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Improving Completion Rates for Underrepresented Populations

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IMPROVING COMPLETION RATES FOR UNDERREPRESENTED POPULATIONS: BUILDING ON BEST PRACTICES

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EXECUTIVE SUMMARY

Most experienced educators recognize that many students will not complete optional assignments, and often those students who need additional help do not seek assistance. Current research demonstrates that students in underrepresented populations (see definition below) are less likely to seek support than others because they see needing help as a confirmation that they don't really "belong" in college in the first place. Research shows that those who do access currently optional supports such as tutoring are more likely to succeed, so this research group looked for ways to build structured connections between underrepresented students and resources.

We found that our peers at various VCCS colleges had programs that were working to build these connections for our students, so in our resource-constrained environment, we chose to focus on what exists that works, is scalable, and could be implemented in stages as resources permit. Our proposal reflects increased resource allocation on both the academic support (tutoring) side and the student support (TRIO, Pathway to the Baccalaureate, Success Coaches) side to increase structured contact between the student and the support to decrease the "stigma"

of seeking help. We propose this because in our roles as administrators and faculty we know that often our students need both academic support and holistic support.

DEFINITION

This proposal uses the current VCCS definition for underrepresented or underserved populations to include “any student who is first generation (both mother’s and father’s education are high school graduate or below), minority (any student not white/Caucasian or unknown), or Pell-eligible (as indicated by ISIR as of the award year)” (C. Finnegan, personal communication, February 13, 2018). The Joint Legislative Audit and Review Commission (JLARC) study notes that compared to students enrolled in four-year institutions, community college students are more likely be in the underserved population, including being categorized as “low-income, the first in their family to attend college, and requiring remedial coursework in English and math” (Joint Legislative Audit and Review Commission, 2017, p. i).

The JLARC study noted that credential attainment in the VCCS is low compared to state universities, with only 39% of our students reaching degree completion within 7 years after initial enrollment. Completion rates are even lower in the underrepresented populations (Joint Legislative Audit and Review Commission, 2017). To develop best practices to help students successfully persist towards completion, we must first examine the factors that impede that progress.

COMMON BARRIERS TO SUCCESS

Primary causes of attrition for students include inadequate financial support, unsolidified academic decisions, and a variety of life interruptions (Optimizing academic advising at community colleges, 2014). Some students are unprepared for college level work. Others have

difficulty understanding how to navigate the higher education system. Colleges strive to provide appropriate resources to alleviate some of these barriers, such as academic tutoring centers, success coaches, first year programs, advising services, student activities, and financial resources; however, the reality is that many students do not utilize the services. A Community College Survey of Student Engagement (CCSSE) study reported that less than half of students take advantage of these beneficial services (Optimizing academic advising at community colleges, 2014). They are often overwhelmed by too many resources, so instead they rely on “self-advising,” or they do not seek assistance due to the stigma associated with asking for help. Additionally, students from underrepresented groups may not seek help because the act of seeking help further perpetuates their sense of “not belonging” (Markle, 2017). **The question becomes how do we connect the underrepresented students who most need the academic and advising resources?**

THE SOLUTION, PART I: PROACTIVE ADVISING

Meeting the complex needs of the various underrepresented community college students is key to addressing enrollment and completion. Studies have shown that proactive (i.e., high-touch or intrusive) advising is effective with underrepresented populations. In a recent summary provided by NACADA, Harrell (2016) builds upon earlier work done by Glennen and Baxley (1985) “that shows that a proactive advising approach can reduce attrition and increase enrollment” for African American students, in particular, through “deliberate intervention,” such as “the use of mandatory appointments throughout the semester based on academic preparedness, testing, structured course options, supplemental education, and goal setting—these implementations increased enrollment, decreased attrition, and improved retention rates.” This

kind of intrusive or proactive outreach is needed since a 2014 CCSSE indicated that 32% of community college students report rarely or never using advising services, and 70% report rarely or never discussing career plans with a faculty or advisor (Optimizing academic advising at community colleges, 2014).

Much of the research on serving students at the highest risk of dropping out of college promotes the provision of extensive supplemental services to support the students academically and personally. Strategies such as hands on financial aid workshops, financial assistance programs and food pantries have contributed to increases in enrollment and graduation (Northern Virginia Community College, n.d.). When the underrepresented students have a place where they belong, where they are understood, and where they can gain guidance and support, research shows that improved student outcomes result. A number of VCCS colleges have programs that have already demonstrated success in retaining students and supporting student success, particularly for underrepresented students. We will focus on three programs, in particular: College Success Coach Initiative (CSCI), TRIO Student Support Services (SSS), and Pathways to the Baccalaureate. Each program is described in more detail in the next section.

