

NOVA Institutional Effectiveness Audit of Educational Programs 2015-16 to 2019-20



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OFFICE OF INSTITUTIONAL EFFECTIVENESS AND STUDENT SUCCESS

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Institutional Effectiveness Audit of Educational Programs 2015-16 to 2019-20

Executive Summary

Northern Virginia Community College (NOVA) documents the assessment of student learning through *Annual Planning and Evaluation Reports (APERs) for Instructional Programs*. Associate-degree granting programs and select certificates submit assessment reports each year, and *Institutional Effectiveness Audits of Educational Programs* provide an analysis of the assessment of student learning at NOVA. The following *Audit* presents assessment data and analysis for 2019-20 and compares this year's results with the previous four years. The highlights of the *Institutional Effectiveness Audit of Educational Programs*, 2015-16 to 2019-20, include the following:

- Like higher-education institutions around the world, NOVA was impacted by the global pandemic that began in Spring 2020. The College adapted to meet the challenges faced by its educational programs and students: instruction moved to an online/remote modality in March 2020, and as a result, courses and assessments had to be adjusted from their original format. Many programs were able to adapt existing assessments for an online environment, and other programs with primarily hands-on assessments made innovative changes to these assessments in order to evaluate students' skills remotely.
- Despite the global pandemic, all required educational programs submitted *Annual Planning and Evaluation Reports (APERs) for Instructional Programs* in 2019-20.
- College-wide, the 2019-20 overall APER rubric score was 96.2%, which is an increase of 2.4 percentage points from the previous year. The area that demonstrated the most improvement in rubric scores was the Use of Results section of the report which increased by 5.6 percentage points from the previous year. This increase indicates that programs are regularly using assessment results to make decisions about actions to take to improve student learning and success. Overall, the 2019-20 rubric results confirm that programs are submitting complete assessment reports, improving in their reporting and analysis of assessment results, and taking action targeted at continuous program improvement.
- Programs reported 2,234 actions for improvement in total, which equates to 38.5 actions implemented per program. This is a slight decrease in the number of actions reported from the previous year, but a portion of that decrease may be attributed to the global pandemic that began in Spring 2020. With the move to remote learning and the subsequent closure of multiple activities and venues both on and off campus, the events of Spring 2020 had an impact on the number and types of actions that programs were able to implement in that semester.
- The actions for improvement that programs take each year are classified into five major categories. The categories are listed below along with the distribution of how frequently each category was utilized in 2019-20:

1. Curriculum-Specific actions: 38.8 percent

2. Co-Curricular Resources: 24.4 percent

3. SLO Assessment Process: 23.5 percent

4. College-Level: 8.5 percent

5. Program Resources: 4.9 percent

- The five major categories listed above break down into 18 subcategories. The top five subcategories utilized by programs to improve student learning are below and, in total, make up 68.6 percent of all actions reported in 2019-20:
 - Academic Support/Advising (a subcategory of Co-Curricular Resources): 22.6
 percent
 - 2. Course Revision (a subcategory of Curriculum-Specific): 19.2 percent
 - 3. Pedagogy Change (a subcategory of Curriculum-Specific): 10.7 percent
 - 4. SLO Assessment Change (a subcategory of SLO Assessment Process): 9.3 percent
 - 5. Curricular Change (a subcategory of Curriculum-Specific): 6.8 percent
- The most notable changes in the frequency and types of actions that were implemented in 2019-20 include the following:
 - Because the total number of overall actions decreased in 2019-20, all major categories decreased in usage except for Co-Curricular Resources. This category increased by 6.1 percentage points from 2018-19 and included 102 more actions that were implemented in 2019-20 than in the previous year.
 - The subcategory Academic Support/Advising had a dramatic increase over the past year and was the most-frequently cited subcategory in 2019-20. The number of actions reported for Academic Support/Advising increased from 388 in 2018-29 to 505 in 2019-20 which is 30.2 percent increase. The need for accurate and timely student advising in the midst of a global pandemic could have contributed to the increase in usage of this subcategory in 2019-20.
 - The subcategory Curricular Change increased 1.6 percentage points in 2019-20. This increase moved Curricular Change into the top five most-frequently cited subcategories in 2019-20. Programs reported the most curricular changes in 2019-20 (151 actions) compared to the previous four years, demonstrating that programs continue to ensure that their courses and curricular offerings are relevant, meet the needs of students, and enable transfer pathways to four-year institutions.
 - The subcategory SLO Assessment Change increased 0.5 percentage points in 2019-20, demonstrating that programs continuously monitor the effectiveness of their assessment methods and make changes when necessary to ensure authentic assessment of student learning.

