or sorority or other club (40.3 percent versus 11.3 percent), and in intramural or varsity athletics (30.1 percent versus 4.4 percent).

See Figure 42.

*"My undergraduate education helped me to grow from a baby leaving high school into a young adult starting out into the world. My family and I were homeless during my undergraduate years and I still graduated with Honors. Without my undergraduate education, it would have been very hard to solely focus on the negatives of my life, instead of keeping my mind in the books. I was a very positive person who stayed joyous, regardless of what I went through. God kept us then and is still keeping us today!!"*

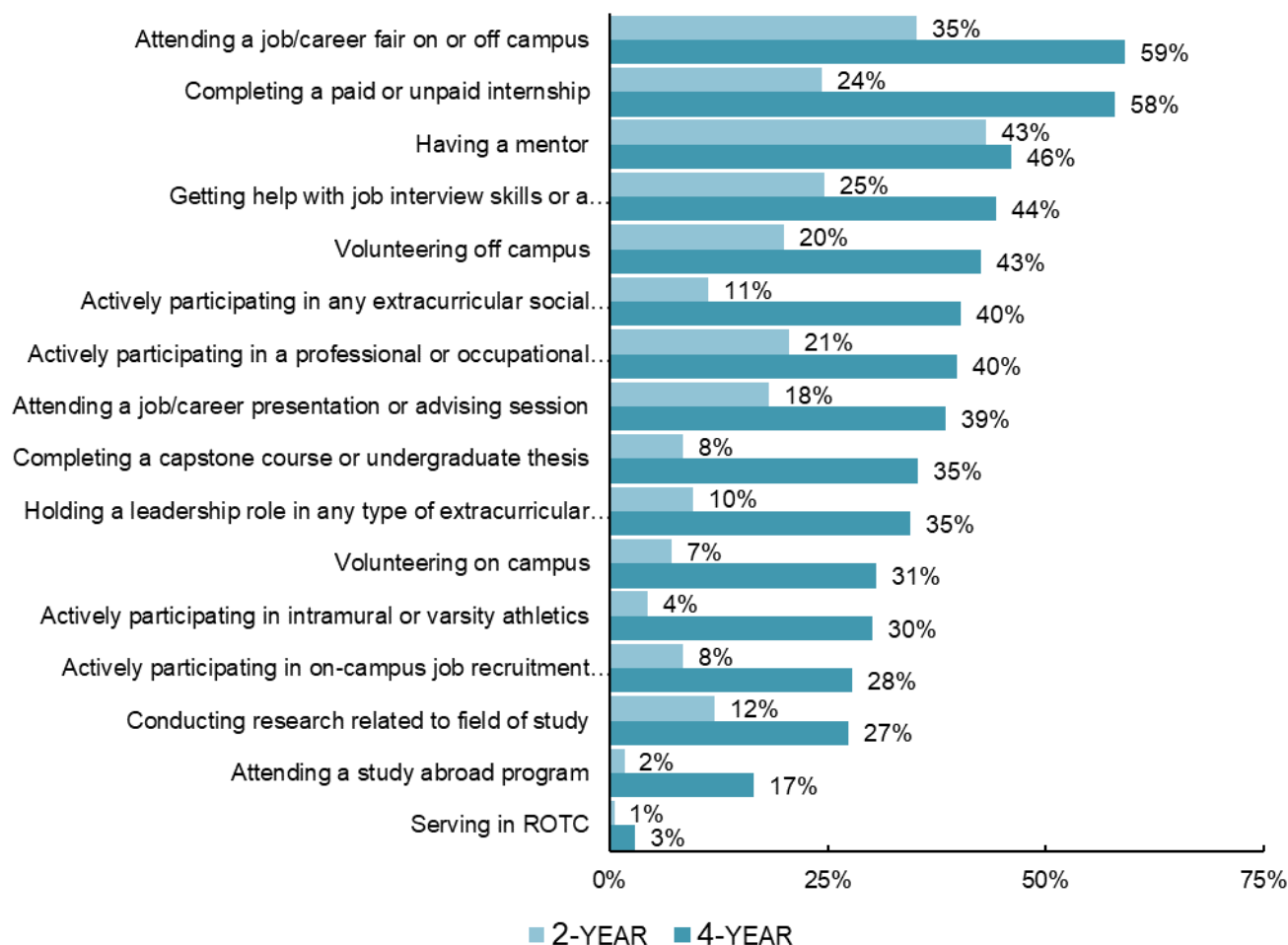
– Virginia Educated respondent

*"Have options, either school or work so you can choose and don't put all your eggs in one basket, make sure you have something, and don't star[t] senior year, start junior year, start applying and getting internships and really focus on gaining experience with others."*

– Virginia Educated respondent

*"At college, challenge yourself academically and get involved in a variety of extracurricular activities to maximize your personal growth."*

– Virginia Educated respondent

**Figure 42: Participation in Extracurricular Activities**

Among graduates of two-year institutions, men (45.4 percent) and those currently living in rural areas (54.0 percent) were more likely to have had a mentor compared to women (41.9 percent) and those currently living in non-rural areas (40.1 percent). Those studying education were most likely to have a mentor among either graduates of two- (51.7 percent) and four-year (57.0 percent) institutions.

When it came to internships, female graduates of two-year institutions (26.5 percent) were more

*"My college or university could have provided me better, more active mentorship by having more diverse, outgoing mentors that have a heart for seeing their pupils succeed, and it also could have provided more opportunities to gain more career/research hands-on opportunities outside of internships and/or co-ops."*

– Virginia Educated respondent

likely to have had a paid or unpaid internship while at the institution compared to their male counterparts (21.6 percent). Non-Hispanic Black/African-American (29.1 percent) graduates of two-year institutions were more likely than non-Hispanic White (23.5 percent) and Hispanic (20.9

percent) graduates to have had such internships. No such demographic differences were evident among graduates of four-year institutions.

Among both types of graduates, those who studied education (42.5 percent of graduates of two-year and 81.3 percent of graduates of four-year institutions) were most likely to have had a paid or unpaid internship. Additionally, more than half of graduates of two- (53.2 percent) and four-year (57.0 percent) institutions indicated that these internships helped them obtain a job offer after graduation, which they may or may not have accepted.

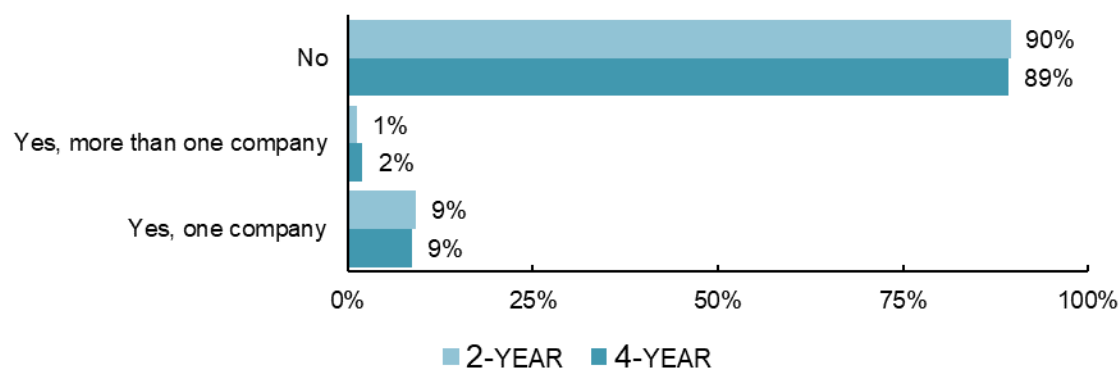
Female graduates of four-year institutions were more likely to have studied abroad (20.0 percent) and conducted research related to their field of study (28.8 percent) than male four-year graduates (12.3 percent and 25.9 percent, respectively). In addition, women were more likely than men to volunteer, among both two-year and four-year graduates. But, overall, men were more likely to participate in most social and job/career-related activities. Refer to Figure 42 above.

Graduates who participated in one or more of these social, volunteer, study/research or job/career-related activities were asked if they helped them obtain a job after graduation – 30.8 percent of graduates of two-year institutions and 45.1 percent of those graduating from four-year institutions said that they did.

## Entrepreneurship

About 5.6 percent of graduates of two-year institutions and even fewer four-year graduates (4.6 percent) reported being currently self-employed. Slightly larger numbers – 10.4 percent of two-year graduates and 10.7 percent of four-year graduates – reported owning one or more companies since their undergraduate experience (see Figure 43). This was 10.6 percent of all graduates taken as a whole.

**Figure 43: Entrepreneurship – Did Graduate Start One or More Companies?**



Nearly three-quarters (74.6 percent) of all graduates who started one or more companies reported that at least one of the companies they started was still in operation, whether under the original

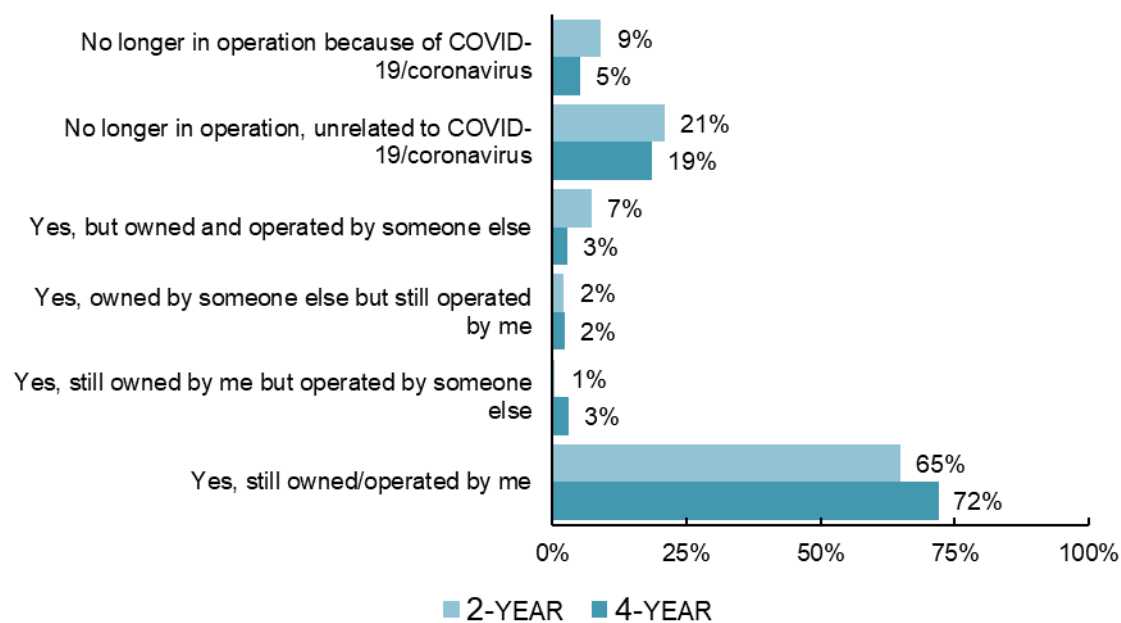


ownership or new arrangements. Most of the companies were small – 88.6 percent overall had five or fewer employees including the graduate.

As Figure 44 (below) reveals, among the graduates who started one or more companies, 65.0 percent of two-year graduates and 72.0 percent of four-year graduates continued to own and also operate their companies at the time of the survey.

About 21.1 percent of graduates of two-year and 18.6 percent of graduates of four-year institutions reported that their businesses were no longer operational (these respondents did not report that they closed their businesses because of the COVID-19 pandemic, although indirect impacts may have led to closures). Additionally, 9.2 percent of graduates of two-year institutions and 5.2 percent of graduates of four-year institutions reported closing their businesses specifically because of the COVID-19 pandemic.

**Figure 44: Entrepreneurship – Are Any of the Graduate’s Companies Still Operating?**



Among graduates of both two- and four-year institutions, men (12.5 percent and 12.0 percent, respectively) were more likely than women (8.6 percent and 9.6 percent, respectively), and non-Hispanic Black/African-American graduates (14.4 percent and 19.6 percent, respectively) were more likely than their non-Hispanic White (8.6 percent and 9.4 percent) and non-Hispanic Asian (7.8 percent and 6.8 percent, respectively) counterparts to have started a company since their undergraduate experience. In addition, among graduates of two-year institutions, those currently living in rural areas (7.5 percent) were less likely to have started a company compared to those currently living in non-rural areas (11.3 percent). Most of these entrepreneurs still continued to own and operate their companies across the various demographic groups.

**In summary**, most graduates of Virginia institutions of higher education were satisfied with how their undergraduate experience prepared them for the workplace, with graduates of four-year institutions more likely to express such satisfaction in comparison to graduates of two-year institutions. Most were currently working for someone else. Those graduating from four-year institutions were a little more likely to be currently employed.

Of those currently working, the vast majority worked 40 or more hours per week in jobs that related at least moderately well to the discipline they studied. Most of them worked for large for-profit firms with 500 or more staff where they received health insurance, paid time off and retirement contributions. Graduates of four-year institutions more likely to receive these benefits, while two-year graduates were more likely to receive student loan forgiveness or help with payments from their employers, but they were generally less likely to receive benefits at all.

Graduates of four-year institutions were more likely to cite various positive attributes about their job, such as being respected by colleagues, while those graduating from two-year institutions were more likely to cite negative attributes like not earning enough money. Four-year graduates were more likely to indicate satisfaction with progress toward their long-term career goals since their undergraduate experience compared to their two-year counterparts.

Few graduates of both types considered themselves to be underemployed, while more than four in 10 were calculated to be potentially underemployed based on their responses to various survey items. Most of the “disagreement” here was with graduates who said they did not consider themselves to be underemployed because their work/life situation was their choice or their job made good use of their skills and education. About nine percent of graduates had opened a company since their undergraduate experience, and most of those entrepreneurs said they still owned and operated at least one of those companies.

## **Perceptions of skills obtained and needed**

Respondents to the survey were asked to indicate up to three skills they obtained during their undergraduate experience that they find most useful. Graduates of two-year institutions most often mentioned “gaining skills specific to my primary job or occupation” (39.5 percent versus 27.9 percent of graduates of four-year institutions), followed by “time management” (28.9 percent versus 28.3 percent of their four-year counterparts) and “critically evaluating issues” (28.8 percent versus 35.9 percent).

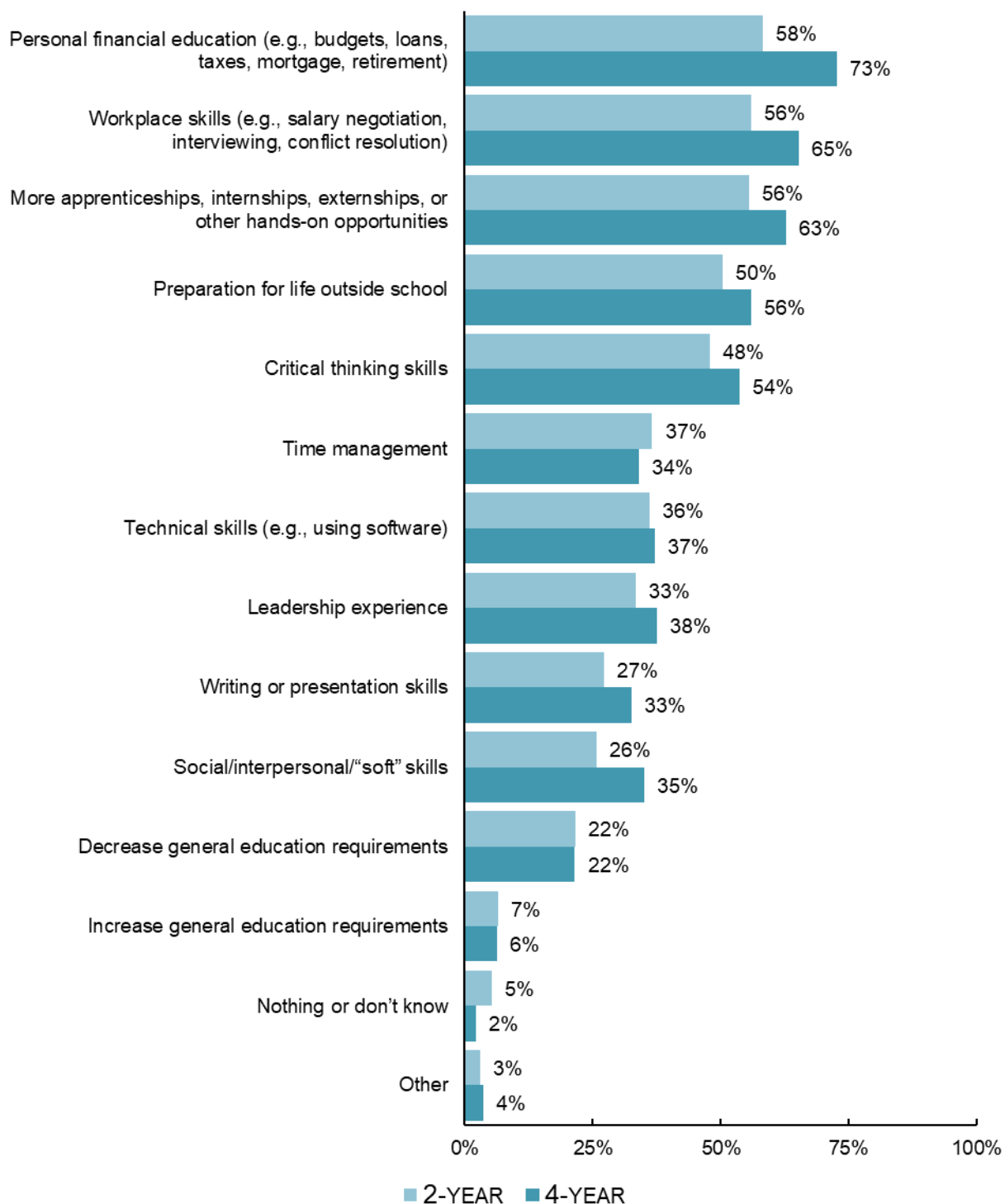
Graduates of four-year institutions most often mentioned “critically evaluating issues” (35.9 percent, as mentioned in the prior sentence), followed by “thinking analytically” (34.6 percent versus 25.5 percent of their two-year counterparts) and “collaborating with people from different backgrounds” (30.9 percent versus 27.2 percent, respectively). See Figure 45 for details.

