



VCU

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Virginia Educated:
A Post-College Outcomes Study
Institutional Table Guide

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Prepared for



**STATE COUNCIL OF HIGHER
EDUCATION FOR VIRGINIA**

Introduction

This document has been assembled to assist in the interpretation of accompanying institutional data tables. Two spreadsheets are provided for each institution – one that includes all variables with categorical responses (e.g., “strongly disagree,” “strongly agree”) and one that includes scale variables calculated from the averages or sums of multiple sets of questionnaire items. This document discusses how to read the labeling of these tables; it also outlines calculations involved in the creation of some variables.

Labeling of columns and rows

All of the columns and rows have been assigned unique labels to facilitate analysis in data visualization applications (e.g., Tableau). These labels are located in column A and row 1 of each included spreadsheet. In addition to these unique labels, there are other labels provided for ease of reading. These labels are described below:

- **Column B:** Variable/question labels (e.g., “In what semester did you start your undergraduate education?”).
- **Column C:** Response labels (e.g., “Fall”). This label is not included in the scale tables.
- **Row 2:** Demographic variable/question labels (e.g., “Gender”).
- **Row 3:** Demographic response labels (e.g., “Male”).
- **Row 4:** For each response, summaries are included for the focal institution¹ and a composite of all institutions of the same level (2-year or 4-year) excluding the focal institution.
- **Row 5:** Statistic summary labels
 - For the focal institution, summary variables include the count of responses [“Count” in the main tables or “Valid N” in the scale tables] and either the percentage of responses [“%”] in the main tables or the average value [“Mean”] in the scale tables.
 - For the institutional composite, summary variables include the count of responses [“Count” in the main tables or “Valid N” in the scale tables], either the percentage of responses [“%”] in the main tables or the average value [“Mean”] in the scale tables, the lowest institutional percentage or mean [“Min”] among the composite institutions, and the highest institutional percentage or mean [“Max”] among the composite institutions.

¹ The focal institution is the institution that issued the credential that was used to identify graduates who were eligible for the survey, and was the institution respondents were asked to think about when answering the survey questions.

Variables

Most variables in the tables correspond directly to questions in the survey questionnaire, but some variables were calculated during the analysis stage of the study. For calculated variables, summaries appear below, describing how they were constructed and listed in alphabetical order. Variables that feature basic re-coding of questionnaire items are not included in the descriptions below (e.g., the primary reason for starting undergraduate education was re-coded into a career-related reason versus a reason that was not career-related).

- **Calculated Underemployment:** For individuals who were employed at the time of the survey, they were calculated to be underemployed if any of the following criteria were met:
 - They listed a level of education required for their primary job that was lower than their highest degree earned (see “Highest Degree Earned” for more details).
 - Their job doesn’t use their education and/or skills sufficiently.
 - They work less than 35 hours a week due to lack of employment opportunities, shortage of raw materials, seasonal work, or an inability to find full-time work.
 - They work part-time and would rather work full-time.
 - They do not earn enough at their primary job.

- **Caregiver During Undergraduate Education (UG):** This was calculated using respondents’ choices in Q108. If respondents took care of anyone during their undergraduate education (i.e., their own children; an elderly, ill or disabled adult relative; or someone else), then they were considered to be a caregiver during their undergraduate education.

- **Diversity of Community Engagement (ranging from 1 – 14):** This was calculated by taking the sum of all responses for the Q21 series on the questionnaire. It represents the level of community engagement respondents reported in 12 months prior to the survey.

- **Diversity of Political Engagement (ranging from 1 – 7):** This was calculated by taking the sum of all responses for the Q24 series on the questionnaire. It represents the level of political engagement respondents reported since they completed their undergraduate educations.

- **First Generation:** This was calculated using respondents’ choices in Q110, which asks respondents if any of their parent(s) or guardian(s) completed a certificate, an associate degree, or a bachelor’s degree. If none of their parent(s) or guardian(s) did so, the respondent was determined to be a first-generation student.

- **Highest Degree Earned:** This was calculated by comparing the focal credential to any additional certificates or degrees that the respondent listed in Q16 of the questionnaire and

taking the highest credential.