Introduction

At Northern Virginia Community College (NOVA), we have built a culture of assessment that is ongoing, faculty-led, and aimed at improving student learning. For over ten years, the Office of Academic Assessment, a unit within the College's Office of Institutional Effectiveness and Student Success, has offered extensive College-wide workshops, presentations, and one-on-one meetings with programs and faculty to develop and enhance the assessment process at the College. The staff of the Office of Academic Assessment meet with faculty, staff, and administrators regularly to discuss assessment processes and methods, assist with implementing assessment plans, provide advice on writing annual assessment reports, and promote the use of assessment data to make evidence-based decisions about actions that will improve student learning and the student experience at NOVA.

This report analyzes the college-wide assessment of student learning in academic year 2019-20 as it is reported in the *Annual Planning and Evaluation Reports (APER) for Instructional Programs*. This assessment year was a challenge for programs and faculty as classes abruptly moved online in the middle of the Spring 2020 semester due to the COVID-19 global pandemic. The majority of programs were able to adapt their assessments for an online environment, and other programs with primarily hands-on assessments made innovative changes to these assessments in order to evaluate students' skills remotely (see examples of innovative assessment changes in Section II of this report).

Both associate-level and select stand-alone certificate programs are required to submit annual assessment reports. The *Annual Planning and Evaluation Reports for Instructional Programs* publicly document educational programs' assessment of three sets of outcomes: student learning outcomes (SLOs), core learning outcomes (CLOs), and program goals. NOVA defines student learning outcomes as the program-level, discipline-specific knowledge, skills, and attitudes/values that students achieve as a result of completing their program of study at NOVA. Core learning outcomes are college-wide general education competencies that students gain as a result of both general education requirements and discipline-specific courses in associate and certificate programs. Program goals comprise program placement (i.e., discipline-specific enrollment) and graduation outcomes, and programs monitor these metrics in order to make data-based decisions about how to best assist students entering and completing the program.

Annual Planning and Evaluation Reports for Instructional Programs detail the assessment of three SLOs each year, one core learning outcome, and program placement and graduation. Programs choose the SLOs that they assess each year while the College has a three-year rotation schedule for assessing the six core learning outcomes (see the Core Learning Outcome Assessment Cycle included in the Appendix). All programs report on program-placement and graduation data, and they have the option of reporting on additional goals that relate to student achievement indicators and/or employment and enrichment activities. Programs report on the following four areas (displayed in Table 1) in their Annual Planning and Evaluation Report for Instructional Programs:

Table 1: Reporting Areas for Annual Planning and Evaluation Report for Instructional Programs

SLOs, CLO, and Program Goals	Assessment Methods	Assessment Results	Use of Results
What was assessed?	What methods were used? Who was assessed?	When did the assessments take place? What were the results? Have the results improved over time? What areas need improvement?	What actions have been implemented in the past to improve student learning? What actions will be taken in the future to improve student learning based on the results of the assessments?

This *Institutional Effectiveness Audit of Educational Programs* provides data on the past five years of assessment reports: academic years 2015-16 through 2019-20. The report begins with a summary of the improvements that have been made over the past decade in the reporting and analysis of assessments at the College (Section I). A special section on Assessment During COVID-19 (Section II) provides information about the types of modifications that were made to assessments in Spring 2020 as a result of the global pandemic. Program participation in assessment reporting is analyzed (Section III) along with the quality of reporting (Section IV). A discussion of the actions that programs are taking with the purpose of improving student learning is provided in Sections V through VII. Finally, the Appendix contains the raw data for the figures presented in this report.