**Figure 45: Three Most Useful Skills Obtained During Undergraduate Experience**

Respondents to the survey were also 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 along 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.

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). See Figure 46.

**Figure 46: Skills Desired During Undergraduate Experience**



**In summary**, while graduates of two-year institutions were most likely to value the job skills they learned during their undergraduate experience, those graduating from four-year institutions were more likely to mention critical thinking skills. When it came to recommending skills that Virginia higher education institutions should focus on, graduates from both types of institutions were most likely to indicate practical workplace and life-related skills, with the most frequently mentioned being personal financial education (for example, budgeting, loans, taxes, mortgages and retirement planning).

## Perceptions of success, life satisfaction and health

### Perception of success

The survey asked respondents to define success, which graduates of both types of institutions largely did in terms of “sense of personal growth, fulfillment, confidence or perspective” (67.5 percent of graduates of two- and 73.6 percent of four-year institutions); “career or job satisfaction, professional growth or status” (62.0 percent and 72.5 percent, respectively); “financial stability, security, self-sufficiency, control of debt” (59.7 percent and 71.3 percent, respectively); and “family relationships” (59.7 percent and 71.3 percent, respectively).

They were then asked to rate how much of that success they attributed to their undergraduate experience. Four-year graduates were generally more likely than two-year graduates to attribute their success to their undergraduate experience. The combined total of 55.3 percent of four-year graduates saying their success was “entirely” or “very much” attributable to their undergraduate experience was greater than the 43.3 percent found among two-year graduates. See Figure 47.

*“Seek and provide coaching and feedback constantly. Don't get lost in the weeds, think about where you are going and why. If you cannot articulate those things, you should question why and what you should do. Don't be afraid to fail. In this world where everything moves quick, don't let things pass you by, seize the moment. To be honest, fail early and often, it is what you do next and learn that is critically important.”*

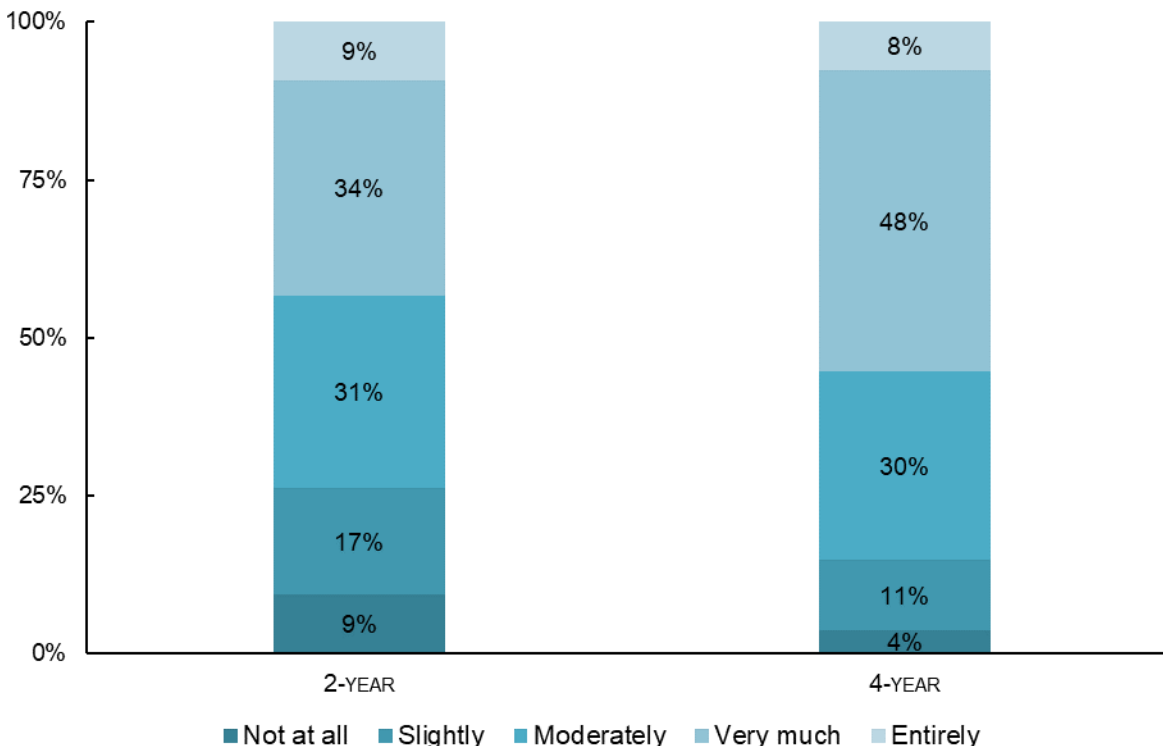
– Virginia Educated respondent

*“Better studying/time management skills, more well-rounded knowledge. Without my undergrad, I feel like my knowledge about the world would be pretty shallow.”*

– Virginia Educated respondent

*“Offer courses on salary negotiation, budgeting, loans and everyday finances. Also, a course on understanding taxes and the impact on your paycheck would be very helpful as some cities and states tax more or less than others.”*

– Virginia Educated respondent

**Figure 47: Success Attributed to the Undergraduate Experience**

Female graduates of two-year institutions were more likely to attribute their success to their undergraduate experience “entirely” or “very much” (45.5 percent) compared to their male counterparts (40.7 percent). Male graduates of four-year institutions were more likely to give those responses (57.1 percent) compared to their female counterparts (54.4 percent). Non-Hispanic White graduates of two-year institutions were also less likely to give those responses (41.8 percent) compared to their non-Hispanic Black/African-American (49.4 percent) and non-Hispanic Asian (51.0 percent) counterparts, as were those currently living in rural areas (50.0 percent) compared to their non-rural counterparts (41.4 percent). Among graduates of four-year institutions Hispanic graduates (57.6 percent) were more likely to say “entirely” or “very much” compared to non-Hispanic Asian respondents (51.2 percent). Among both types of graduates, those who studied the health professions (58.0 percent of graduates of two- and 61.3 percent of four-year institutions) were most likely to give these responses – they were also least likely to say “not at all” (2.9 percent and 1.7 percent, respectively).

### Satisfaction with life

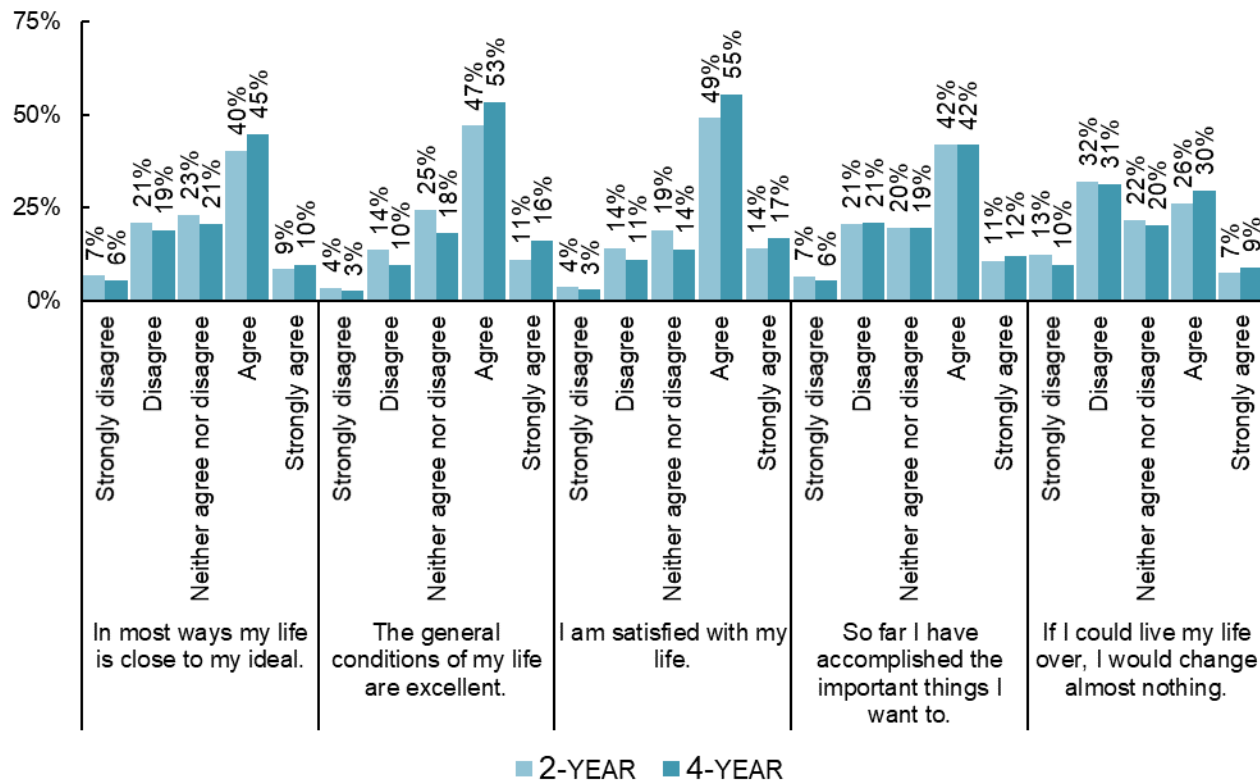
The survey also asked respondents to indicate their level of agreement with a series of statements about their life (based on Diener et al., 1985). Overall, 52.6 percent of *Virginia Educated* respondents said their life in most ways is close to ideal and 65.7 percent said the general conditions of their 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 expressed greatest agreement regarding the statement, “I am satisfied with my life,” with 72.1 percent of graduates of four-year institutions and 63.0 percent of graduates of two-year institutions saying “strongly agree” or “agree.” As Figure 48 indicates, more than half the graduates of both types of institutions noted that “the general conditions of my life are excellent” (69.6 percent of graduates of four- and 58.1 percent of two-year institutions) and also that “so far I have accomplished the important things I want to” (54.0 percent and 52.8 percent, respectively).

More than half of graduates of four-year institutions also agreed with the statement, “in most ways my life is close to my ideal” (54.5 percent), as did slightly under half of graduates of two-year institutions (48.9 percent). Still, only about one-third of graduates from both types of institutions (38.7 percent of graduates of four- and 33.7 percent of graduates of two-year institutions) agreed with the idea, “if I could live my life over, I would change almost nothing.” Overall, graduates of four-year institutions were more likely to agree with all five statements compared to two-year participants, thus implying that they are more likely to be satisfied with life. See Figure 48.

*“My education has made a huge impact on my life in a positive way. I am able to communicate with others on a personal and professional level not allowing both to collide in certain situations. I have been able to find my purpose in life through my undergraduate experience and honestly I don't know where I would be without my undergraduate education.”*  
– Virginia Educated respondent

**Figure 48: Responses to Satisfaction with Life Scale Items (Diener et al., 1985)**

Still, when these five items measuring social efficacy are combined – and keeping in mind that on a scale of 1 to 5, 1 equals “strongly disagree” and 5 equals “strongly agree” – the average score among graduates of four-year institutions is 3.41. This is similar to the 3.28 for those graduating from two-year institutions. Among participants from both types of institutions, non-Hispanic Whites (3.33 among graduates of two- and 3.50 among graduates of four-year institutions) were more likely to express agreement compared to their non-Hispanic Black/African-American (3.23 and 3.20, respectively) and Hispanic (3.15 and 3.29, respectively) counterparts; as were those who studied the liberal arts (3.18 and 3.32, respectively), and psychology and social sciences (3.14 and 3.30, respectively). Those currently living in rural areas among those who graduated from two-year institutions (3.37) were more likely to agree with these statements than those currently living in non-rural areas (3.25).

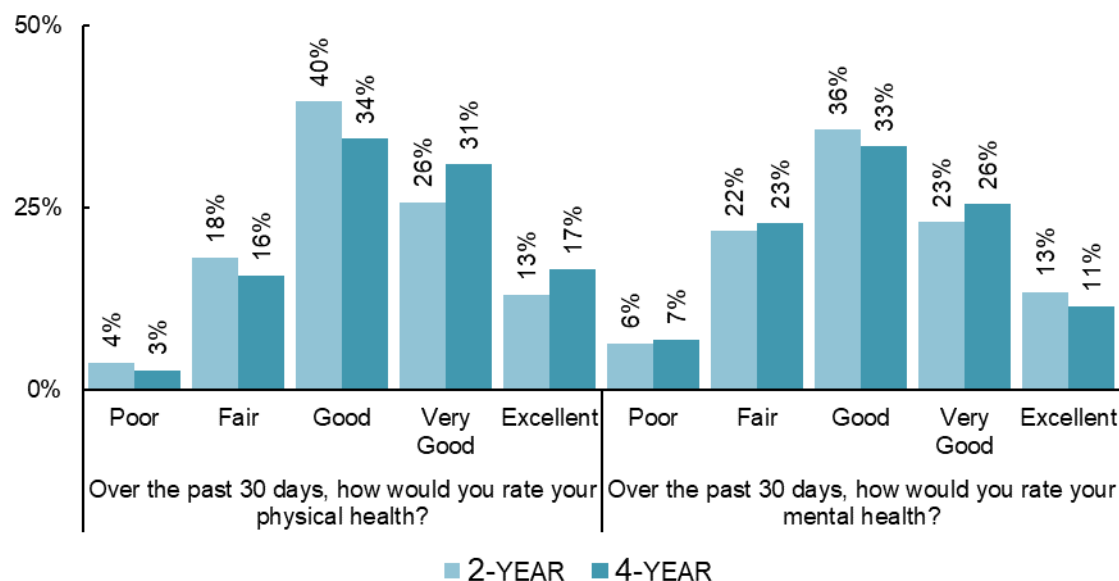
### Rating of physical and mental health

Graduates of four-year institutions were more likely to rate their physical health as “excellent” (16.5 percent versus 13.0 percent of two-year graduates) and “very good” (30.9 percent of four-year graduates versus 25.7 percent of two-year graduates). On average, graduates of four-year institutions rated their physical health over the last 30 days better than two-year graduates (3.43 versus 3.26 respectively).



On average, two-year graduates rated their mental health over the past 30 days a little better than four-year graduates (3.16 and 3.12, respectively). This difference is slight. See Figure 49.

**Figure 49: Rating of Physical and Mental Health**



When asked about smoking or chewing tobacco in the past 30 days, 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, while 12.5 percent of graduates of two-year institutions and 5.1 percent of those graduating from four-year institutions said they smoked or chewed tobacco three times or more per week in the last 30 days. In data from the 2019 Behavioral Risk Factor Surveillance System (BRFSS), 15.7 percent of adult Virginians with some college and 5.9 percent of college graduates were current smokers. (The *Virginia Educated* question asked about tobacco use in all forms, not just smoking.)