- **Impact of COVID-19 (ranging from 1 – 5):** This was calculated by taking the mean of all responses for the Q96 series on the questionnaire. It represents how COVID-19 has impacted various elements of respondents' lives.
- **Impact of COVID-19 (weighted) (ranging from 9 – 45):** This was calculated by taking the mean of all responses for the Q96 series on the questionnaire multiplied by the number of items in the series. It represents how COVID-19 has impacted various elements of respondents' lives.
- **Impact of Undergraduate Experience (ranging from 1 – 5):** This was calculated by taking the mean of all responses for the Q12 series on the questionnaire. It represents the impact that undergraduate education has had on various elements of respondents' lives.
- **Impact of Undergraduate Experience (weighted) (ranging from 9 – 45):** This was calculated by taking the mean of all responses for the Q12 series on the questionnaire multiplied by the number of items in the series. It represents the impact that undergraduate education has had on various elements of respondents' lives.
- **Non-Traditional Student:** A respondent was determined to be a non-traditional student if they selected any race/ethnicity other than Non-Hispanic White, acted as a caregiver during their undergraduate education, started their undergraduate education at age 25 or higher, or worked 25+ hours for pay on average during all or most of their undergraduate education. The calculations for non-traditional student were adapted from the Lumina Foundation's "Today's student" (Soares, Gagliardi, & Nellum, 2017).
- **Overall Life Satisfaction (ranging from 1 – 5):** This was calculated by taking the mean of all responses for the Q97 series on the questionnaire. It represents the level of satisfaction respondents have for their overall lives.
- **Overall Life Satisfaction (weighted) (9 – 45):** This was calculated by taking the mean of all responses for the Q97 series on the questionnaire multiplied by the number of items in the series. It represents the level of satisfaction respondents have for their overall lives.
- **ReturnedHome:** This indicates whether the graduate returned to their home county or independent city after graduation, and it was calculated by SCHEV by comparing the graduate's address at time of graduation with their matched address as of December 2018.

- **ReturnedState:** This indicates whether the graduate returned to their home state after graduation, and it was calculated by SCHEV by comparing the graduate's address at time of graduation with their matched address as of December 2018.
- **Satisfaction with Undergraduate Experience (ranging from 1 – 5):** This was calculated by taking the mean of all responses for the Q8 series on the questionnaire. It represents the level of satisfaction that respondents have with various elements of their undergraduate experiences.
- **Satisfaction with Undergraduate Experience (weighted) (ranging from 9 – 45):** This was calculated by taking the mean of all responses for the Q8 series on the questionnaire multiplied by the number of items in the series. It represents the level of satisfaction that respondents have with various elements of their undergraduate experiences.
- **Self-Reported Mobility and Residence at Entry:** This was calculated using the self-reported questionnaire item that asks respondents if they are currently Virginia residents, combined with a created variable for whether the respondents were in-state or out-of-state students during their undergraduate education.
- **Undergraduate (UG) Influence on Ability (ranging from 1 – 5):** This was calculated by taking the mean of all responses for the Q27 series on the questionnaire. It represents the level of influence that respondents' undergraduate experiences have had on various abilities (e.g., ability to express empathy for other people).
- **Undergraduate (UG) Influence on Ability (weighted) (ranging from 9 – 45):** This was calculated by taking the mean of all responses for the Q27 series on the questionnaire multiplied by the number of items in the series. It represents the level of influence that respondents' undergraduate experiences have had on various abilities (e.g., ability to express empathy for other people).
- **Under-Represented Student:** A respondent was determined to be under-represented if they chose any race/ethnicity other than Non-Hispanic White, if they started their undergraduate education at age 25 or higher, or if they were living in a Virginia locality within the lowest quintile of associate and baccalaureate attainment rates during their undergraduate education. These calculations for under-represented students were adapted from SCHEV's (n.d.) definition of under-represented students.