In total, 14 of the community colleges in Virginia currently serve underserved students through one of these programs. Eleven have a TRIO SSS Program and ten have a CSCI program. Currently, Northern Virginia Community College (NOVA) has the only Pathway to the Baccalaureate program. For those nine schools who do not house an SSS, CSCI or Pathway program, we recommend an expansion of the College Success Coach Initiative, as it will be the easiest to implement quickly.

While these programs vary in approach and scope, they all provide students with personal support and connection to campus and community resources in the form of wrap-around services

to keep the students progressing and assist them in overcoming barriers. These programs require academic advising, check-ins, and other forms of active participation, and are designed to build connections between the student and program staff, as well as other students. Our recommendation, in keeping with the literature on the benefits of wrap-around support programs and with the JLARC study, is a fuller commitment of funding to expand existing programs for underserved students at our state's community colleges.

WHAT WORKS FOR OUR STUDENTS: COLLEGE SUCCESS COACH INITIATIVES

The VCCS Chancellor's College Success Coach Initiative (CSCI) college success coach model exists at nine Virginia community colleges. Paul D. Camp Community College's S.T.E.P.S. program was one of the original programs on which later ones were modeled. The success coach programs provide intensive interventions for first generation, ethnic minority and Pell grant eligible students, and are designed to improve outcomes for underserved students in the areas of credit program and credential completion and transfer. Coaches work with students to tackle such issues as academic remediation, financial constraints, family responsibilities, and motivational factors through clear goal setting and activities designed give students the awareness of academic and non-academic resources and the comfort and confidence to interact effectively with those resources. Coaches actively monitor and track their students, respond to academic alerts, help with scholarship searches, assist in the development of SMART goals, alert students to pre-exam events, and maintain regular communications. At Paul D. Camp Community College, these interventions had the following results:

- (a) 70% of students maintained a 2.0 or above GPA;
- (b) 134 degrees, diplomas, certificates, or other credentials have been earned;

- (c) over \$235,000 in scholarships awarded; and
- (d) 3-year average retentions rates: fall to spring (77.86%) and fall to fall (49.46%), which consistently exceed the VCCS and PDCCC rates by 7% to 18%. (2017)

To put that into perspective, in alignment with Complete 2021, S.T.E.P.S. tripled the number of credentials earned by the end of Year 3 funding when compared to the baseline group.

The success coach model has already been assessed by the VCCS and has shown to have a positive return on investment: “In 2015, using FY2013 and FY2014 data, the VCCS calculated the 3-year return on investment at \$3,062,800 for the nine-institution coaching initiative” (Paul D. Camp, 2017). See Appendix A for more detail. Of the three programs being showcased here, this model is the one that is most easily scalable and affordable.

WHAT WORKS FOR OUR STUDENTS: TRIO STUDENT SUPPORT SERVICES

One of the longtime cornerstones of Federal Department of Education grant programs are TRIO Student Support Services (SSS) Programs. SSS programs receive funds to serve first-generation students, low income students, and students with disabilities. These programs build wrap-around supports designed to encourage both persistence and completion of underserved students who are statistically at the greatest risk for stopping or dropping off the higher education track. While not all programs are identical, these programs typically offer case management style advising and coaching with low student to advisor ratios, individualized tutoring services, mandatory advising and transfer planning, support for early major selection and require regular touch base points. In a national study of TRIO programs, the persistence rate of two-year institutions was 85.4%, and the three-year completion rate of two-year institutions was 39.2%, exceeding the Federal Department of Education’s target (U.S. Dept. of Ed, 2015). Locally,

within Virginia community college's, most programs retained students at rates between 70% and 90% and saw completion rates of between 40% and 50%. See Appendices B, C, & D for more detail. The Trio Student Support Services require the host college to manage the grant application and compliance processes, which can be cumbersome, and funding is not guaranteed.

WHAT WORKS FOR OUR STUDENTS: PATHWAY TO THE BACCALAUREATE

Northern Virginia Community College's Pathway to Baccalaureate (Pathway) provides early and ongoing support for students with demonstrated barriers to college access and completion, beginning in high school through attainment of a baccalaureate degree. The Pathway Program provides holistic student services offered on-site at participating high schools and centers during the regular school day, at NOVA campuses, and at George Mason University. In 2016-17, Pathway served "over 3500 12th graders enrolled in 50+ high schools and centers across nine school systems, while over 6800 college-matriculated Pathway students attend[ed] all NOVA campuses and George Mason University" (Pathway, 2017).