*“Being able to leave home and my hometown was essential for my life and well-being. I probably wouldn’t have received essential mental health care if I had stayed at home. Beyond that, I do think of my time in Virginia positively it is a great state, and I would never have lived there were it not for college.”*  
– Virginia Educated respondent

When asked how often they used alcohol in the past 30 days, 36.7 percent of graduates of two-year institutions and 20.2 percent of those graduating from four-year institutions said they never drank, while 13.0 percent of graduates of two-year institutions and 24.1 percent of those graduating from four-year institutions said they drank three times or more per week in the last 30 days. In 2019 BRFSS data, 65.6 percent of college graduates and 52.4 percent of those with some college had at least one alcoholic drink in the last 30 days. See Appendix D for details about BRFSS.

**In summary**, graduates of four-year institutions were more likely to be satisfied with their life on several different measures such as general satisfaction, and whether their life is excellent or close to ideal. Graduates of four-year institutions were also more likely to attribute their success, based on their own definition of success, to their undergraduate experience compared with those graduating from two-year institutions. 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 two-year graduates. Graduates of two-year institutions, however, were likely to rate their mental health more highly than four-year graduates. In addition, while graduates of two-year institutions were more likely to have used tobacco in the last 30 days, those graduating from four-year institutions were more likely to report using alcohol in the last 30 days.

## Student debt

Borrowing to pay for higher education may have positive and negative impacts, as Table 2 demonstrates.

**Table 2: Impacts of Student Debt**

	Negative	Positive
Individual	<ul style="list-style-type: none"> <li>High debt burden can negatively influence mental health</li> <li>Delays entry into adulthood (home ownership, marriage)</li> </ul>	<ul style="list-style-type: none"> <li>Income and wealth premium remain positive</li> </ul>
Societal	<ul style="list-style-type: none"> <li>Can contribute to racial inequities</li> <li>May reduce rates of home ownership</li> </ul>	<ul style="list-style-type: none"> <li>Reduce educational inequalities by allowing more students to fund education</li> </ul>

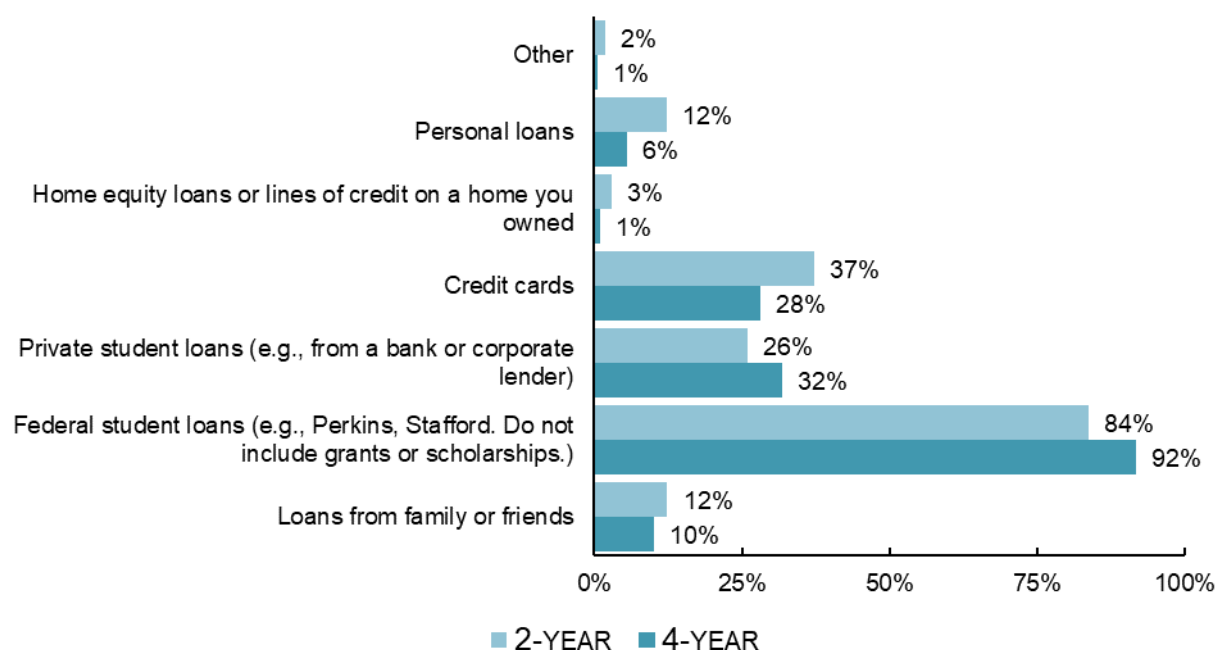
As noted earlier in the section about demographic characteristics of the respondents, 50.5 percent of the *Virginia Educated* survey respondents taken as a whole – 39.9 percent of graduates of two-year institutions and 56.0 percent of graduates from four-year institutions – owed money for their education upon graduation. Among those who had student debt when they completed their undergraduate education, 73.4 percent of graduates of two-year institutions and 62.9 percent of those graduating four-year institutions still carried student debt at the time of the survey. This current debt could be from the focal undergraduate experience, additional education, or both.

Expressed as percentages of all graduates – including those who had no debt and those who previously paid it off – 27.0 percent of graduates of two-year institutions and 23.1 percent of those graduating four-year institutions carried student loan debt at the time of the survey. In

short, while graduates of two-year institutions were less likely to have student loan debt, they were more likely to be still carrying their debt post-graduation.

As Figure 50 shows, almost all of them had obtained federal student loans (83.6 percent and 91.7 percent, respectively), though a significant share of respondents also indicated acquiring credit card debt (37.3 percent and 28.1 percent, respectively), having private student loans (26.0 percent and 31.9 percent, respectively), taking loans from family and friends (12.4 percent and 10.1 percent, respectively) and taking out personal loans (12.3 percent and 5.5 percent, respectively).

**Figure 50: Types of Debt Incurred from Undergraduate Education**



Women graduates of both two-year and four-year institutions were more likely than men to have credit card debt when they finished their undergraduate education (40.3 percent versus 31.5 percent among two-year graduates and 30.7 percent versus 25.1 percent among four-year graduates). Non-Hispanic Black/African-American (86.9 percent of graduates of two-year and 95.6 percent of those graduating from four-year institutions) and Hispanic (87.7 percent and 90.4 percent, respectively) graduates were more likely to have federal student loans compared to non-Hispanic Whites (82.5 percent and 90.6 percent, respectively). Non-Hispanic Whites were more likely to have private student loans (27.2 percent and 33.8 percent) compared to non-Hispanic Black/African-American graduates (20.5 percent and 29.2 percent, respectively).

Twenty-seven percent of those graduating from two-year and 23.1 percent graduating from four-year institutions currently have student loan debt (which could be from their focal credential or an additional credential), but less than half of them (43.9 percent and 48.4 percent, respectively)

are currently making payments on those loans. Of those who currently have loan debt and are not paying, the most common reason was COVID-19 forbearance, given by 36.2 percent of those who graduating from two-year institutions and 27.5 percent of those graduating from four-year institutions. Another 17.7 percent of graduates from two-year and 10.7 percent of graduates from four-year institutions were not currently paying due to a deferral. More than twelve percent (12.4 percent) and eight percent, respectively, listed income-driven repayment plans as a reason for not paying.

Among those who currently had loan debt from their undergraduate education, 61.6 percent of two-year graduates and 57.6 percent of four-year graduates were making reduced payments – 21.1 percent and 24.6 percent, respectively, were on income-driven repayment plans; 45.3 percent and 45.8 percent, respectively, had COVID-19 forbearance; and the remainder had other types of reduced payments.

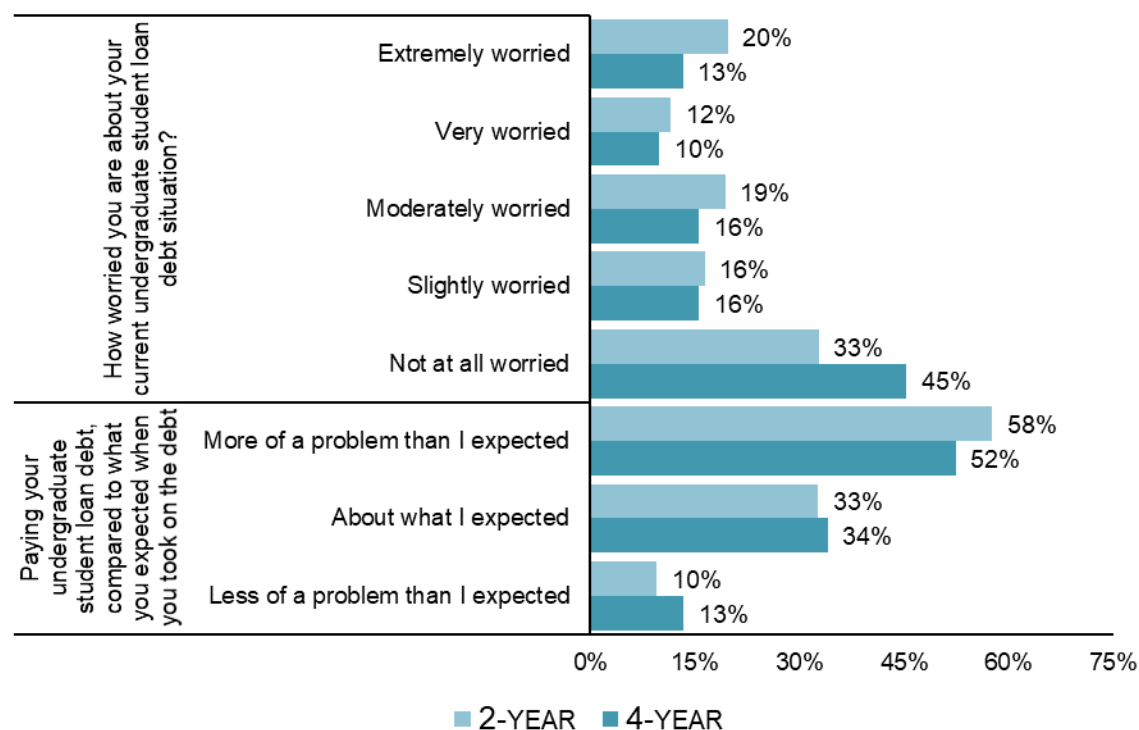
When asked, graduates of two-year institutions were more likely than graduates of four-year institutions to say that their undergraduate student loan debt was more of a problem than they expected it to be when they took it on (57.7 percent versus 52.4 percent). Also, as Figure 51 demonstrates, more of them were worried about their current undergraduate student loan debt situation – 50.8 percent of those graduating from two-year institutions reported some level of worry compared to 39.0 percent of those graduating from four-year institutions.

*"I find that there is a great disservice to the students who attend higher education from out of state and how both private and federal loans are needed to afford an education. Education...has become a necessity so that students can eventually enter the work force, typically in the same state as the university. The extraordinary debt in which people put themselves...so that they can better themselves and have a chance to make a change in their lives is cut short when opportunities slip away due to the burden of monthly payments to student loan lenders."*

*– Virginia Educated respondent*

*"Student loan debt is crippling and it's sad that sometimes I feel as though going to college was the worst decision I have ever made and on othe[r] day[s] I am thankful that I can use my knowledge to help others. Student loan debt is crippling and not fair for social workers such as myself who barely make enough to pay bills but selflessly give to ensure that other[s] have what they need. Institutions should be ashamed. At this moment, I believe that college was an awful decision, but pray that with hard work it will all be worth it. Please look into forgiving loans for healthcare workers. It would be life changing."*

*– Virginia Educated respondent*

**Figure 51: Level of Worry Regarding Student Debt, Expectations about Paying**

Expressed as percentages of all graduates – including those who had no debt and those who previously paid it off – 22.1 percent of two-year and 28.9 percent of four-year graduates said that paying their undergraduate debt was more of a problem than they expected. This included 13.0 percent of two-year and 17.9 percent of four-year graduates who said that paying their undergraduate debt was “a lot more of a problem” than they expected, and 9.1 percent of two-year and 11.0 percent of four-year graduates who said that paying their undergraduate debt was “a little more of a problem” than they expected.

Also, expressed as percentages of all graduates – including those who had no debt and those who previously paid it off – 19.6 percent of two-year and 21.2 percent of four-year graduates reported that they were at least moderately worried about their current undergraduate debt situation.

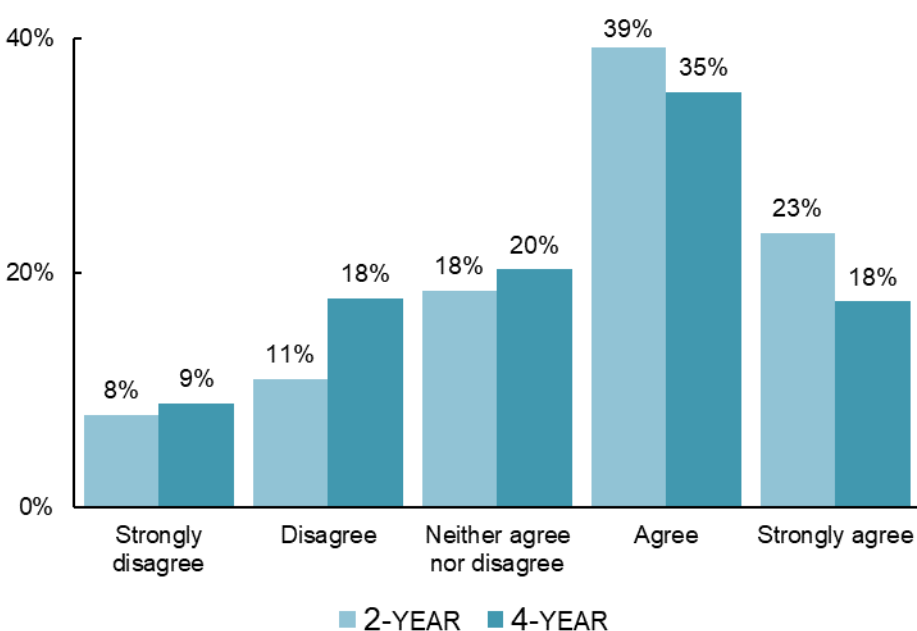
Despite being more likely to be carrying student loan debt at the time of the survey and being more worried about those loans, graduates of two-year institutions were more likely to agree with the statement that “your undergraduate education was worth the cost” (62.7 percent compared to 53.0 percent of those graduating from four-year institutions), including agreeing strongly (23.5 percent versus 17.6 percent). See Figure 52.

Overall, 70.2 percent of non-Hispanic Black/African-American students had student loan debt or owed money used to pay for their education when they graduated. The figures were 45.4 percent to 58.2 percent for non-Hispanic White, non-Hispanic Asian and multiracial graduates overall.

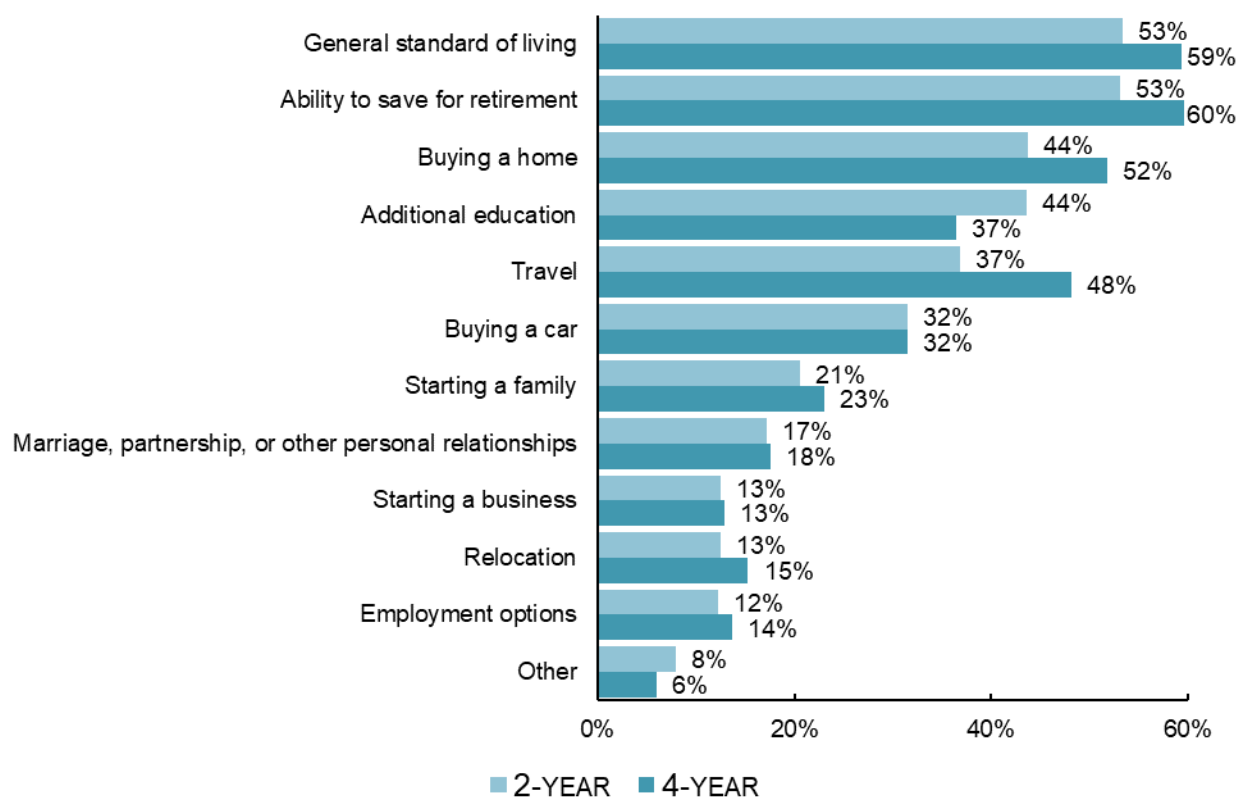
Among graduates of two-year institutions, non-Hispanic Whites were more likely to find the undergraduate experience worth the cost (65.8 percent) compared to their non-Hispanic Black/African-American (59.5 percent) and Hispanic (55.1 percent) counterparts. Graduates currently living in rural areas (65.5 percent) were also more likely to agree compared to their non-rural counterpart (61.9 percent). Graduates who had studied the health professions were most likely to agree (72.7 percent) and those who had studied psychology and social science (53.5 percent) and the liberal arts (55.7 percent) were least likely to agree.