Multiple response items

Some questions on the survey allowed respondents to indicate more than one response. The percentage for each response for these multiple response items is calculated by dividing the

number of times the response was checked by the number of respondents to the question overall. Therefore, the individual percentages for the responses can add to more than 100%. However, the percentages on the total row for multiple response variables are calculated by dividing the number of total respondents – not responses – by itself (the number of total respondents), so the total percentage for multiple response variables will display as 100%.

Additional notes

If respondents skipped a question, they were not included in the totals for that question (i.e., if the respondent selected the option “Choose not to answer”). Due to this, total counts of respondents may vary by question. For items where the cell count value is below 25 respondents, the exact value has been suppressed and the text is replaced with “<25.” Additionally, some mean values are missing where the count of respondents was zero.

Community college groups

The 23 individual community colleges were grouped for sampling, analysis and reporting, using the Virginia Community College System (VCCS) categories I through VII based on full-time enrollment statistics. No community college fit into group VI at the time of the survey. See Table ITG-1 below.

This was done to promote the most useful sample given the resources available. If community colleges had been sampled as standalone institutions drawing similar numbers of graduates from each institution into the sample to represent each institution individually, then about 60% of the completed surveys would have come from community college graduates. This would have underrepresented the four-year institutions. On the other hand, if we had sampled community colleges as standalone institutions but reduced the sample sizes at each community college in order to have better representation of four-year institutions, then there is diminishing value in sampling the community colleges individually because they would not have had adequate representation at the individual institutional level.

The two-year institution data tables were run for each of the six community college groupings plus Richard Bland College. The reference group in the two-year institution data tables is all two-year institutions other than the institution (or community college group) that is the subject of the data table.

Table ITG-1: Community College Groups Used in Sampling, Weighting and Analysis

VCCS Group	Institutions and subtotals	Graduates	% within the group	% of all community colleges
Group VII	Northern Virginia Community College	38,858	100.0%	22.7%
	Total	38,858	100.0%	22.7%
Group V	Tidewater Community College	27,236	100.0%	15.9%
	Total	27,236	100.0%	15.9%
Group IV	J Sargeant Reynolds Community College	10,219	60.4%	6.0%
	John Tyler Community College	6,705	39.6%	3.9%
	Total	16,924	100.0%	9.9%
Group III	Thomas Nelson Community College	8,553	23.3%	5.0%
	Lord Fairfax Community College	6,781	18.4%	4.0%
	Virginia Western Community College	6,567	17.9%	3.8%
	Germanna Community College	6,471	17.6%	3.8%
	Piedmont Virginia Community College	4,381	11.9%	2.6%
	New River Community College	4,017	10.9%	2.4%
	Total	36,770	100.0%	21.5%
Group II	Southside Virginia Community College	8,309	19.0%	4.9%
	Central Virginia Community College	4,983	11.4%	2.9%
	Danville Community College	4,960	11.3%	2.9%
	Wytheville Community College	4,747	10.8%	2.8%
	Blue Ridge Community College	4,730	10.8%	2.8%
	Southwest Virginia Community College	4,480	10.2%	2.6%
	Patrick Henry Community College	4,213	9.6%	2.5%
	Mountain Empire Community College	4,084	9.3%	2.4%
	Rappahannock Community College	3,300	7.5%	1.9%
	Total	43,806	100.0%	25.6%
Group I	Virginia Highlands Community College	3,213	44.1%	1.9%
	Paul D Camp Community College	1,613	22.1%	0.9%
	Dabney S. Lancaster Community College	1,432	19.6%	0.8%
	Eastern Shore Community College	1,032	14.2%	0.6%
	Total	7,290	100.0%	4.3%
Total		170,884	100.0%	100.0%

Source: Virginia Community College System, 2018-19 data

Sampling and sampling error

Table ITG-2 and Table ITG-3 below show the sampling numbers and sampling errors by institution. Users of the tables should note that each statistic in the institutional data tables has its own sampling error. Sampling errors for smaller numbers of cases are generally larger than the sampling errors presented in Table ITG-3, all of which are based on calculated variables or survey questions that apply to all or almost all of the respondents in the data. Statistics based on small numbers of cases may not be reliable.