Ninety percent of Pathway students come from underrepresented or populations at risk for non-completion:

Pathway Student Demographics

- 79% of participating students are members of minority groups
- 72% of participating students are immigrants or children of immigrant parents
- 73% of participating students are first generation college students
- 63% of participating students report an annual family income less than half the median family income in the Northern Virginia region (Pathway, 2017).

Pathway counselors at the high schools, on NOVA's campuses, and at George Mason University guide students through the transfer process, addressing potential barriers and connecting students with appropriate resources to mitigate their needs. They engage students in service learning, peer mentoring, and career enrichment activities. The program also includes financial supports in the form of emergency funding and scholarships. The students who participate in the Pathway program have had excellent retention and completion rates:

- 90% of students in the program at NOVA are retained from the first to the second semester
- 81% of students at NOVA are retained from year to year.
- 73% of students are in good academic standing after one semester at NOVA.
- 98% of the students in the program earn transferable credit in their first year of college.
- 66% of deferral and stop-out students return to college within one year.
- The community college graduation rate is double that of the NOVA student population, [which JLARC notes is 19%.]
- 80% of Pathway's Mason transfers completed a bachelor's degree within three years of transfer (Pathway, 2017).

The success of the Pathway program is the result of students receiving proactive advising in high school, during their time at the community college, and through the transition to the university. Additionally, in high school, students are identified by counselors and are invited to apply to the program. Since the program has an element of "selectivity," the usual stigma associated with receiving support is reduced. Additionally, the selected students are treated as a cohort, with special Pathways SDV sections and orientations. Students are required to check in at

mid-term with their counselors and are not permitted to register for the following semester until they have done so.

This is not an inexpensive model and requires partnerships with both the local high school systems and the major transfer partners; however, the Pathway program does what the JLARC report recommends to support at-risk students, in that it “require[s] at-risk students to attend orientation and complete a one-credit student development course in their first semester” and works with students who are underprepared while still in high school to stay focused on high school completion and coursework (Joint Legislative Audit and Review Commission, 2017, p. 11). The participating high schools that have embedded Pathway counselors share a portion of the cost of their salaries. NOVA conducts placement testing with the VPT on-site and maintains dedicated counselors. In the recent years, the caseloads have crept up to nearly 600 students per counselor, which is well above the 250, which is the upper limit for “high touch” counseling. For more information, see the Pathway Fact Sheet and the Program Design Presentation available on NOVA’s website: <http://www.nvcc.edu/pathway/outcomes.html>.

What do these three programs have in common? The case management approach to counseling, the interventions, and other supports that build a connection between the student and “their person” all enable the coach/counselor/advisor to engage in problem-solving with the students. It is this connection that helps students overcome the life barriers to their success, and this requires extensive follow-up and connection with other campus and community resources. The student who would have dropped out due to their broken down car now has someone paying attention, reaching out in their absence, and providing options and assistance for continuing through the semester.

Mandatory and intensive advising can help ensure that students are being supported and guided to progress to fulfilling a credential. However, the current number of personnel in student services is insufficient to perform such consistent student advising. Statistically, “The median number of students per non-faculty advisor FTE was 250 students, and more than 500 for three colleges” (Joint Legislative Audit and Review Commission, 2017, p. 21). The JLARC study stated that “Increasing the number of academic advisors or college success coaches was the most commonly identified approach to improve student success across the VCCS, selected from 14 approaches by 28 presidents and vice presidents” (Joint Legislative Audit and Review Commission, 2017, p. 21). Additionally, the study recommends that the VCCS commit funding, either to increase the number of success coaches or to increase the number of professional advisors system-wide. Therefore, by adding consistent academic advising, the VCCS can allow for greater engagement and an increased likelihood for credential completion of the students within the underrepresented population.

PROPOSAL & COSTS FOR EXPANDED PROACTIVE ADVISING

We propose the commitment of funding to expand existing case-management advising programs for underserved students at our state’s community colleges. This includes the addition of one or more success coach(es) or advisor(s) at each VCCS campus that currently has one of the programs described above, and for the nine that do not, we recommend an expansion of the Success Coach Initiative.