Among graduates of four-year institutions, men (54.6 percent compared to 52.4 percent of women) and non-Hispanic Whites (56.9 percent compared to 40.3 percent of non-Hispanic Black/African-Americans and 43.8 percent of Hispanics) were more likely to agree that their undergraduate education was worth the cost. Those who had studied the STEM disciplines were most likely to agree (61.4 percent) and those who had studied psychology and social science (48.2 percent) and the liberal arts (47.6 percent) were least likely to agree.

**Figure 52: Undergraduate Experience Worth the Cost**



Additionally, the survey asked if student loans had delayed or interfered with numerous life domains. The most common areas that these loans interfered with or delayed according to graduates from both types of institutions were their general standard of living (53.4 percent of graduates of two-year and 59.4 percent of graduates of four-year institutions), their ability to save for retirement (53.1 percent and 59.7 percent, respectively), buying a home (43.7 percent and 51.8 percent, respectively), additional education (43.6 percent and 36.5 percent, respectively), travel (36.8 percent and 48.2 percent, respectively), and buying a car (31.5 percent in both groups). See Figure 53 for more details.

**Figure 53: Student Loan Debt Delayed or Interfered in Areas of Life**

### Student debt stress: Exploratory analysis

*Virginia Educated* results show that student loan debt can have profound impacts on graduates. Both the amount of student debt following graduation and current student loan debt were negatively related to satisfaction with undergraduate education. Open-ended responses revealed that graduates negatively characterized their student loan debt. The survey directly asked students how worried they were about their student loan debt and a significant number were worried. The survey also asked about loans in deferment, forbearance or reduced payment plans.

In an analysis of 2016 graduates who did not enroll in graduate school, Schak et al. (2020) defined repayment difficulty as missing payments or securing temporary loan relief through deferments and forbearance. In that study, graduates with higher student loan debt had higher rates of repayment difficulty. Additionally, non-Hispanic Black/African-Americans graduates had the highest percentage of loan repayment difficulty (40 percent), followed by Hispanic graduates (29 percent). Non-Hispanic White and non-Hispanic Asian graduates had similar percentages of repayment difficulty (22 and 19 percent, respectively).

Scherschel (1998) asserts that borrowers should not devote more than eight percent of their pre-tax monthly income to repaying student loans. Baum & Schwartz (2006) suggest that no more than 10 percent of monthly income be devoted to education debt, and borrowers with incomes

below 150 percent of the poverty line (approximately, \$14,700 for a single person in 2006 dollars) should not be making payments on education debt. Baum & O'Malley (2003) found that approximately 45 percent of undergraduates were making payment greater than eight percent (the average was six percent).

SERL conducted an exploratory student debt “stress analysis” of the 65.8 percent of graduates who currently have student debt to further investigate its impacts. This debt could be from the focal undergraduate experience, additional education, or both. The stress analysis was based partly on a calculation of the percentage of the respondent’s monthly income used to pay student debt, partly on self-reported concerns about their student debt, and partly on their student loans being in deferment or involving reduced payment plans.

### ***Results of the student debt stress analysis***

Of the *Virginia Educated* graduates who provided both their personal income and their monthly payments towards educational loans, 38.5 percent of graduates reported making monthly loan payments that were more than eight percent of their monthly personal income. Four-year graduates were significantly more likely to be paying over eight percent of their personal income towards student loans than two-year graduates (39.7 percent versus 34.7 percent, respectively).

According to the student debt stress index calculated by SERL, approximately three quarters of all graduates (74.0 percent) who currently had student debt were stressed due to their student debt. This was 77.1 percent of two-year graduates and 72.7 percent of four-year graduates. Two-year graduates were more stressed than four-year graduates despite the fact that students graduating with two-year degrees typically accrue less debt than those graduating with bachelor’s degrees (see Appendix D).

This student loan stress index also revealed a number of significant differences in loan stress across demographic groups. First, graduates who were stressed by education loans were significantly more likely to be in the education (78.2 percent), health professions (77.0 percent), liberal arts (75.8 percent), or psychology and social sciences (78.3 percent) disciplines as opposed to STEM (71.0 percent) or business and communication (64.7 percent). Students of color were more likely to be stressed by education loans than others (75.7 percent versus 72.7 percent, respectively). Female graduates (76.8 percent) were more likely to be stressed by education loans than male graduates (68.5 percent). Graduates who started their education in the 25 to 44 age range (76.9 percent) were more likely to be stressed than those who started under age 18 or between ages 18 and 20 (73.0 percent and 73.4 percent, respectively). Additionally, graduates who currently reside rural areas were more likely to be stressed compared to those who live in non-rural areas (80.8 percent versus 73.3 percent, respectively). Graduates in higher income brackets – both personal and household – were less likely to be stressed by education loans than graduates in lower income brackets.



First-generation students (78.1 percent) were more likely to be stressed by education loans than non-first-generation students (71.7 percent). Graduates who were non-traditional (75.5 percent) or under-represented (75.1 percent) students were more likely to be stressed by education loans (70.6 percent and 72.8 percent of their counterparts were stressed, respectively). Graduates who were a caregiver during their undergraduate education were more likely to be stressed than those who were not a caregiver (78.7 percent versus 72.4 percent, respectively). Graduates who were calculated to be underemployed (79.1 percent) or who self-identified as underemployed (81.1 percent) were more likely to be stressed by education loans (compared to 64.5 percent and 70.7 percent of those not calculated or self-identified as underemployed, respectively). Finally, in-state students who lived in Virginia at the time of the survey (75.0 percent) were more likely to be stressed by education loans than those who were in-state students but left Virginia (71.5 percent). Graduates who went on to receive a higher degree were less stressed than graduates who did not (79.5 percent versus 70.7 percent, respectively)

There were not significance differences in loan stress between graduates who worked for pay during their undergraduate education and those who did not.

Looking within each institution type, females were more likely to be stressed than males at both two- and four-year institutions (78.9 percent and 75.8 percent of females and 73.1 percent and 66.6 percent of males were stressed for two- and four-year institutions, respectively). Within two-year institutions, non-Hispanic Black/African-American graduates (82.7 percent) were more likely to be stressed than non-Hispanic White graduates (75.8 percent).

### ***Limitations of the student debt stress analysis***

Only a subset of graduates reported both their current income and current student loan payment amounts (approximately 8,000 respondents). The survey did not collect the total amount of education debt owed by graduates. Also, this measure of student loan stress is based on how graduates *currently* feel about their student debt. Graduates who no longer had education debt were not included in this stress calculation, but it is possible they were stressed about their education debt at one time. Thus, it is possible that this index of student loan stress underestimates stress. Additionally, during the survey period, the federal government suspended student loan payments due to COVID-19, and it is possible that this influenced graduates' responses.

**In summary**, as of 2020, about one million Virginians owed \$41 billion in federal student loan debt. Overall, 50.5 percent of the *Virginia Educated* survey respondents overall – 39.9 percent of two-year graduates and 56.0 percent of four-year graduates – owed money for their education upon graduation. Nearly all of these respondents had used federal student loans – 83.6 percent of two-year graduates and 91.7 percent of four-year graduates, respectively.

Although graduates of two-year institutions were less likely to owe student loan debt at the time of graduation, they were more likely to be carrying student debt at the time of the survey in comparison to graduates of four-year institutions. Graduates of two-year institutions were also more likely to report that their undergraduate student loans were more of a problem than they had anticipated. They were also more worried about them than their four-year peers. Both groups of respondents reported that debt had delayed or interfered with their general standard of living, their ability to save for retirement, buying a home, and pursuing additional education.

According to a student debt stress index analysis conducted by SERL, 74.0 percent of graduates were currently stressed by student loan debt, and two-year graduates were more stressed than their four-year graduates—77.1 percent and 72.7 percent were stressed, respectively.

Still, graduates of two-year institutions – especially graduates of color – were more likely to say that their undergraduate education was worth the cost relative to four-year participants. Overall, 62.7 percent of graduates from two-year institutions and 53.0 percent of graduates from four-year institutions found the cost worthwhile.

## Residency and mobility

As mentioned earlier, the vast majority of graduates of two-year (97.1 percent) and four-year (80.5 percent) institutions were Virginia residents at the time of enrollment.

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)

*“Without my undergraduate education, I would not be in the industry I am or have the job I have. I may not have even stayed in VA.”*  
– Virginia Educated respondent

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

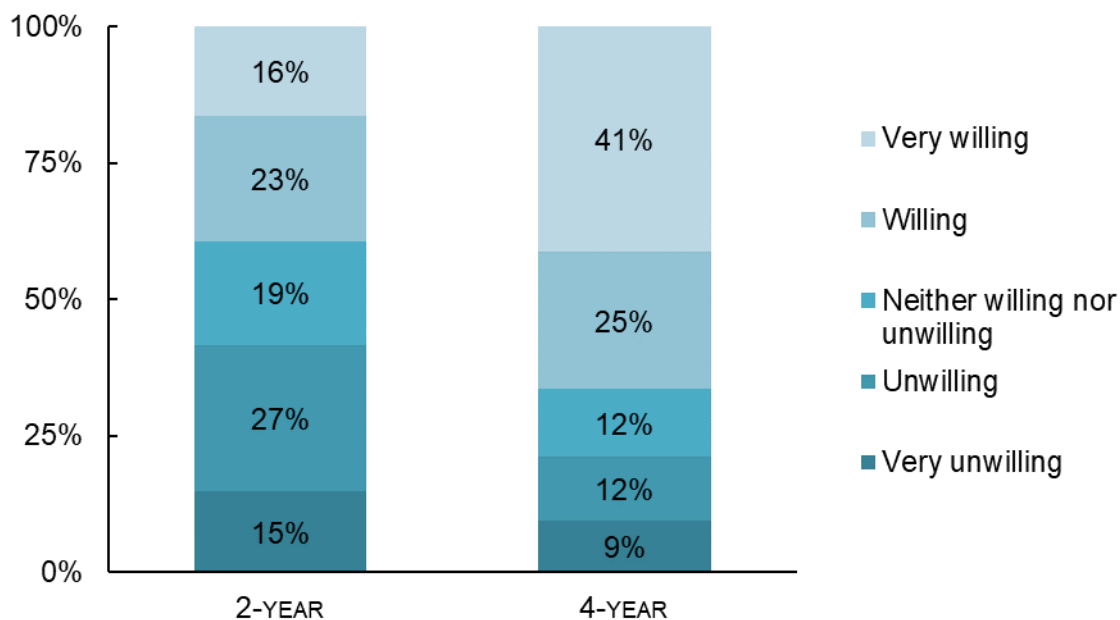
- New Jersey (12.0 percent)
- Pennsylvania (10.3 percent)
- New York (8.9 percent)
- Massachusetts (3.9 percent)
- Connecticut (3.9 percent)

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.

Most of the in-state graduates lived in the Virginia at the time of the survey (88.2 percent of two-year graduates and 80.0 percent of four-year graduates). Among out-of-state students, 19.4 percent overall lived in the Virginia at the time of the survey (almost all of the out-of-state students were four-year graduates).

When asked where they had intended to go immediately after graduation, the most common answer was “somewhere in Virginia” (48.5 percent of two-year graduates and 46.2 percent of four-year graduates), followed by “didn’t have intentions about where I would go” (39.4 percent and 39.1 percent, respectively).

Furthermore, graduates of two-year institutions were particularly unwilling to relocate more than an hour away for a good job after completing their undergraduate education, with just 39.4 percent indicating a willingness to do so, in contrast to 66.4 percent of graduates of four-year institutions (refer to Figure 54). Men graduating from both two- (47.1 percent) and four-year institutions (71.8 percent) were more likely than women (34.1 percent and 62.8 percent, respectively) to be willing to relocate, as were non-Hispanic Black/African-Americans (42.0 percent and 61.6 percent of two-year and four-year graduates respectively) relative to non-Hispanic Whites (37.7 percent and 68.8 percent, respectively). In addition, among graduates of two-year institutions, those currently living in rural areas (42.8 percent) reported being more willing to relocate during their undergraduate education compared to their non-rural peers (38.4 percent). See Figure 54.

**Figure 54: Willingness to Relocate More Than an Hour Away for a Good Job at Graduation**

While 48.9 percent of graduates of two-year institutions and 73.1 percent of graduates from four-year institutions reported ever changing where they lived since completing their undergraduate education, many of them were moves within Virginia (71.0 percent of two-year graduates who moved and 51.1 percent of four-year graduates who moved). Four-year graduates were more likely to have moved to another state or territory than two-year graduates (59.6 percent of those who moved compared to 31.9 percent). A small number moved outside the United States at some point after graduation (7.2 percent of four-year graduates and 0.8 percent of two-year graduates).

For those who left Virginia, they did so mainly for an employment opportunity for themselves or someone else (32.5 percent of graduates of two-year and 46.6 percent of four-year institutions), followed by family or personal reasons (28.8 percent and 13.9 percent, respectively), and an educational opportunity for themselves or someone else (14.4 percent and 13.9 percent, respectively).

*"...the awareness of the VA area got my wife and I to move to DC twice."*  
– Virginia Educated respondent

*"The biggest impact my undergraduate degree had was that it le[d] me to Virginia. Without it I would still live in Maryland."*  
– Virginia Educated respondent

Among those who moved within Virginia or came back to Virginia, the top two reasons were an employment opportunity for themselves or someone else (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).

**In summary**, graduates may be more closely tied to geographic locations than some might expect. Most graduates of Virginia’s two-year and four-year institutions of higher education were residents of Virginia at the time of enrollment and they currently live in the Commonwealth. When they started their undergraduate education, most of them had no concrete plans to relocate out of Virginia after they graduated. Graduates of two-year institutions were more unwilling than four-year graduates to relocate more than one hour away for a good job, with 39.4 percent being willing compared to 66.4 percent of four-year graduates.

While 48.9 percent graduates of two-year institutions and 73.1 percent of those graduating from four-year institutions reported moving since graduation, those moves were largely within Virginia. Most relocations were due to personal or family reasons or because of employment opportunities for themselves or someone else.

### **Recommending Virginia to others**

Overall, 18.5 percent of respondents said they had helped convince someone to move to Virginia from out of state for any reason (respondents could indicate multiple reasons). The most frequently mentioned reasons were to join family or friends living in Virginia (8.9 percent overall) or to start employment in Virginia (8.6 percent overall). 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.

### **Satisfaction by institution**

Satisfaction among the set of six key opinion items tends to be similar within any given institution, and varies across different institutions. These results most likely reflect unique characteristics of students who attend each institution as well as the unique missions and contexts found at each institution. These contextual factors could include institutional funding, student demographics (income, race, location), and student access to various experiences and opportunities prior to enrolling. Thus, readers should avoid making simplistic inferences about institutional merit or worthiness on the basis of the survey results alone.

Keeping in mind these caveats – 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:

- 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

Responses to all of these items used five-point scales. The two most favorable responses on the scales were grouped as “satisfied,” “appreciative” and “agreeing” for this analysis. (See “Assessing the undergraduate experience” above for more details.) These data are shown in Table 3 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, the percentage of 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.