Community colleges were grouped for sampling and analysis using the FTE categories defined by the Virginia Community College System (VCCS). See above for details. Each VCCS group is treated as if it were a single institution. Two VCCS groups actually are individual institutions – group V (Tidewater Community College) and group VII (Northern Virginia Community College). There was no community college that fit into VCCS group VI at the time of the survey.

See Appendix B (Methods) in the main report of the survey results for more details about sampling for the survey and sampling error.

Table ITG-2: Response Rates Overall and by Institution

Institutions	Population N	Sampling frame size (excludes no-contact lookup cases)	Probability sample size (incl. non-contact lookups) ^a	Probability sample respondents	Probability sample response rate	Email-only supplement size ^b	Email-only supplement respondents	Email-only supplement response rate	Total Respondents
Total	499,665	254,585	50,495	13,294	26.33%	52,175	2,054	3.94%	15,348
1 Group I (Smallest 4 CCs)	7,290	3,412	2,198	496	22.6%	126	4	3.2%	500
2 Group II (Small 9 CCs)	43,806	22,468	2,583	577	22.3%	6,482	199	3.1%	776
3 Group III (Medium 6 CCs)	36,770	19,629	2,504	623	24.9%	5,219	210	4.0%	833
4 Group IV (Large 2 CCs)	16,924	9,927	2,287	583	25.5%	2,573	96	3.7%	679
5 Group V (Tidewater CC)	27,236	15,762	2,452	604	24.6%	5,392	164	3.0%	768
7 Group VII (Northern Va CC)	38,858	20,311	2,527	675	26.7%	6,244	208	3.3%	883
231712 Christopher Newport University	9,530	4,561	2,224	696	31.3%	104	6	5.8%	702
232186 George Mason University	45,377	23,761	2,709	688	25.4%	6,049	241	4.0%	929
232423 James Madison University	36,754	18,885	2,753	764	27.75%	3,587	159	4.43%	923
232566 Longwood University	7,951	4,340	2,210	669	30.27%	273	9	3.30%	678
232681 University of Mary Washington	9,300	4,834	2,243	740	32.99%	516	26	5.04%	766
232937 Norfolk State University	8,326	4,230	2,234	452	20.23%	993	33	3.32%	485
232982 Old Dominion University	33,853	18,873	2,572	676	26.28%	4,819	245	5.08%	921
233277 Radford University	17,584	9,281	2,324	601	25.86%	1,500	70	4.67%	671
233338 Richard Bland College ^{a,b}	1,431	777	784	162	20.66%	3	0	0.00%	162
233897 UVa College at Wise ^{a,b}	2,756	1,415	1,426	379	26.58%	6	1	16.67%	380
233921 Virginia Tech	51,248	23,324	2,898	833	28.74%	1,868	71	3.80%	904
234030 Virginia Commonwealth University	43,056	19,629	2,618	649	24.79%	3,631	156	4.30%	805
234076 University of Virginia	36,153	17,996	2,781	811	29.16%	2,379	132	5.55%	943
234085 Virginia Military Institute ^b	3,603	1,452	1,518	351	23.12%	0	0	--	351
234155 Virginia State University	7,523	2,884	2,258	432	19.13%	36	1	2.78%	433
231624 William & Mary	14,336	6,834	2,392	833	34.8%	375	23	6.1%	856

^a - For schools where 100% of available cases with contact information were sampled, sample sizes can be larger than frame size because no-contact cases that were successfully looked up were added to the sample.

^b - A small number of cases that started out in the probability survey sampling frame -- because they had mailing addresses -- had their mailing information invalidated after the mailing list was updated. If they had email addresses, they were included in the email-only supplement. That is why two of the three institutions that were censused in the probability sample have small numbers of cases in the email-only supplement. The email-only supplement ordinarily included only cases left over from the probability sampling -- and there should be no such cases for institutions that were censused