The JLARC study (2017) recommends that the CSCI program be expanded and provides this cost estimate:

This could be done at its current scale, serving 200 students per college. In FY17, the nine participating colleges received a total of \$1.2 million in funding, or approximately \$130,000 per college. At the current scale of 200 students per college, the cost to expand the program to the remaining 14 colleges would be approximately \$1.8 million. The additional cost to serve 400 students per college at all 23 colleges would be \$4.9 million, and the additional cost to serve 600 students per college would be \$7.9 million (p. 22).

Since we are unlikely to receive \$7.9 million from the legislature, we recommend the addition of one or more success coach(es) or advisor(s) at each VCCS campus to supplement and enhance existing programs that have already been shown to be effective.

For example, Lord Fairfax Community College has a TRIO program at the Middletown Campus. Under this model, they would receive one additional TRIO advisor at Middletown and one new TRIO advisor for the Fauquier campus. These new advisors would each manage a load of 100 students and would be supervised by and fall under the direction of the current TRIO program director. NOVA's Pathway program would also expand to enhance the support that students receive once they matriculate to NOVA. Each campus would gain a new advisor/coach to expand the reach of the Pathway program. CSCI programs, like that of Paul D. Camp Community College would expand to add an additional success coach at each location. The colleges that do not have any of these programs would each gain a College Success Coach to serve 100 to 200 students. This model builds upon successful initiatives that already exist within our individual infrastructures and adds 41 new coaches/advisors who would provide intensive wrap-around services, impacting at least 4,100 students. Salary and benefits costs for the 41 positions are estimated between 2.7 and 3.1 million; however, improved retention and completion will potentially give a result in a return on investment.

THE SOLUTION, PART II: CONNECTING STUDENTS TO THE RESOURCES

THEY NEED FOR ACADEMIC SUCCESS

In addition to expanding proactive advising within the VCCS, we propose that a core focus of this advising is the connection of students to tutoring services. Coaches/Advisors/Counselors are needed to help students who are first-generation to college, are underrepresented at college, or are underprepared for college-level coursework connect to the existing services that help them succeed. The one-on-one supplemental instruction that students can gain from tutors is a key resource to helping students who are struggling to meet the academic demands of their course work. As the JLARC study (2017) noted, “According to the research literature, students who seek and receive tutoring have higher grades and higher rates of completion” (p. 24). A study conducted between the NOVA-Annandale Learning and Technology Resources in 2015 showed that students who used tutoring services were 15% more likely to pass their classes and that tutoring was most likely to make a positive impact in the following courses: ACC 211, CST 100, CST 110, ENG 111, ENG 112, and HIS 101 (Bogdewiecz & Miller, 2015).

Effective tutoring takes many forms: one-on-one sessions, group sessions, embedded in-class support, online support, and supplemental instruction. While one method of tutoring may prove to be more effective for one student or one class, another may be more effective for another; therefore, a fluid tutoring environment with multiple options ensures that students can be helped in the manner that best suits them. **The challenge remains: how to get the students who need the additional academic support to use the resources that are available to them?** As many faculty know, the students who take advantage of “extra credit” opportunities are rarely the students who actually need the extra credit. How do we breach the stigma associated with

“tutoring”? Too many students see receiving tutoring as translating into failure or as confirmation of their self-imposed assumptions of their perceived inability to perform academically (neither of which are true!). Here are some possible solutions:

Mandatory Tutoring for All in Gateway Courses: Fain (2012), author of “Mandatory Tutoring,” claims that tutoring should be a requirement instead of an option. Making tutoring mandatory helps to eliminate the stigma associated with it; since all students must attend, no student is being singled out as needing additional help. For example, in an introductory, “gateway” course, like ENG 111, students could be required to take an initial draft to the Writing or Tutoring Center for feedback or review. This would introduce students to the existence of the resource, and those who found it helpful would be able to return for additional assistance as needed. *Note: faculty may need to coordinate with the tutoring staff to stagger the flow of students as to not overwhelm the limited campus resources.

Mandatory (or Highly Encouraged) Preparation for Placement Tests: Fain (2012) notes that 48% of colleges in America offer placement testing study aids, but a mere 13% of those colleges make the test prep mandatory. If test prep resources were utilized, more students would place into credit courses. If one aspect of proactive advising was the requirement (or the high-encouragement) of the completion of test prep materials before the first attempt at the test, students would be placed more accurately on their first attempt and less likely to be discouraged by lower than expected results.

Summer Bridge or Immersion Programs for Students Needing Remediation: For those students who do need remediation, free summer or intersession classes could increase retention and success. The City University of New York Community College (CUNY) system is the model for this suggestion. They offer free, compressed summer and winter intersession

courses to help students meet college-readiness requirements. These classes are for students who just miss the cut-off scores for placement into Math and English classes. These same compressed, free sessions are available to select students who have made progress but still failed certain developmental Math, English, or English as a Second Language courses. The repeating students are recommended by the developmental Math or English faculty whose classes they have failed.