Satisfaction with progress towards long-term career goals ranged from 58.9 percent to 79.2 percent. The most satisfied graduates here were from Virginia Military Institute (79.2 percent), University of Virginia (78.1 percent), James Madison University (78.1 percent), W&M (77.3 percent), Virginia Tech (77.2 percent) and University of Virginia's College at Wise (76.0 percent).

Opinions about whether the undergraduate education was worth the cost varied more broadly, ranging from 36.3 percent to 68.0 percent. The highest ratings here came from graduates of Virginia Military Institute (68.0 percent), W&M (67.9 percent), University of Virginia (67.2 percent), University of Virginia's College at Wise (63.7 percent) and Virginia Tech (62.6 percent).

Satisfaction with how their undergraduate experience prepared them for the workplace ranged from 58.7 percent to 85.6 percent. It was highest among graduates from Virginia Military Institute (85.6 percent), Virginia Tech (79.5 percent), James Madison University (78.4 percent) and University of Virginia's College at Wise (77.9 percent).

The percentage of graduates agreeing with the statement “I am satisfied with my life” ranged from 57.2 percent to 78.9 percent. The most satisfied graduates in this regard were from James Madison University (78.9 percent), Virginia Military Institute (77.9 percent), University of Virginia's College at Wise (77.4 percent), Virginia Tech (77.3 percent) and University of Virginia (76.9 percent).

**Table 3: 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%

The two most favorable responses on five-point scales were grouped as "satisfied," "appreciative" and "agreeing" for this analysis.



## Impact of the COVID-19 pandemic

As Table 4 shows, 57.9 percent of two-year and 59.9 percent of four-year graduates said their worldview changed for the worse during the COVID-19 pandemic. Nearly half of graduates from two-year institutions (45.6 percent) and 58.0 percent of graduates from four-year institutions said their mental health changed for the worse. Additionally, 30.8 percent of respondents from two-year institutions and 37.1 percent of graduates of four-year institutions indicated their physical health changed for the worse. Twenty-three percent of two-year graduates and 24.1 percent of four-year graduates gave the same response when it came to their overall sense of success.

Graduates of two-year institutions were more likely than graduates of four-year institutions to say the following situations had changed for the worse: education (12.2 percent versus 8.3 percent), employment (29.3 percent versus 22.5 percent) and financial (31.8 percent versus 22.8 percent).

On the other hand, graduates of four-year institutions were more likely than graduates of two-year institutions to say the following had changed for the worse: personal relationships (30.9 percent versus 24.0 percent), social relationships (49.4 percent versus 39.2 percent) and professional relationships (20.9 percent versus 15.2 percent).

Most participants did not report changing their alcohol or tobacco use during the pandemic.

*“If I did not get my undergraduate education, I would not be afforded the opportunity to work from home during COVID. I am able to utilize my analytical skills and I am respected by my colleagues. I would be working at low-wage hourly jobs that require risks to my health and work-life balance if I did not get my undergraduate education. Since graduating, I have been in my career for over 3 years and have purchased my first home.”*

*– Virginia Educated respondent*

**Table 4: Impact of COVID-19 Pandemic**

Impact Element	Impact Direction	Two-Year	Four-Year
My worldview...	Changed for the worse	57.9%	59.9%
	Did not change	28.1%	26.3%
	Changed for the better	13.9%	13.8%
My education situation...	Changed for the worse	12.2%	8.3%
	Did not change	76.3%	83.1%
	Changed for the better	11.6%	8.6%
My employment situation...	Changed for the worse	29.3%	22.5%
	Did not change	52.9%	56.9%
	Changed for the better	17.9%	20.6%
My family relationships...	Changed for the worse	24.3%	23.7%
	Did not change	54.9%	51.7%
	Changed for the better	20.8%	24.6%
My financial situation...	Changed for the worse	31.8%	22.8%
	Did not change	50.7%	51.8%
	Changed for the better	17.5%	25.5%
My mental health...	Changed for the worse	45.6%	58.0%
	Did not change	45.6%	33.6%
	Changed for the better	8.7%	8.5%
My overall sense of success...	Changed for the worse	23.0%	24.1%
	Did not change	61.3%	58.9%
	Changed for the better	15.7%	17.0%
My personal relationships...	Changed for the worse	24.0%	30.9%
	Did not change	58.3%	47.6%
	Changed for the better	17.7%	21.5%
My physical health...	Changed for the worse	30.8%	37.1%
	Did not change	53.3%	42.1%
	Changed for the better	15.9%	20.8%
My professional relationships...	Changed for the worse	15.2%	20.9%
	Did not change	69.7%	62.4%
	Changed for the better	15.1%	16.7%
My social relationships...	Changed for the worse	39.2%	49.4%
	Did not change	49.7%	38.5%
	Changed for the better	11.1%	12.1%
If applicable, my use of alcohol...	Changed for the worse	11.7%	18.7%
	Did not change	82.1%	71.6%
	Changed for the better	6.2%	9.7%
If applicable, my use of tobacco...	Changed for the worse	5.3%	3.6%
	Did not change	91.4%	94.2%
	Changed for the better	3.3%	2.2%

## Open-ended responses

A team of reviewers read through 40,491 open-ended *Virginia Educated* survey responses, assigning a total of 57,191 thematic codes. Many open-ended comments centered around topics like career impacts, sense of accomplishment or personal growth, personal/professional relationship effects, student debt burdens, and advice to current/future students.

Another 17,681 college and university write-in answers were also coded by hand, using a list of institutions derived from IPEDS. These responses were associated with Question 14 (most selective institution applied to) and Question 16 (institutions attended for additional education).

An additional 8,483 “Other, write-in” responses to 26 questions were assessed for content. They were also reviewed to ensure that the “Other, write-in” endorsement did not exceed a threshold of ten percent. This was an important check on the comprehensiveness of answer choices provided.

Across answers to five main open-ended *Virginia Educated* survey questions, SERL discovered themes highlighting the value and the impact that higher education had on thousands of Virginia graduates. Overall, participants described employment, financial, and personal effects. Generally, they valued the relationships, skills, and knowledge they developed at their institutions. They also mentioned positive influences on their relationships with, and understanding of, other people, including those different from themselves. They also overwhelmingly emphasized the negative impacts of student loan debt.

(This summary covers themes expressed by at least five percent of open-ended question respondents. Percentages are weighted.)

Please note that, while exact percentages are reported in this section, coding of open-ended responses is somewhat subjective and may carry a wider margin of error than quantitative data. The percentages provide a guideline for interpreting and understanding the themes that emerged from the respondents’ written answers.)

### Positive impact on career and employment

A positive effect on career and employment was the most commonly stated impact of undergraduate education (40.9 percent of respondents; see Figure 55). Open-ended answers revealed diverse ways this could occur:

For some, undergraduate education appeared to play a role in increased career exploration:

- “My time at [INSTITUTION REDACTED] helped me identify a career that truly made me happy.”

Respondents also said that their undergraduate education provided career choices and opportunities:

- *“It has given me opportunities I would not have otherwise had in terms of job/career selection.”*
- *“Without undergrad, I wouldn't have a choice in multiple career paths.”*

Some answers suggest that education affected job attainment, wherein participants found higher paying, more fulfilling employment relatively quickly. It also aided advancement in current employment, as well as realization of career goals:

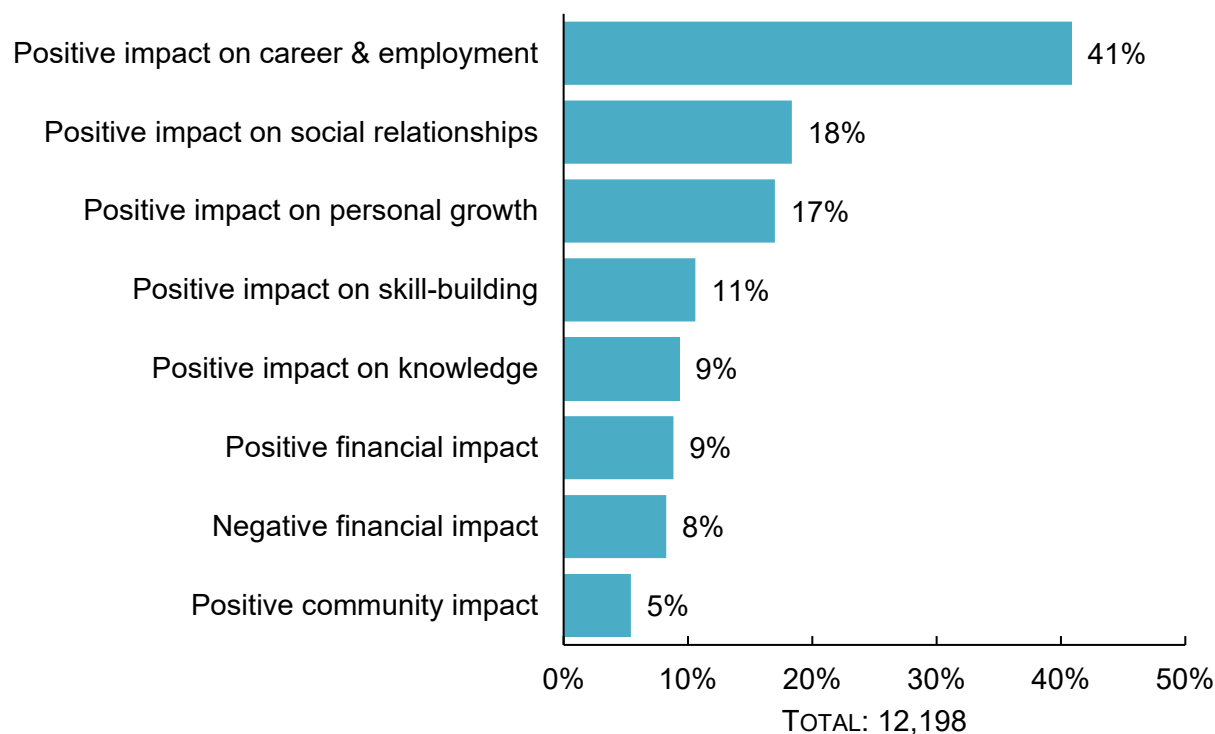
- *“I wouldn't have be[en] able to get my initial job which lead me to my current career.”*
- *“My undergraduate degree allowed me to be eligible for a supervisor position shortly after receiving it which I have worked for 3 years.”*
- *“The biggest impact my undergraduate education had on my life was helping me reach my career goals in a timely manner.”*
- *“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.”*

Participants further acknowledged that their undergraduate education allowed them to secure employment that matched their interests. Others noted that it helped them find “good,” “ideal,” “stable,” “real,” and “meaningful” jobs. Some respondents specifically stated that they would be underemployed without their education:

- *“My undergraduate degree has given me a job that meets my passion. It is both rewarding and challenging and is helping me get to the next level in my career.”*
- *“If I did not get my undergraduate education, I would most likely have a ‘job’, and not a career.”*
- *“I would probably be terminally underemployed.”*

Remarks also reveal that undergraduate education provided flexibility and opportunity for career changes. For others, it represented a stepping stone:

- *“It got me the job I have now and got me out of my old career.”*
- *“I would not have continued to graduate classes, which is how I was able to attain the job I have now.”*

**Figure 55: Undergraduate Education Impacts, Open-Ended Responses**

Note: Only codes that received at least five percent of weighted responses are shown.

Note: Due to rounding, some bars with the same percent values may have slightly different lengths.

### Positive financial impact

Almost nine percent (8.8 percent) of respondents indicated that their undergraduate education had a positive financial impact (Figure 55). For instance:

- *“I would be working a minimum wage job and probably relying on government assistance to take care of my family.”*
- *“I probably would not make much money or have health/retirement benefits.”*
- *“Breaking the cycle of generational poverty.”*
- *“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.”*

### Positive impact on social relationships

Some respondents (18.4 percent) said that their undergraduate education enriched their social lives – enabling them to develop meaningful relationships (Figure 55):

- *“I was able to form friendships and relationships that have lasted and will last a very long time in my life.”*
- *“The biggest impact my undergraduate education has had on my life would have to be the friendships that I found and maintained while attending school. If I did not have access to develop those initial friendships during my undergraduate education, then I don't think that my life now would be satisfactory.”*

### **Positive impact on personal growth; personal development advice**

Seventeen percent of respondents described numerous ways in which their undergraduate education helped them develop personally (Figure 55). Many answers spoke about opportunities to articulate understandings of self and purpose. Participants also described experiencing “inner strength” and “resilience.” Several noted that their education allowed them to grow into “fully realized” adults and/or to gain independence. Others acknowledged a sense of personal accomplishment. For example:

- *“The biggest impact was self-discovery, autonomy, sense of self, and personal growth.”*
- *“My undergraduate education gave me the space I needed to explore what my values are and grow into them.”*
- *“Wonderful start of a foundation for becoming an adult.”*
- *“taught me to live on my own and to be an adult”*
- *“The biggest impact my undergraduate education has had on my life is having a sense of feeling accomplished. Wow, look what I was able to achieve by pushing myself. If I didn't get a[n] undergraduate education I would feel like I am just settling.”*
- *“My biggest positive impact is having a degree in my name. Without my undergraduate education, I would have felt incomplete, education-wise.”*

### **Positive community impact**

In contemplating the effects of their undergraduate education, approximately 5.4 percent of respondents answered in ways suggesting positive community impacts (Figure 55). For example, some said that they became more “empathetic,” and a “citizen of the world” through exposure to a variety of viewpoints and perspectives. Others remarked:

- *“My undergraduate experience brought me into contact with a diverse range of people and ideas and made me think more critically about how I interact with others and how society is shaped.”*
- *“My appreciation and desire to be involved in community service grew because of my undergraduate education.”*
- *“Relate more positively to others with different backgrounds, seek ways to help others in the world. I would be a more selfish person without the lessons and values instilled in me at [INSTITUTION REDACTED].”*

### Positive impact on skill-building

The analysis revealed that 10.6 percent of respondents noted positive impacts of their undergraduate education on different skills, such as leadership, time management, critical thinking, problem-solving and research (Figure 55). Participants also reported that their undergraduate education helped them develop particular job-related skills and communication skills:

- *“It helped shape the way I approach problems in my social and professional life, how to analyze them and how to execute solutions.”*
- *“It taught me specific job skills that prepared me for work the day after graduation.”*
- *“It significantly developed my soft, interpersonal skills.”*

### Positive impact on knowledge

Undergraduate education also had a positive influence on respondents’ knowledge base (9.3 percent; Figure 55). Many indicated that undergraduate education helped make them more “well-rounded” and “cultured” in a general sense, or they connected it to the working world:

- *“My undergraduate degree has given me knowledge in criminal justice to pursue my career.”*
- *“I wouldn’t be as knowledgeable of the world.”*

### Negative financial impact; links to perceived lack of success

Respondents also expressed concerns related to their education debt. Some graduates found that their undergraduate education was too expensive and not worth the cost. Student loan debt appeared to negatively influence some participants’ lives, especially when they were unable to find employment.

More than eight percent (8.2) of respondents who wrote comments reported negative financial impacts from their undergraduate education (see Figure 55). Among those who graduated with student debt, 11.2 percent wrote comments about negative financial impacts, as did 10.7 percent of those currently holding student debt (whether from their undergraduate education or some additional education).