Table ITG-3: Margins of Error for Nine Key Variables by Institution

Institutions	rand1 sampling error: Randomly- generated Yes/No variable	rand2 sampling error: Randomly- generated Yes/No variable	rand3 sampling error: Randomly- generated Yes/No variable	q6_cat sampling error: Appreciative of the general education	q9_cat sampling error: Satisfaction with undergraduate education overall	q53_cat sampling error: Satisfaction with career progress	q91_cat sampling error: Agreeing undergraduate education was worth the cost	q67_cat sampling error: Satisfaction with preparation for the workplace	q97_3_cat sampling error: Agreeing "I am satisfied with my life"
Total	1.19%	1.20%	1.20%	1.21%	0.80%	1.10%	1.16%	1.10%	1.11%
Group I (Smallest 4 CCs)	4.83%	4.83%	4.76%	5.71%	2.41%	4.19%	4.32%	3.83%	4.48%
Group II (Small 9 CCs)	4.76%	4.83%	4.75%	5.64%	3.19%	4.41%	4.31%	4.22%	4.55%
Group III (Medium 6 CCs)	4.80%	4.74%	4.70%	5.40%	3.25%	4.63%	4.65%	4.51%	4.67%
Group IV (Large 2 CCs)	4.76%	4.57%	4.79%	5.26%	3.50%	4.62%	4.60%	4.53%	4.78%
Group V (Tidewater CC)	4.78%	4.79%	4.78%	5.89%	3.42%	4.92%	4.90%	4.90%	4.91%
Group VII (Northern Va CC)	4.64%	4.81%	4.83%	5.27%	3.50%	4.64%	4.66%	4.68%	4.79%
Christopher Newport University	4.26%	4.26%	4.30%	4.04%	2.73%	3.90%	4.25%	4.12%	3.97%
George Mason University	4.68%	4.68%	4.75%	4.40%	3.44%	4.37%	4.71%	4.51%	4.39%
James Madison University	4.50%	4.49%	4.47%	4.14%	2.36%	3.68%	4.35%	3.55%	3.60%
Longwood University	4.26%	4.33%	4.29%	3.87%	2.41%	3.91%	4.32%	3.86%	3.77%
University of Mary Washington	4.15%	4.15%	4.11%	4.22%	2.64%	3.83%	4.17%	4.09%	3.77%
Norfolk State University	5.08%	5.06%	5.02%	5.48%	3.50%	5.01%	4.94%	4.60%	4.89%
Old Dominion University	4.46%	4.62%	4.60%	4.67%	3.27%	4.35%	4.57%	4.40%	4.34%
Radford University	4.92%	4.91%	4.92%	4.88%	3.14%	4.70%	4.99%	4.51%	4.52%
Richard Bland College	7.98%	7.85%	8.19%	8.24%	6.09%	8.04%	7.71%	7.84%	8.18%
UVa College at Wise	5.20%	5.00%	5.17%	5.06%	2.89%	4.46%	4.91%	4.34%	4.29%
Virginia Tech	4.04%	4.14%	4.13%	3.89%	2.08%	3.42%	3.89%	3.28%	3.50%
Virginia Commonwealth University	4.77%	4.94%	4.78%	4.25%	3.85%	4.60%	4.72%	4.86%	4.59%
University of Virginia	3.98%	3.99%	3.96%	4.12%	2.14%	3.36%	3.73%	3.45%	3.36%
Virginia Military Institute	5.17%	5.17%	5.27%	5.23%	2.98%	4.28%	4.91%	3.79%	4.48%
Virginia State University	5.56%	5.37%	5.38%	5.57%	3.35%	5.38%	5.25%	4.56%	5.32%
William & Mary	4.10%	4.12%	4.10%	3.97%	2.34%	3.38%	3.78%	3.57%	3.61%

All percentages are +/-

References

- Soares, L., Gagliardi, J.S., & Nelligan, C.J. (2017). *The post-traditional learners manifesto revisited: Aligning postsecondary education with real life for adult student success*. American Council on Education. <https://www.acenet.edu/Documents/The-Post-Traditional-Learners-Manifesto-Revisited.pdf>
- State Council of Higher Education for Virginia. (n.d.). *Higher ed info for Virginia*. <https://research.schev.edu/info/Glossary/Under-represented-populations>