The Assistant Dean for Academic Support Services at the Borough of Manhattan Community College - CUNY, Dr. J. Zummo, discussed the program by phone and reported that CUNY provides the funding for the program, which is expensive but effective, because they believe in the importance and effectiveness of remediation. System-wide, as of a 2010 report, the following information was found:

Immersion programs served almost 21,000 students ... and colleges reported spending a total of approximately \$4,730,000 on these programs. This sum includes monies spent on instruction, tutoring, administrative and OTPS costs. Across the campuses, the average price per student enrolled was \$139 for January 2010 sessions and \$280 per student for summer 2009 sections/ workshops.” (Jones, 2010, p. 16)

Faculty teach the intersession and summer classes as “overloads” (BMCC has a different funding model.). The immersion classes vary in size from 15 to 25 and BMCC runs 50+ in any given summer. Dr. Zummo reports that the classes are most effective for Math. Because of their immersive nature (four days a week, four hours a day with a focus on one subject only), they show higher success rates in Math and English compared to regular semester-length classes. She did note that high school seniors often opt *not* to take the classes, even though they are free,

because they are seen as “summer school” and start only a few days after graduation. Proactive advising would be needed to recruit and encourage students to take the courses.

These free courses could be powerful incentives to students who either delay taking the initial placement tests for fear of failure or those who need remediation. The Office of Institutional Research at NOVA has found that 44% (6,902 students) of first time to NOVA students did not take the math placement test before starting coursework. Of those who did, 21% (3,289 students) were placed into developmental math, but only 14% (474 students) succeeded in the course during their first semester. If students who made some progress had access to a free opportunity to repeat a “module,” they could be retained.

All of the above suggestions require funding, to provide free classes, expand the number of available tutors who can be available when students need the services (mornings, evenings, and weekends), and expand the number of advisors/counselors/coaches to connect students to tutoring services and to encourage compliance with test preparation.

“Light Touch,” Lower Cost Tutoring Interventions: There are other “light touch interventions,” to borrow South Texas College’s term, that could be implemented (MDRC) more cost-effectively. When South Texas College realized that students were not using the existing services, they incorporated tutors into various outreach activities. For example, tutors were part of new student orientations to talk with the students, introduce themselves, and offer assistance. They were invited into classrooms, especially classes that traditionally utilize more tutoring, to introduce themselves and offer help. While this intervention did not improve overall pass rates in the math classes it targeted, it did benefit two populations:

(1) part-time students were less likely to withdraw from and more likely to pass the math class, earned more credits, and, at least in the developmental math classes, scored higher on the final exam, and

(2) developmental students were less likely to withdraw from math class than students in the control group, and they earned more credits in their non-math developmental courses.

(MDRC, 2010)

Having the tutors come to the students seems to create a connection for some underrepresented groups. Being available, visible, and open to helping students bridges the gap. Ultimately, if underrepresented students are retained, then the degree attainment can help close the earnings gap for some underrepresented populations. Deborah Faye reports that “The attainment of any postsecondary degree (particularly a baccalaureate degree) often results in a greater net dividend for minority populations” (Malveaux, 2003). For example, the median African American family income is 63% of the median white family income (“Holding a Four-Year College Degree,” 2005). If income data is analyzed only for individuals who received baccalaureate degrees, however, African Americans on average earn 95% of what white individuals earn (“Holding,” 2005).

CONCLUSION

In a recent article in *The Chronicle of Higher Education*, Tyler Hallmark, reflected on his own experience as a student from a low-income background. He argues that colleges should work to “foster a sense of belonging” to help low-income and first-generation students combat the barriers to graduation and should “tell students that they shouldn’t be afraid to ask for help-- and point them to where help is.” Programs like Pathway to the Baccalaureate, TRIO SSS, and

College Success Coach Initiative can foster this sense of belonging, which makes it possible for students to ask for and receive tutoring and other help--which can lead to retention and completion--if the programs are well-funded and supported system-wide.