Some characterized their student debt as “crushing,” “overpowering,” and “crippling,” as well as like a “burden” and an “avalanche.” Others stated that they may never be able to repay their education debt. Further, some participants indicated that student debt had negatively affected their employment decisions, family formation, home ownership and general transition to adulthood. For example:

- *“It has put me into permanent debt that I don’t think I’ll ever come out of.”*
- *“I became extremely stressed and worried about paying off my student loan debt...which led me to settle for a job I do not find personally fulfilling.”*

- *“The cost has prevented many life advancements. Such as buying a home and having children.”*
- *“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.”*
- *“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.”*

### **Advice to undergraduates today**

When asked what advice they would give current students, the most frequent answer – given by 16.0 percent of respondents – was to work hard and stay focused (Figure 56). Sample comments include:

- *“Apply yourself 100%”*
- *“work hard it is worth your efforts”*
- *“Remain focused at all times no matter what”*
- *“Stay focused do not let anything interfere with your education”*

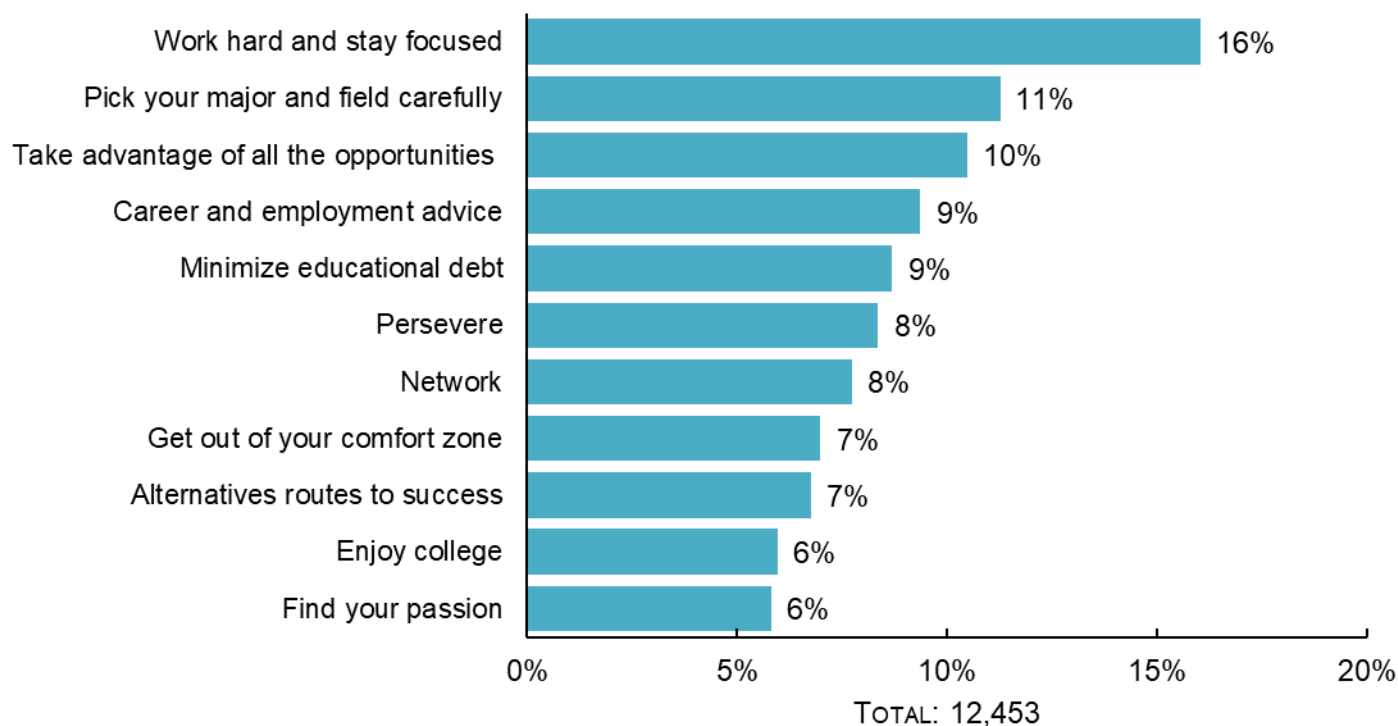
Three of the seven most frequent answers to this question centered around career and employment (see Figure 56). Respondents suggested that students carefully choose their major and field of study to make sure it aligns with their future goals (11.3 percent). Additionally, 7.7 percent mentioned networking, and 9.4 percent offered other kinds of employment and career advice. Sample comments included:

- *“Understand how your major is linked to a career and salary.”*
- *“Network as much as you can in and outside of your university.”*
- *“Seek out opportunities to work for companies and identify your career interests.”*
- *“Gain hands on work experience in your field before graduating whether that is a paid or unpaid internship, shadow program, apprenticeship.”*

Seven percent of respondents emphasized getting out of your comfort zone to develop as a person (Figure 56):

- *“College isn’t so much about the content of classes as much as it is about how you grow as a person.”*
- *“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.”*



**Figure 56: Advice to Undergraduate Students Today, Open-Ended Responses**

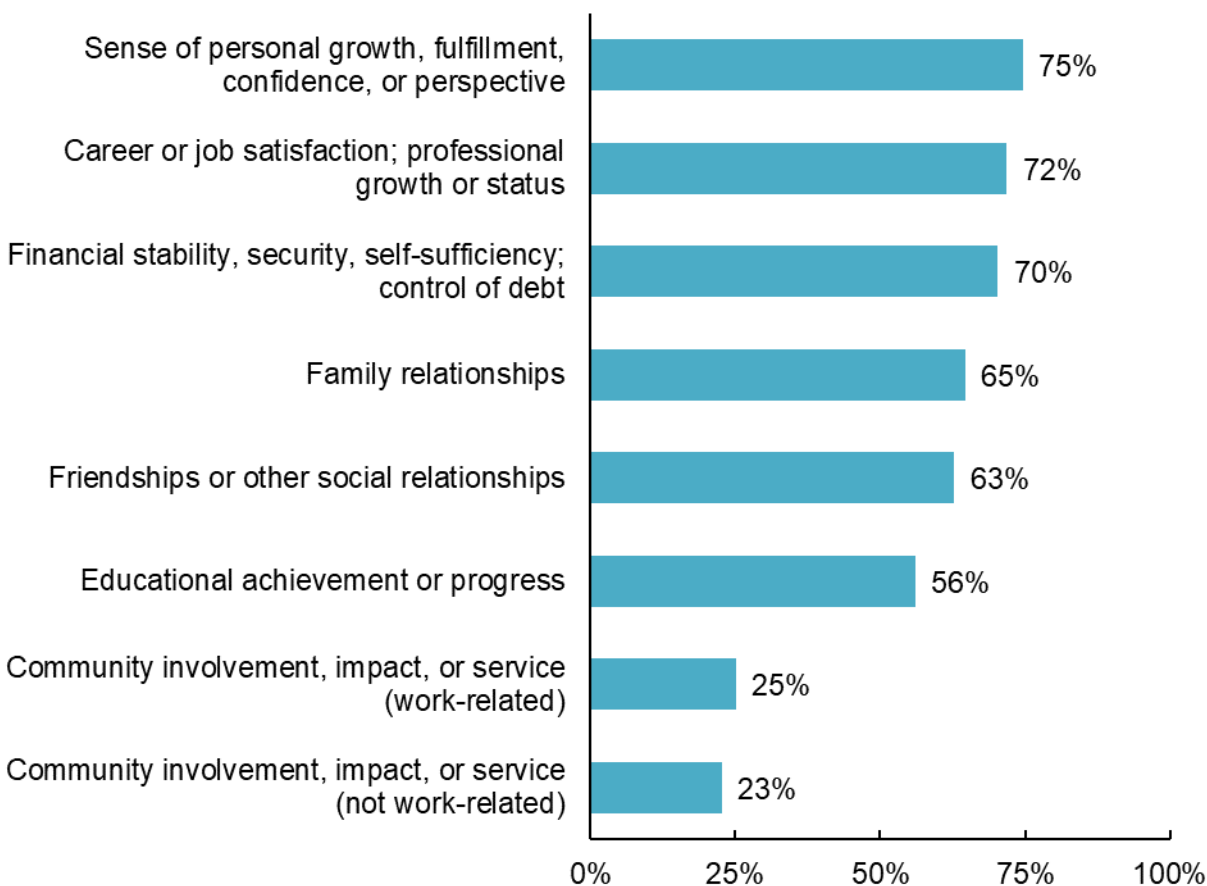
Note: Only codes that received at least five percent of weighted responses are shown.

Note: Due to rounding, some bars with the same percent values may have slightly different lengths.

### Reasons for feeling successful

Respondents were presented with a closed-ended question asking them why they felt successful. Respondents could choose multiple answers. One of the possible options was “I do not feel successful.” If respondents answered that way, they were then presented with an open-ended question asking why they did not feel successful.

To provide context for discussion of that question, Figure 57 displays the results to the closed-ended question about why graduates felt successful (respondents who did not feel successful are excluded from Figure 57). It shows that personal growth/fulfillment was the most often mentioned reason for feeling successful, followed by career and financial reasons. Family and social relationships were also frequently cited.

**Figure 57: Reasons Why Participants Feel Successful**

Note: This was a multiple-response closed-ended question

Note: Only codes that received at least five percent of weighted responses are shown.

### Why do some graduates feel unsuccessful?

#### *Career and job reasons; financial reasons*

Graduates who volunteered that they did not feel successful were asked why felt this way (n = 1,051 commented). While this is a relatively small number compared to *Virginia Educated's* overall response set – 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. Among participants who explained why they did not feel successful, 53.6 percent offered career and/or job reasons and 37.2 percent mentioned financial reasons (Figure 58). Some stated that they were not able to find employment despite having a degree, and that they carried substantial debt:

- *“I've never had gainful employment. The only work I can find is part-time or retail and I've lived below the poverty line my entire adult life. I don't have the tools to maintain my*

*personal finances. I'm deeply in student loan debt and don't believe I will ever come out from under it."*

- *"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."*
- *"I've been working in a low wage jobs and not have free time to enjoy my passions and still remain in student loan debt."*
- *"I went to college and spent tens of thousands of dollars and once I graduated I could not find a job in my degree field. I ended up working in a factory. I could have done that without going to school and without putting myself in debt."*

### ***Personal growth reasons***

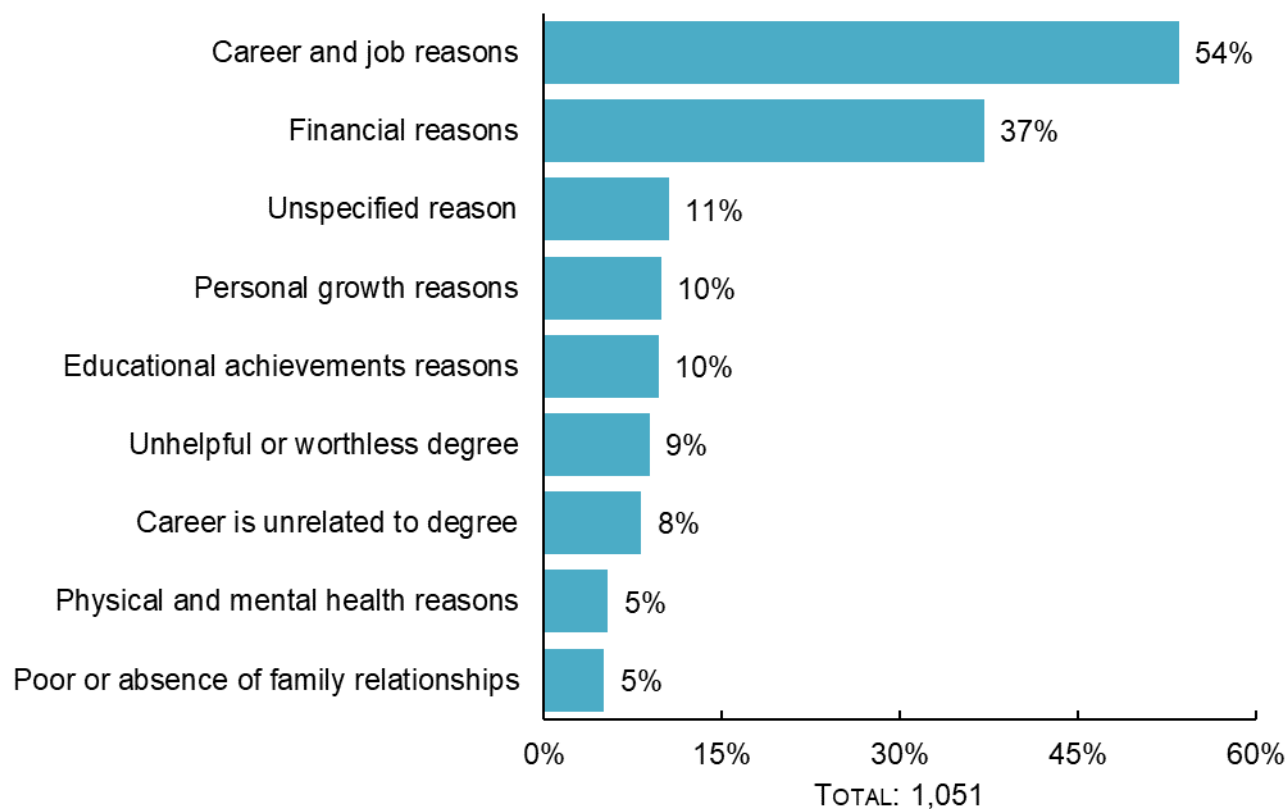
Among participants who did not feel successful, 9.9 percent reported a lack of personal growth – saying they felt “stagnant,” “not fulfilled,” “unrealized,” or that they were “going nowhere in life.” See Figure 58. Additional comments include:

- *"I am not where I thought I'd be at this point in my life professionally or personally."*
- *"I haven't done enough in life."*
- *"I do not feel that I have reached the goals that I set for myself. In comparison to others in my graduating class I'm doing well, but I do not feel that I've accomplished everything I could."*

### ***Educational achievement reasons; unhelpful or worthless degree; career unrelated to degree***

Almost ten percent (9.7 percent) of these respondents linked their lack of success to educational achievement reasons (e.g., stymied progress, concerns about educational path). Additionally, 8.9 percent of this group made remarks suggesting their degree was “useless,” “worthless,” or “meaningless.” A little more than eight percent (8.2) said their career was unrelated to their degree. Refer to Figure 58. Sample comments included:

- *"I have not completed my BA and have put off starting it for many years."*
- *"Even six years out of college, I have yet to find a full-time career related to my degree. I am employed full-time, but my job has no relevancy to my degree."*

**Figure 58: Reasons Why Participants Feel Unsuccessful, Open-Ended Responses**

Note: Only codes that received at least five percent of weighted responses are shown. Only respondents who said they did not feel successful saw this question, which explains the lower total.

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

#### *Hands-on training*

Participants were asked how their institutions might have better helped them get ready for the working world. Some (17.3 percent) said that universities should emphasize “hands-on,” “real-life” opportunities like internships, externships, apprenticeships, shadowing, and field or clinical experiences (Figure 59). Others felt that their coursework did not provide the training necessary for work:

- *“My university could have given us more hands on experience and opportunities related to my career and degree path. Although we had challenging classes and studies, it doesn’t prepare you for life outside of college.”*
- *“There was a need for more practical application of theories learned in the textbooks. Working in the field and not having real world experience hinders your ability to quickly respond to challenges that may arise on the job.”*

Some respondents recommended requiring internships, but many stated they should be paid or for course credit:

- *“I think an internship requirement would be helpful for students. However, with this idea, paid internship should be offered so that all students are able to participate.”*

### ***Focus on workplace skills***

The second most frequent recommendation (13.3 percent) to improve preparation was more workplace skills training (Figure 59):

- *“I feel like my education was focused more on memorization of theories and formulas vs. a critical thinking approach to current industry job markets. There should be more simulation of workplace environments and responsibilities to ensure students are heading into the workforce with a reasonable expectation.”*

Specific skills included navigating the “corporate” environment and “work culture,” handling salary negotiation, engaging in communication, and resolving conflict. Participants said that these skills were especially important to develop among women, first-generation, and historically excluded students. Some sample topics were:

- *“how to maneuver the political landscape of a workplace”*
- *“selling yourself to a future employer”*
- *“learning how to self-advocate”*
- *“coworker interactions”*

### ***Career coaching and assistance***

Numerous respondents (11.5 percent) indicated a need for more assistance securing employment – through activities such as job placement and search help, interview practice, and résumé preparation (Figure 59). Some said that university career resources should be promoted more:

- *“Pour more money and resources into the career services department because they cared too coach us on how to exit school and enter the workforce consistently.”*
- *“If the school provided more support and emphasis on the Career Center. I feel like I didn't fully understand the benefits of going to the Career Center, and would've gone sooner if I had only known.”*
- *“They offered career services but I rarely heard from them, received information from them, and my advisors/teachers never referred me to them. They need to make it a requirement that prior to graduation, you spend time with the career services department.”*

***Financial education; coursework changes***

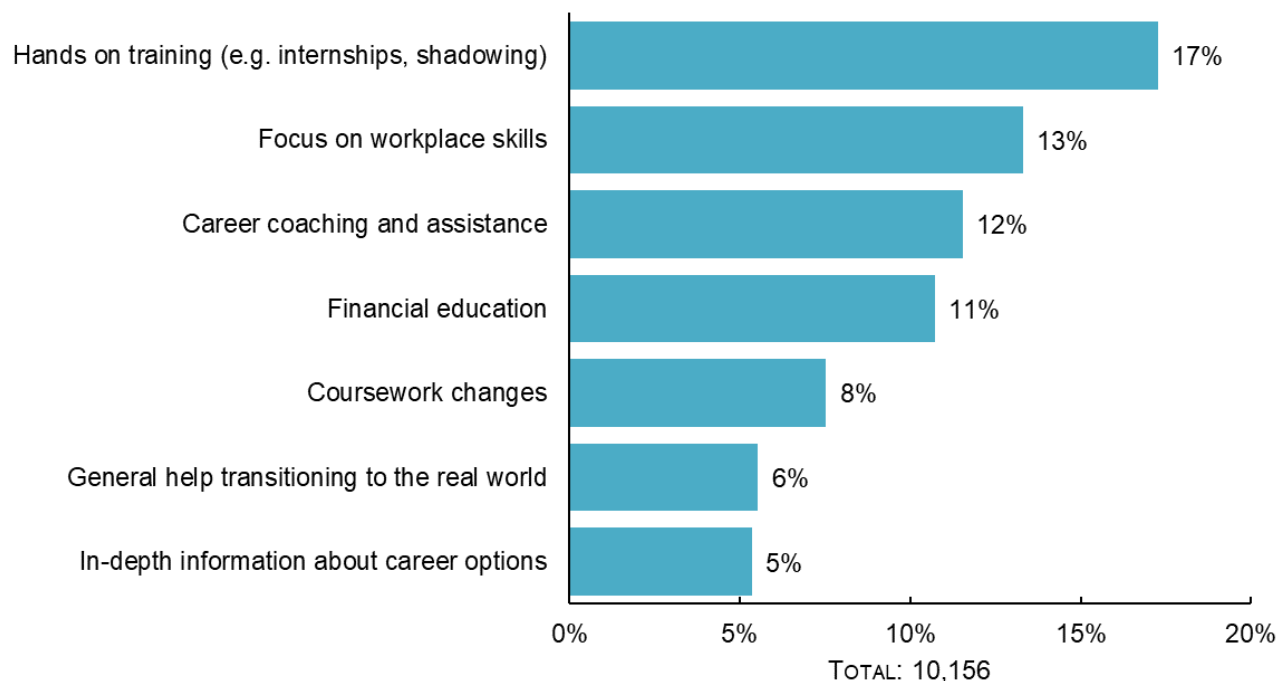
About 10.7 percent of respondents emphasized increasing financial literacy education. Additionally, 7.5 percent of respondents discussed changes to coursework – in both a broad sense and from a workplace perspective (Figure 59). Some participants had specific suggestions about classes related to their degrees and career interests. For example:

- *“The course selection could have been more aligned with the job market. There was little to no digital marketing courses offered while I attended.”*
- *“Provide more courses on data science.”*
- *“more writing courses”*
- *“Take classes actually pertaining to degree of study. less classes like history, english, or math that a person is not going to use in work field.”*

***General help transitioning to the real world***

Several respondents (5.5 percent) described a need for more support transitioning to the real world. This might be offered through a “life skills” or “adulting” course (Figure 59):

- *“Sometimes I think college feels like you're in a bubble. You're independent but you're not. You're controlling your own time but you're not. I think there needs to be more real world prep for life.”*
- *“I wish they would have had a more ‘real life advisor’ that I was required to go to. I didn’t have a clue about real life.”*

**Figure 59: Recommendations Regarding Workplace Preparation, Open-Ended Responses**

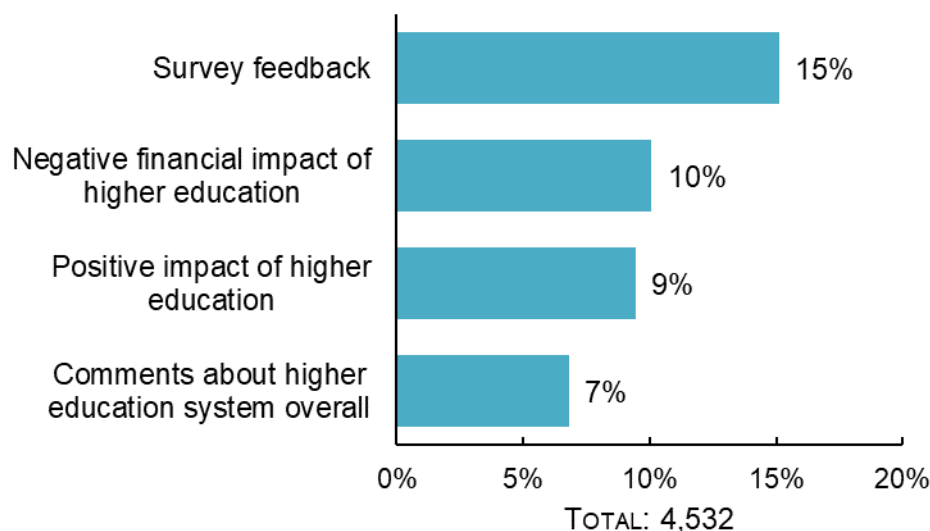
Note: Only codes that received at least five percent of weighted responses are shown.

Note: Respondents that wrote “No recommendations” (9.9%) or “No answer” (7.8%) are not shown for clarity.

### Closing comments

At the end of the survey, when asked if they had other comments, 10.1 percent of those who offered remarks mentioned negative financial effects of undergraduate education (Figure 60). Some called the price of undergraduate education “exorbitant,” “ridiculous,” and “overpriced,” and they shared apprehensions about their student loan debt:

- *“Student loan debt really needs to be addressed, and I mean for future borrowers as well. The interest rate is way too high and resembles what I would call predatory lending.”*
- *“please help with my student loan payments. Every time I pay it, it doesn't seem to go anywhere except up.”*
- *“College should not be an expensive burden. When graduating, I was in over \$100,000 in debt, which prevented me from applying to get my master’s.”*
- *“The cost to education ratio is not worth it, especially for out of state students.”*

**Figure 60: Closing Comments, Open-Ended Responses**

Note: Only codes that received at least five percent of weighted responses are shown. Survey feedback is discussed in another section of this report.

The advice given to undergraduates in the earlier question echoed these concerns, as 8.7 percent of respondents suggested that undergraduate students limit their financial costs (Figure 56). They might accomplish this by going to “affordable” and “reasonably priced” institutions, avoiding “predatory” loans, reducing debt, paying debt off quickly, and saving money. Additionally, 6.8 percent of participants emphasized alternative routes to success – like trade school – as ways to counter the cost of undergraduate education (Figure 56). For instance:

- *“Do whatever you can to borrow less money and therefore owe less money when you graduate.”*
- *“Pay off loans ASAP.”*
- *“Try to save as much money as you can!”*
- *“Unless there is a very specific/specialized career that you are trying to obtain, higher education is not worth the investment.”*
- *“Do a trade, most 4 year degrees are a gimmick. Dont spend 80k to get a 40k job. Spend 10k to get a 60-100k job depending on how much you want to put in. I am 6 years in and make nearly 6 figures because I got good at what I did and worked hard.”*

Related to the financial concerns raised by some in the closing comments, when asked earlier in the survey how undergraduate institutions could have better prepared them for the workplace, 10.7 percent of respondents suggested providing financial education courses; these might cover topics like student loans, retirement, savings and taxes (Figure 59):

- *“Life skills like budgeting so I can pay back student loans.”*



***Affordability and accessibility; support for students; other remarks***

Approximately 6.8 percent of the closing comment respondents offered observations and suggestions about higher education overall (Figure 60). These statements were wide-ranging. Some considered higher education to be a “scam” and a “money making machine” or a “well run business rather than a[n] institution of learning.” Others recommended making education more affordable and accessible through increased funding or reduced costs. For example:

- *“I personally think the value of higher education is important and irreplaceable, but I think it’s a privilege reserved for those that are able to afford it. If it was treated as a right rather than a privilege, then I think so many more people at the community level would prosper. Education shouldn’t be limited by money.”*
- *“The state of Virginia should give more funding to its public university system.”*
- *“Please, please try to get creative with costs. Are all the gen eds really necessary? Can online classes be offered for less than in-person? What about credit for jobs during college? Education is becoming inaccessible and society will suffer for it.”*
- *“Reduce administrative costs at colleges that have risen exponentially in the last 70 years. You will bankrupt yourselves or your students otherwise.”*
- *“Ultimately, I think that university should be a free right given to all - education should not come with a price tag.”*

***Other closing comments***

Closing comments also covered improving support for students, especially those from historically excluded groups:

- *“There should be a greater focus on how universities ignore mental health and how that affects students' future successes/failures and also take SES, gender, and race into account.”*
- *“The issue of isolation for black students, low income students, or children of immigrants, is one of concern to me. I think [INSTITUTION REDACTED] could work on that, especially for students' well-being. I think that general advising at during the first two years of undergrad could also be stronger.”*
- *“One of the things that will help students be more successful in Virginia colleges is to really work to address gender-based violence, racism, classism, ableism, etc. That is the invisible burden that so many students are carrying while trying to get through school.”*

Some respondents also noted that the state of Virginia offers high quality undergraduate education:

- *“I went to school in Virginia because in state tuition was all me and my family could afford. However, I now recognize I was lucky to have grown up in Virginia, with such great state schools to consider.”*

- *“I feel that Virginia educational institutions are overall very high quality but should do more to increase diversity.”*
- *“The Virginia community college system is the best educational experience to prepare a person for a career or continuing education available for an affordable cost.”*

Other respondents made observations like:

- *“Stop brainwashing students. Leave politics out of the classroom and start terminating professors who use the classroom as their soap boxes to promote their agendas.”*
- *“The liberal agendas of college institutions and their professors is becoming more and more destructive. If you want to build well-rounded young professionals ready for the real world, they need to be exposed to all viewpoints and permitted to formulate their own opinions. Using colleges as places for liberal indoctrination and pushing the principles of elitist professors is going to back fire.”*

Additional comments that may be of interest are shown below and on the following pages.

*“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*

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

*– 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*

*“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*

*"I feel like COVID has affected some of my answers... teaching virtually is TOUGH, so in a way, I do feel like I should be paid more, especially when we have to go back to teaching in person as the pandemic is more dangerous than it has ever been..."*

*– Virginia Educated respondent*

*"Figure out what you want to do before you spend all the money on a degree. If you aren't sure, take time off to understand what you want. Once you know what you want, allow that to fuel every decision you make. Think about things like, 'How will what I'm doing help me achieve the goals I've set for myself?' If you can't answer that question, it's time to reevaluate that decision/action."*

*– Virginia Educated respondent*

*"The experience is really what you make of it. I'm happy I chose a university that I felt was the best 'fit,' but even if I had not gone there (because it was more expensive) I think you can really make your experience your own."*

*– Virginia Educated respondent*

*"I understand the impact of my undergraduate education most strongly after I graduated and began working, especially in comparison to my peers who did not complete an undergraduate degree. I understand that higher education is not for every individual, but I believe that having my degree has afforded me the opportunities that have put me in an advantageous position, especially in this time of COVID-19. I have recently purchased a condo and received not only a significant bonus, but a raise at work this year, and these are all things I do not think would have happened if I did not complete my degree."*

*– Virginia Educated respondent*

*"Try as many things as you can. General education is great because it lets you explore a lot of different ideas and you can use those ideas to think about what you want to do with your life."*

*– Virginia Educated respondent*

*"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 make a difference in my well-being and feeling of success."*

*– Virginia Educated respondent*

*“The reason I am under-employed is because I choose to stay home with my children and not place them in daycare during the COVID crisis. I work part-time on the weekends right now, and am looking to start daycare and move to full-time employment soon now that the vaccine is out.”*

*– Virginia Educated respondent*

*“Be open to new experiences even if they seem strange and painful at the time. You never know how much they will improve your life in the future.”*

*– Virginia Educated respondent*

*“Meet people in your discipline and outside of it, you never know when a network will come in handy. If you have an advisor (core/career) talk to them about your goals and interests, they are there to help. Look into internships, career fairs, and campus jobs to build a resume before you graduate.”*

*– Virginia Educated respondent*

*“Overall it has made a good impact financially, however, the student loan debt is higher than necessary because of all the general education courses that ate up time and money prior to starting actual degree.”*

*– Virginia Educated respondent*

*“The ‘sticker price’ on higher education is anxiety inducing for people like me who want to go to college, but also live paycheck to paycheck. I am terrified of taking out loans to go to school.”*

*– 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*

*“My undergraduate experience gave me the opportunity to pursue my passions. I think my experience also allowed me to grow professionally and personally. It gave guidance and purpose to my life as far as my career and goals. I wouldn’t have a solid career in my field without it nor would I have had the experience to excel professionally in the way that I have. It gave me the opportunity to make an impact on my community and has opened the door for me to exceed in my social, economic, professional and personal endeavors.”*

*– Virginia Educated respondent*

*"I can not stress enough the importance of taking advantage of internships in the field of study. Most companies require some form of experience in the field and an internship is the best way to accomplish that without work experience. It should be a requirement for each field of study. This will help ensure that when graduates finish school, they can compete in the job market."*

*– Virginia Educated respondent*

*"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*

*"Unless you want to be a lawyer or doctor or something that requires lots of education, don't go to college. It's a rip off and most people I know who work trades straight after high school are significantly wealthier than people I know who graduated and are crippled by education loan debts."*

*– Virginia Educated respondent*

*"Do as much stuff as you can while you're there. Meet people, try different clubs you might not know you like, get involved! College is a microcosm of the world where so many cultures and interests are represented. Take them all in while you can! Classes are important, but so is the classroom of 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*

*“Gain as many skills as you can. Your career may not unfold exactly as you thought but being able to contribute in multiple ways will ensure that you’re always an asset.”*  
– Virginia Educated respondent

*“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

*“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

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

*“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

## Willingness to participate in follow-up activities

At the end of the survey, respondents were asked if they were interested in receiving an emailed summary of study results, participating in a follow-up interview or focus group, or participating in a survey panel (i.e., occasional small-scale surveys). Substantial numbers of respondents were interested in these things – 63.0 percent wanted an emailed summary of study results, 38.1 percent were willing to participate in a follow-up interview or focus group, and 49.8 percent were willing to participate in a survey panel. Those interested in the further interviews, focus groups and/or survey panels represent an opportunity for useful and potentially powerful follow-up research.

## **II. SUMMARY OF INITIAL NOTABLE FINDINGS**

This section describes the most notable themes and patterns found in the descriptive analysis of the survey data at this point. This is not a comprehensive summary of everything in the dataset because it is a unique, rich trove that may take many months to fully analyze and understand. The dataset also could support follow-up work in various areas – for example, exploring the pros and cons of different ways to define and measure the concept of underemployment. But the findings summarized here are clearly notable and important.

### **There are two different groups of graduates in this study**

Survey responses from graduates of two-year and four-year institutions are presented in tandem throughout the report as the most natural way to present the data within each survey topic. It can also be helpful to see differences and similarities in responses from two-year and four-year graduates in one glance for each survey topic, thus providing related information in one place. The report generally avoids combining their responses because these two groups were different in many respects; however, when their survey responses were similar the report sometimes expresses them as one pooled statistic.

It is important to keep in mind that these two types of institutions have different missions and often serve students from different backgrounds and life situations. Differences in the survey responses from two-year and four-year graduates should be thought of as indicative of these varying contexts rather than directly comparable differences in institutional effectiveness and impact.

### **There are high levels of satisfaction with many aspects of undergraduate education, except general education**

Satisfaction with the undergraduate experience was an important topic area in the survey. It was assessed in various ways across multiple survey items. Key findings regarding satisfaction are:

- Two-year and four-year graduates expressed nearly identical high degrees of satisfaction when asked about their undergraduate education overall
- 86.9 percent of two-year graduates and 88.7 percent of four-year graduates were satisfied (that is, they said they were either “satisfied” or “very satisfied”)
- Satisfaction with 13 other aspects of the undergraduate education was generally good to very good
- One aspect of the undergraduate education – general education – received notably lower ratings

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.

Respondents generally expressed satisfaction with their lives today, how well their undergraduate experience prepared them for the workplace, whether their undergraduate education was worth the cost, and their long-term career progress since graduation. Favorable responses for these four questions from two-year graduates ranged from 62.7 percent to 68.1 percent, and from 53.0 percent to 72.1 percent for four-year graduates.

Satisfaction was also very high – between 80.1 percent and 92.0 percent for both two-year and four-year graduates – with the academic quality, relevance of course content, class sizes and variety of course offerings provided during their undergraduate education. In addition, between 59.9 percent and 71.0 percent of two-year graduates were satisfied with social connections/relationships, sense of belonging, and personal contact with faculty in their major or program of study during their undergraduate education. The range across those items for the four-year graduates was 64.5 percent to 75.7 percent.

There was one main area where graduates lacked satisfaction – it was appreciation now for the general education courses they took during their undergraduate education. This was the lowest-rated aspect of undergraduate education across all 14 measures. Among two-year graduates, only 45.8 percent indicated they were “very” or “extremely” appreciative now of the general education courses they took as part of their undergraduate education, and only 34.8 percent of four-year graduates indicated this.

Among the 29.5 percent of all respondents who were “not at all” appreciative or only “slightly” appreciative of their general education courses, roughly 40 to 50 percent 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 were not worth the cost or time. These concerns from the survey data echo comments expressed during *Virginia Educated’s* focus groups.