APPENDIX A

College Success Coach Initiative Performance Measures
Fall 2012-2016 Cohort Cumulative Data

	Fall 2012						Fall 2013						Fall 2014					
	Cohort Group			Control Group			Cohort Group			Control Group			Cohort Group			Control Group		
	Total	Successes	%	Total	Successes	%	Total	Successes	%	Total	Successes	%	Total	Successes	%	Total	Successes	%
1. SDV	1001	853	85.21	2369	1985	83.79	524	435	83.02	2117	1736	82	384	322	83.85	2191	1805	82.38
2. Dev Eng	423	137	32.39	1032	247	23.93	22	7	31.82	249	81	32.53	188	88	46.81	1419	446	31.43
3. Dev Math	756	148	19.58	1513	301	19.89	326	75	23.01	1929	400	20.74	352	35	9.94	2383	330	13.84
4. Col Eng	1456	642	44.09	5505	2033	36.93	633	307	48.5	4975	1876	37.71	573	234	40.84	5606	1719	30.66
5. Col Math	1601	418	26.11	5632	1361	24.17	676	214	31.66	5164	1118	21.65	614	91	14.82	5878	968	16.47
6. 24 credits	1658	471	28.41	5851	960	16.41	743	262	35.26	5378	1018	18.93	633	151	23.85	6124	1025	16.74
7. Credential	1658	393	23.7	5851	962	16.44	743	138	18.57	5378	500	9.3	633	37	5.85	6124	148	2.42
8. Retain - T	1658	1188	71.65	5851	3673	62.78	743	558	75.1	5378	3394	63.11	633	477	75.36	6124	4051	66.14
9. Retain - Y	1658	840	50.66	5851	2497	42.68	743	415	55.85	5378	2262	42.06	633	316	49.92	6124	2743	44.79
10. Transfer	1658	110	6.63	5851	599	10.24	743	10	1.35	5378	254	4.72	633	1	0.16	6124	0	0

	Fall 2015						Fall 2016						Cumulative (Fall 2012 to Fall 2016 Cohorts)					
	Cohort Group			Control Group			Cohort Group			Control Group			Cohort			Control		
	Total	Successes	%	Total	Successes	%	Total	Successes	%	Total	Successes	%	Total	Successes	%	Total	Successes	%
1. SDV	571	522	91.42	2619	2263	86.41	777	664	85.5	2439	2030	83.2	3257	2796	86%	11735	9819	84%
2. Dev Eng	183	97	53.01	1697	473	27.87	212	88	41.5	1595	470	29.5	1028	417	41%	5992	1717	29%
3. Dev Math	380	53	13.95	2826	399	14.12	461	60	13	2704	296	11	2275	371	16%	11355	1726	15%
4. Col Eng	643	317	49.3	7587	2723	35.89	841	388	46.1	7418	2581	34.8	4146	1888	46%	31091	10932	35%
5. Col Math	696	123	17.67	7587	1357	17.89	950	177	18.6	7418	1312	17.7	4537	1023	23%	31679	6116	19%
6. 24 credits	774	244	31.52	7587	1290	17	1075	398	37	7418	1179	15.9	4883	1526	31%	32358	5472	17%
7. Credential	776	36	4.64	7587	279	3.68	1098	131	11.9	7418	300	4	4908	735	15%	32358	2189	7%
8. Retain - T	776	615	79.13	7587	5168	68.12	1098	803	73.1	7418	4995	67.3	4908	3641	74%	32358	21281	66%
9. Retain - Y	776	452	58.25	7587	3363	44.33	1098	616	56.1	7418	3384	45.6	4908	2639	54%	32358	14249	44%
10. Transfer	774	2	0.26	7587	29	0.38	1075	6	0.6	7418	28	0.4	4883	129	3%	32358	910	3%

Measure 1: % of students enrolled in SDV who successfully complete course
 Measure 2: % students completing developmental English requirements within one year
 Measure 3: % students completing developmental math requirements within one year
 Measure 4: % students completing college-level English
 Measure 5: % students completing college-level Math

Measure 6: % students completing at least 24 credits in one year with at least 2.5 GPA
 Measure 7: % students earning post-secondary, credit-based award
 Measure 8: % students graduated or retained in following term
 Measure 9: % students graduated or retained in following year
 Measure 10: % students transferring to a 4-year institution

APPENDIX B

All TRIO SSS data from: <https://www2.ed.gov/programs/triostudsupp/performance.html>

Percent of Full-time SSS Freshman in 2013-14

Grantee name	Number of full-time freshmen served in 2013–14	Number enrolled at the grantee institution in 2014–15	Persistence rate
Lord Fairfax Community College	18	16	88.9%
Mountain Empire Community College	12	7	58.3%
Patrick Henry Community College	23	18	78.3%
Paul D. Camp Community College	1	1	100.0%
Rappahannock Community College	11	7	63.6%
Southwest Virginia Community College	14	13	92.9%
Thomas Nelson Community College	16	16	100.0%
Tidewater Community College	5	5	100.0%
Virginia Highlands Community College	8	7	87.5%
Virginia Western Community College	16	15	93.8%