This relatively low level of satisfaction among both two-year and four-year graduates indicates that institutions may want to explore opportunities for engaging students to understand their attitudes about general education courses in more depth, which could improve how general education is offered.

### **Graduates say personal financial education and more hands-on experiences would make students more successful**

The survey asked graduates “What kinds of information, opportunities or skills should Virginia’s colleges and universities focus on to make students more successful?” The list of answer choices 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 – and the survey in general – gave graduates an opportunity to say what they wanted to say in ways that were not pre-determined by the researchers.

Among both two-year and four-year graduates, the most frequently mentioned answer was “personal financial education (e.g., budgets, loans, taxes, mortgage, retirement).” Among two-



year graduates, 58.2 percent requested this, and 72.6 percent of four-year graduates requested it. Close behind among both types of respondents were “workplace skills (e.g., salary negotiation, interviewing, conflict resolution)” – selected by 55.9 percent of two-year and 65.3 percent of four-year graduates – and “more apprenticeships, internships, externships, or other hands-on opportunities” (55.5 percent and 62.7 percent, respectively).

Expanding these kinds of courses and experiences could possibly overlap with an exploration of how to meet general education course requirements while addressing the critiques of graduates who were not appreciative of their general education courses.

### **Student debt is a problem for a substantial minority of graduates**

As described earlier, 50.5 percent of survey respondents overall owed money for their undergraduate education when they graduated. This was 39.9 percent of two-year graduates and 56.0 percent of four-year graduates. Among those who had student debt when they completed their undergraduate education, 73.4 percent of two-year graduates and 62.9 percent of four-year graduates still carried student loan debt at the time of the survey. This current debt could be from the focal undergraduate experience, additional education, or both.

Taken across the multiple measures detailed below, the survey results suggest that education-related debt is proving to be a major life obstacle for perhaps 10 to 20 percent of all graduates.

Expressed as percentages of all graduates – including those who had no debt and those who previously paid it off – 27.0 percent of two-year graduates and 23.1 percent of four-year graduates carried student loan debt at the time of the survey. Graduates of two-year institutions were less likely to have student debt when they completed their undergraduate education, but more likely to be still carrying student debt post-graduation.

Among all graduates (including those who had no debt and those who previously paid it off), 19.5 percent of two-year and 21.2 percent of four-year graduates reported that they were at least “moderately” worried about their current undergraduate student loan debt situation. Among all graduates (including those who had no debt and those who previously paid it off), 12.9 percent of two-year and 17.8 percent of four-year graduates said that paying their undergraduate debt was “a lot more of a problem” than they expected.

To summarize how well graduates appeared to be handling student debt, SERL created a student loan stress index. The index was based on the estimated percentage of the respondent’s monthly income being used to pay student debt, self-reported concerns about student debt, and student loans being in deferment or reduced payment plans. The stress index was calculated only for the 65.8 percent of graduates with current student debt. This debt could be either from the focal undergraduate experience, additional education, or both.

According to the student loan stress index, 74.0 percent of graduates with current student loan debt were stressed. Graduates more likely to be stressed were females, rural residents, two-year

graduates (despite graduating with less debt than four-year graduates), graduates in lower income brackets, students of color and graduates who started their undergraduate education when they were 25 to 44 years old.

One of the important features of the survey was the inclusion of open-ended questions in which respondents could write about issues in their own words. The open-ended questions in the survey go behind the numerical survey data to reveal glimpses of the graduates. Thus, quantitative data about student debt were complemented by these written responses.

When asked “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?” the vast majority of graduates had positive comments about impacts in their careers and employment situations, social relationships, and personal growth. Some graduates specifically mentioned that their student debt was worth it given the value of the education received. But among those who graduated with student debt, 11.2 percent wrote comments about negative financial impacts, as did 10.7 percent of those currently holding student debt (whether from their undergraduate education or some additional education). Some of the comments could be characterized as concerning.

Findings from additional case-level research may elucidate how some of these circumstances occurred and how the frequency of these challenging scenarios might be reduced.

### **Transfer is a prevalent practice, which has important implications**

As described in this report and Appendix D (literature review), a variety of measures from the *Virginia Educated* survey and secondary data sources show that graduates with four-year credentials are generally better off and more engaged in the community compared to graduates with two-year credentials. The secondary sources extend comparisons to those without any college and those with post-baccalaureate credentials, with similar results – individuals with more formal education are generally better off compared to those with less formal education.

Among survey respondents, 42.4 percent of two-year graduates and 30.9 percent of four-year graduates said they had transferred at any point in their education. The most frequent kind of transfer – 25.0 percent overall – was from a community college to a four-year institution.

A significant number of students transfer at some point in their education, usually from a community college to a four-year institution. Given that four-year graduates in the survey reported higher levels of life satisfaction and engagement than two-year graduates – consistent with the literature – 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.

**Graduates may be more closely tied to geographic locations than some might expect**

*Virginia Educated* respondents, both as students and graduates, were fairly closely tied to their geographic locations: 97.1 percent of two-year graduates and 80.5 percent of four-year graduates enrolled as in-state students. At the time of the survey, 88.2 percent of two-year in-state students lived in Virginia and 80.0 percent of four-year in-state students did. Only 19.4 percent of out-of-state students – almost all of them graduates from four-year institutions – lived in Virginia at the time of the survey. The great majority of the outflow of graduates from Virginia to other locations occurs among four-year graduates.

Overall, 35.0 percent of out-of-state students came to Virginia from the five adjacent states or 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 mentioned 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 very often mentioned their own or a partner’s military status.

Among all graduates who originally enrolled from out-of-state, 80.8 percent did not live in Virginia at the time of the survey.

In total, 18.5 percent of all 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 for employment in the state. 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 pursue higher education here, compared to 4.7 percent of those who started as in-state students.

Although 48.9 percent of two-year graduates and 73.1 percent of four-year graduates have changed where they lived since completing their undergraduate education, the preponderance of their moves occurred within Virginia (71.0 percent for two-year graduates and 51.1 for four-year graduates). The primary motivations for two-year and four-year respondents to relocate were employment reasons and family or personal reasons.

Despite the freedom to travel and change residences, many of the graduates seem to be somewhat geographically anchored. In short, there are practical limits on the ability and willingness of graduates to relocate, which affects the range of options they have for education and employment. These limitations could also inform decisions about how and where to make higher education opportunities available within Virginia.

### **Underemployment is an important concept but it is not easily measured**

One important focus of the study was underemployment – situations in which people’s jobs do not require their full education and/or skills, or provide fewer hours than desired. The survey was designed to include multiple items related to measuring underemployment. Some were more objective because they asked about various aspects of the graduate’s primary job that could factor into assessments of underemployment. Some were subjective because they asked the graduate whether they believed they were underemployed or not, and why they answered the way they did.

The results were ambiguous, but further investigation may shed more light on the nature of underemployment and how best to measure it in surveys.

In the subjective measure, when *Virginia Educated* respondents were presented with a definition of underemployment and asked if they considered themselves underemployed, 14.9 percent of two-year graduates and 11.3 percent of four-year graduates said they did.

A second, more objective, measure of underemployment was calculated from several answers to various survey questions about different aspects of the respondent’s primary job. On the calculated measure, 45.1 percent of two-year graduates and 41.0 percent of four-year graduates were underemployed. Many potentially underemployed graduates from the calculated measure did not perceive themselves to be underemployed because they found their jobs to be fulfilling or preferred the work/life balance they had.

A third measure, also more objective in its nature, asked graduates if their job functions required an associate degree or higher; 11.4 percent of two-year graduates said they did not, which would indicate being underemployed. When asked if their job functions required a bachelor’s degree or higher, 11.6 percent of four-year graduates said they did not.

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

additional credentials they earned. In this measure, 25.0 percent of two-year graduates and 23.0 percent of four-year graduates were possibly underemployed (23.7 percent overall).

In addition to the utility of further investigation of these measurement methods, there is a larger philosophical question indicated by the survey data: When people appear to be underemployed – perhaps not making the full use of their education – what is the balance between personal choices about work/life issues on the one hand, and the interests of those (including the general public) who subsidize the cost of higher education on the other hand?

### **Thinking ahead**

There are significant opportunities for further research within the *Virginia Educated* dataset. Some possibilities include further investigation of the definition and measurement of underemployment, more complex statistical analyses of multiple variables, deeper analysis of the open-ended responses, and continued dialogue with the dataset as questions and comments arise as a result of this report.

In addition, there are opportunities for new, focused data collection efforts building on the fact that 38.1 percent of the respondents were willing to participate in a follow-up interview or focus group, and 49.8 percent were willing to participate in a survey panel. This is a significant opportunity to conduct useful and potentially powerful follow-up research to improve the survey questionnaire and measurements within the survey (such as measures of underemployment), gather case-study information about student debt that could elucidate how and why desperate situations arise, stay in touch with samples of respondents with brief surveys about current topics in higher education, drill down into topics relevant to strategic planning, and so forth.

It will be important for SERL to reach back out to the respondents who requested the results of the survey because that will build trust between researchers and participants. It will be equally important later on for SCHEV to inform the public when feedback from the survey is used to make decisions, because when participants see that happen, they know their time completing the survey was well-spent and trust between researchers and participants is increased further.

Finally, the study can be used to set a baseline against which future graduating cohorts could be compared in future surveys.

### III. FEEDBACK ABOUT THE SURVEY

Feedback from respondents about the *Virginia Educated* survey included positive and negative comments. Participants felt that it addressed important topics and they appreciated the opportunity to reflect on their experiences. Negative comments centered around the survey being too long, redundant, and intrusive. Respondents also mentioned that COVID-19 influenced their answers to certain survey questions. Some participants also felt that survey items were not a good fit for non-traditional, older, commuter, or online students, or those not working due to disabilities. Some respondents indicated that the questions on post-undergraduate life were not expansive enough to account for students who did not enter the workforce.

Below are some examples of these comments.

*“There should also be questions for BIPOC students, especially us Latinx women who have significant challenges during college that are closely linked to our cultural identity. We are the group of students who are less likely to graduate, so this should be studied.”*

– Virginia Educated respondent

*“There were no direct questions about undocumented students or first-generation students. This is a huge blindspot on your research methods because these two populations are highly underserved.”*

– Virginia Educated respondent

*“This focused on events or things learned from college, but there should probably be a section concerning things that you wish you knew before starting college like things that could have been learned or offered in high school. That would probably be more beneficial for future students to be able to learn more about what they are getting into and general life as an adult while they are transitioning to greater independence.”*

– Virginia Educated respondent

*“I would have answered things a little differently if Covid-19 was not an issue.”*

– Virginia Educated respondent

*“Glad I took the time to take this. Made me realize how much my college experience shaped who I am. I needed to leave a small town and go to a school with more people than my ENTIRE town to become who I was destined to be!”*

– Virginia Educated respondent

*“This survey was long and some of the questions are a bit redundant but I can see how it would be helpful to assess the overall educational system and how to improve it.”*

– Virginia Educated respondent

*“The questions regarding employment need to consider those individuals who are not employed in the traditional sense. As a full-time stay at home mother I felt that many of the questions did not apply and I could not appropriately answer, making what I do feel unvalued for the purpose of this survey.”*

*– Virginia Educated respondent*

*“This survey was a great opportunity for self-reflection.”*

*– Virginia Educated respondent*

*“This survey is not for non-traditional students.”*

*– Virginia Educated respondent*

*“All of the questions about my post-undergrad experience were about employment. However, I’m in graduate school working toward a PhD and have been since I graduated undergrad. I tried to answer them as best as I could, but your survey should be much more inclusive of advanced education (which is ironic because this is a survey about education).”*

*– 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*

#### **IV. LIMITATIONS OF THE SURVEY**

The *Virginia Educated* study included people who earned an undergraduate credential – that is, a certificate, associate degree or bachelor’s degree – at a publicly-supported institution of higher education in Virginia in the years 2007 through 2018. The study may not apply to graduates of other institutions or graduates in different years.

The contact information obtained for the survey included only U.S. mailing addresses. Therefore, experiences of international students and graduates currently living abroad are not well represented in the study.

Contact information was obtained for about 60 percent of the study population. This means that about 40 percent of the study population was not covered in the sampling. However, as noted elsewhere in this report and its appendices, a sample of 4,021 graduates with no contact information was included in the production survey sample after their mailing addresses were manually looked up online. There were 801 respondents from within this subsample, and they did not appear to differ meaningfully from those with contact information, but there was no formal follow-up to determine if there was non-ignorable non-coverage error in the sample.

It is possible that those who were sampled and responded to the survey were systematically different from those who did not respond. The good response rate, good alignment of demographics of the respondents to known demographics of the study population, and broad range of positive and negative responses to survey items provide confidence that the respondents are representative of the entire study population, but there was no formal follow-up to try to ascertain the extent of possible non-response error.

Survey responses can vary depending on what mode (web, paper, telephone, face-to-face, etc.) is used to interact with respondents. Other differences can occur depending on what technology respondents use (small screen devices such as cell phones, larger screens such as laptop or desktop computers, etc.). Almost all of the completed surveys were done online rather than on paper, so some mode differences are not likely to be found in the dataset. But there was no investigation of potential mode differences by type of technology used to complete the web-based surveys.

Guided in part by the literature on post-graduate surveys, the questionnaire was developed organically through a process that included exploratory focus groups, expert input on various topics, cognitive interviews and a pilot survey (also carried during the COVID-19 pandemic, in March to June of 2020). The questionnaire seemed to perform well, but there was no formal analysis of the data that was focused on questionnaire validity or reliability.

As indicated by some comments from respondents, the experiences of non-traditional students and those who attended programs that were entirely online may not have fit the assumptions of the questionnaire very well in some places.



It is possible that the recruitment protocols for the probability sample and email-only supplement could create systematic differences in the responses. The probability sample included up to three letters and up to five emails sent to graduates with email addresses on file, while the email-only supplement did not include any letters. In addition, the probability sample included the option to request a paper questionnaire booklet while the email-only supplement did not. The response rate to the probability sample was 26.3 percent while the response rate to the email-only supplement was 3.9 percent. A review of survey responses across the two protocols did not reveal any large differences and the two groups were combined for analysis, but no formal investigation of systematic response differences was carried out.

Perhaps most notably, the survey was launched in mid-December 2020 and concluded in mid-May 2021 – during the COVID-19 pandemic. It is possible that the pandemic impacted responses. The questionnaire contained questions specifically about COVID-19 impacts on graduates, but it is not possible to know what the results would have been like if there had been no pandemic.

Conclusions or assertions made in this report may evolve upon further analysis. Observations included here may or may not be causal. Additional examination may be warranted.

Surveys are subject to many kinds of errors. While every effort was made to suppress or eliminate error in this survey, readers should be mindful of the limitations inherent in survey research.

## V. AREAS OF FUTURE RESEARCH

This report provides a preliminary assessment of *Virginia Educated* survey results. Future research could dig deeper into the dataset – developing an even richer picture of the value and impact of Virginia public higher education. Through further mining, modeling, cross-tabulation, follow-up interviews, and participant panels, topics like the following might be better understood:

1. The experiences of underrepresented groups:
  - a. Racial and ethnic minority students
  - b. Transfer students
  - c. Commuter students
  - d. Students from rural areas
2. College preparation topics:
  - a. Factors intrinsic to college-bound students (e.g., personal motivation, high school academic performance)
3. Further investigation of the nature of underemployment and how best to measure it in surveys
  - a. Subjective reports of the degree level required to do one's job functions
  - b. Objective measures
  - c. The meaning of differences in measurement approaches and definitions
4. Income/wage differentials by degree type, degree field, demographics, and geography:
  - a. Personal and household income
  - b. Race, ethnicity, gender and age
  - c. STEM and non-STEM fields
  - d. Earnings premiums by geographies such as U.S. Census Metropolitan Statistical Areas, Micropolitan Statistical Areas, Metropolitan Divisions, and Combined Statistical Areas
5. Undergraduate education's influence on various facets of career manifestation and finances, by demographics like gender, race and income:
  - a. Career exploration
  - b. Career satisfaction
  - c. Career advancement
6. The impact of student loan debt
  - a. Student loan debt stress and community engagement inclination and availability
  - b. Case studies to understand why larger debts are accumulated and how they affect graduates
7. Why respondents describe themselves as unsuccessful:
  - a. Reasons and proposed remedies direct from participants
8. Why some respondents leave Virginia after graduation:
  - a. Personal, economic and educational reasons

9. The short-term and long-term impacts of the COVID-19 impact:
  - a. Working arrangements
  - b. Mobility
  - c. Income
  - d. Household composition