Wytheville Community College	27	23	85.2%
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APPENDIX C

Degree completion at two-year institutions:**(Three-year cumulative percent of full-time Student Support Services)**

Grantee name	Number of 2011–12 full-time freshmen	Number received AA degree only by 2013–14	Number received AA degree and transferred by 2013–14	Number transferred without receiving AA degree by 2013–14	Number received AA degree and/or transferred by 2013–14	Graduation and/or transfer rate
Dabney S. Lancaster Community College	79	19	7	12	38	48.1%
Lord Fairfax Community College	3	1	1	0	2	66.7%
Mountain Empire Community College	7	0	0	1	1	14.3%
Patrick Henry Community College	39	13	1	1	15	38.5%
Paul D. Camp Community College	10	0	0	0	0	0.0%
Rappahannock Community College	15	0	7	0	7	46.7%

Southwest Virginia Community College	13	1	4	1	6	46.2%
Thomas Nelson Community College	19	2	8	1	11	57.9%
Tidewater Community College	6	2	0	1	3	50.0%
Virginia Highlands Community College	47	4	9	6	19	40.4%
Virginia Western Community College	11	3	2	0	5	45.5%

APPENDIX D

**Efficiency measures for Student Support Services grantees:
Difference between the cost per successful outcome and the cost per participant served: 2013–14**
(all grantees that submitted an APR in 2013–14)

Grant ee name	FY 2013 fundi ng	Number of participa nts served in 2013–14	(1) Number of participa nts who received certificat es, associate 's or bachelor' s degrees, transferre d to another institutio n, stayed enrolled at same institutio n, or complete d program in 2013– 14	(2) Number of participa nts who received associate 's or bachelor' s degrees, transferre d to another institutio n, stayed enrolled at same institutio n, or complete d program in 2013– 14 (certificat es not included)	Cost per particip ant served	Succe ss rate (1)	Succe ss rate (2)	Cost per success ful outcom e (1)	Cost per success ful outcom e (2)	Efficien cy gap (1)	Efficien cy gap (2)
LFCC	\$234,635	153	128	117	\$1,533.56	83.7%	76.5%	\$1,833.09	\$2,005.43	\$299.53	\$471.87

MECC	\$274,364	166	135	120	\$1,652.80	81.3%	72.3%	\$2,032.33	\$2,286.37	\$379.53	\$633.57
PHCC	\$301,416	215	180	170	\$1,401.93	83.7%	79.1%	\$1,674.53	\$1,773.04	\$272.60	\$371.11
PDCC	\$252,736	176	176	176	\$1,436.00	100.0%	100.0%	\$1,436.00	\$1,436.00	\$0.00	\$0.00
RCC	\$278,285	174	129	127	\$1,599.34	74.1%	73.0%	\$2,157.25	\$2,191.22	\$557.91	\$591.88
SVCC	\$355,532	292	265	261	\$1,217.58	90.8%	89.4%	\$1,341.63	\$1,362.19	\$124.05	\$144.61
TNCC	\$219,016	161	149	149	\$1,360.35	92.5%	92.5%	\$1,469.91	\$1,469.91	\$109.56	\$109.56
TCC	\$266,788	209	176	171	\$1,276.50	84.2%	81.8%	\$1,515.84	\$1,560.16	\$239.34	\$283.66
VHCC	\$341,383	214	161	159	\$1,595.25	75.2%	74.3%	\$2,120.39	\$2,147.06	\$525.14	\$551.81
VWCC	\$266,503	229	167	164	\$1,163.77	72.9%	71.6%	\$1,595.83	\$1,625.02	\$432.06	\$461.25
WCC	\$356,910	223	162	151	\$1,600.49	72.6%	67.7%	\$2,203.15	\$2,363.64	\$602.66	\$763.15

REFERENCES

- Bogdewiecz, S., & Miller, E. (2015). Tutoring support and grading outcomes. Retrieved on March 5, 2018 from <https://create.piktochart.com/output/21388717-tutoring-support-and-grade-outcomes>
- Carter, D.F. (2006). Key issues in the persistence of underrepresented minority students. *Inter Science*. Retrieved March 5, 2018 from: https://deepblue.lib.umich.edu/bitstream/handle/2027.42/49309/178_ftp.pdf?sequence=1
- Community College Survey of Student Engagement (CCSSE) (2014). *EAB*. Optimizing academic advising at the community college.” Retrieved February 28, 2018 from <https://www.eab.com/research-and-insights/community-college-executive-forum/white-papers/optimizing-academic-advising-at-community-colleges>
- Esch, C. (2010, April 14). Pathway to the baccalaureate: how one community college is helping underprepared students succeed. Retrieved February 28, 2018, from <https://www.newamerica.org/education-policy/policy-papers/pathway-to-the-baccalaureate/>
- Fain, P. (2012, February). Make It mandatory? *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/news/2012/02/02/academic-support-offerings-go-unused-community-colleges>
- Finnegan, C. (2018, February 13). Personal communication.
- Hallmark, T. (2018, February 11). When ‘failure is OK,’ is not OK. *The Chronicle of Higher Education*. Retrieved on March 1 from: https://www.chronicle.com/article/When-Failure-Is-OK-Is/242489/#.Wo1_Oi3c7k0.email
- Harrell, C. (2016). Advising African American students: African American students in higher

- education. *NACADA Clearinghouse*. Retrieved on February 28, 2018 from:
<http://www.nacada.ksu.edu/Resources/Clearinghouse/View-Articles/Advising-African-American-Students.aspx>
- Joint Legislative Audit and Review Commission. (2017, September). Operations and performance of the Virginia Community College System. Retrieved from
<http://jlarc.virginia.gov/2017-vccs.asp>.
- Jones, Y. (2010, October). Review of CUNY's USIP programs, 2009/2010. Office of Undergraduate Education. Office of Academic Affairs City. University of New York. Retrieved on March 5, 2018 from
<http://www.cuny.edu/about/administration/offices/ue/Immersion/ReviewCUNYUSIPPrograms2010.pdf>
- Markle, R. (2017, Nov 14). From background to behaviors: framing the strengths and challenges of traditionally underserved populations. Educational Testing Service Webinar.
- MDRC. (2010, February). *Can improved student services boost community college student success?* Retrieved from <https://www.mdrc.org/publication/can-improved-student-services-boost-community-college-student-success>
- New York University. (2015, June 1). New study evaluates remedial pathways for community college students. *Science Daily*. Retrieved February 21, 2018 from
www.sciencedaily.com/releases/2015/06/150601134957.htm
- Northern Virginia Community College. (n.d.) *Studies confirm that pathway students exceed both college and national benchmarks in all measured outcome areas*. Retrieved from
https://www.nvcc.edu/oir/_files/3111vccsstudentsuccesssnapshot0811.pdf

Northern Virginia Community College. Research Brief (2018). *Identifying prospective students in the NOVA service area*. Office of Institutional Effectiveness and Student Success, 1(18), pp. 1-8.

Optimizing academic advising at community colleges. (2014). Retrieved February 28, 2018, from <https://www.eab.com/research-and-insights/community-college-executive-forum/white-papers/optimizing-academic-advising-at-community-colleges>

Pathway to the baccalaureate college success consortium 2016-2017 fact sheet. (2017). Retrieved February 28, 2018, from https://www.nvcc.edu/pathway/_docs/pathway-fact-sheet.pdf

Paul D. Camp Community College: student success best practice. (2017). Students Transitioning through Education Programs Successfully (S.T.E.P.S.) - A researched-based, evidence-driven model for effectively serving underserved students. Retrieved February 28, 2018, from http://trcenter.vccs.edu/wp-content/uploads/2017/04/best_practice_PDCCC.pdf

Tukibayeva, M., & Gonyea, R. M. (2014, August). *High-impact practices and the first year student*. Retrieved from Wiley Online Library:
<http://onlinelibrary.wiley.com/doi/10.1002/ir.20059/full>

U.S. Dept. of Education. (2015, December 22). Performance and efficiency measure results: analyses and data tables for multi-years. Retrieved February 28, 2018, from <https://www2.ed.gov/programs/triostudsupp/efficiencyresults.html>

Virginia Community College System. (n.d.) Complete 2021. Retrieved February 28, 2018 from <http://www.vccs.edu/about/where-we-are-going/>

Wassmer, R., Moore, C., & Shulock, N. (2004, September). Effect of racial/ethnic composition

on transfer rates in community colleges: implications for policy and practice. *Research in Higher Education*. Retrieved from:

http://www.academia.edu/10460291/Effect_of_Racial_Ethnic_Composition_on_Transfer_Rates_in_Community_Colleges_Implications_for_Policy_and_Practice

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