Section I. Process Improvements in Analyzing Assessments at NOVA

Just as programs have improved in their assessment and reporting of student learning over the past decade, the Office of Academic Assessment has improved in its analysis of the Annual Planning and Evaluation Reports (APERs) for Instructional Programs. In 2013-14, the office implemented a new, more rigorous rubric to assess APERs. The rubric offered specific, structured feedback to programs on the assessment and reporting process and has been used since that time. Since 2015-16, the office has included subcategories in its analysis of actions taken by programs (see Section VII). The addition of subcategories has increased the accuracy of the classifications provided in this Audit as well as the reliability of the total number of actions taken by programs. For the 2017-18 reports, the office further refined one major category of actions, SLO Assessment Process, by creating additional subcategories; in previous years, all changes to the assessment process were grouped together under one subcategory called "Assessment Methodology." The new subcategories introduced in 2017-18 allow for a more specific understanding of the changes that programs are making to improve their assessment process and methods. (See the Institutional Effectiveness Audit of Educational Programs 2013-14 to 2017-18 for a more detailed explanation of the changes made to the SLO Assessment Process category that year.)

In sum, the changes made over the past decade represent improved analysis of assessment reports and continuous improvement at the program and College level. Annual assessment reports demonstrate that programs are regularly examining their assessment data and results, and they are implementing actions to continuously improve student learning in the areas where

students are not meeting targets. Programs continue to deepen their appreciation of the value and purpose of assessment and broaden their understanding of the assessment process. As a result, faculty, administrators, and educational programs at NOVA utilize the assessment process to improve student learning, the student experience, and overall program quality.

Section II. Assessment During COVID-19

Like higher-education institutions around the world, NOVA was impacted by the global pandemic that began in Spring 2020. The College adapted to meet the challenges faced by its educational programs and students: instruction moved to an online/remote modality in March 2020, and as a result, courses and assessments had to be adjusted from their original format. The majority of programs moved their assessments online, conducting them through the College's learning management system, Canvas. The College provided extensive Canvas training to instructors in Spring 2020 to ensure that faculty were prepared to provide high-quality instruction and assessment in the online environment.

Some programs that conduct mainly hands-on assessments had to innovate to ensure that students' skills continued to be assessed in an authentic way. NOVA faculty and programs rose to the challenge, and some examples of the types of innovations and modifications that were made to assessments are included below. A complete list of assessments and modifications for Spring 2020 can be found in the *Annual Planning and Evaluation Reports for Instructional Programs 2019-20* which is available on the Office of Academic Assessment website.

Driver Education Instructor, C.S.C., faculty were not able to evaluate students' driving skills on the range, as they typically do, to assess 11 critical driving skills (e.g., parallel parking, three-point turns, backing and turning) that students need to master in order to become effective driver education instructors. As a way to assess students' driving skills in an authentic way, faculty altered the assignment by allowing students to complete the driving tasks with a partner videotaping them performing these tasks. Students asked people that they were quarantining with (e.g., family members) to sit in the car with them and videotape them performing the 11 skills. Students then submitted the videos to the professor for evaluation. Faculty were able to successfully evaluate students' driving skills using this innovative modification.

Hospitality Management, A.A.S., typically conducts an assessment in the capstone class each Spring where students plan and execute five catering events in teams. Each team is responsible for overseeing one role per event: General Manager, Banquet Captain, Chef, Steward, and Food and Beverage Comptroller. After each event, the teams are assessed on their performance in their respective roles. Because the program could not hold the five events in Spring 2020, teams instead had to submit *plans* for each event which detailed what they would have done for each activity. Thus, the evaluation of the teams was conducted based on the team's plan rather than the execution of the event. Although students were not able to carry out the catering events, they were assessed on the content and quality of their plans, and they were provided with feedback from the faculty member about areas where the plans were successful and areas that needed improvement.

Diagnostic Medical Sonography, A.A.S., uses an assessment that requires students to create a clinical reference notebook that they can utilize and build upon throughout their careers. Students typically present their notebook to the class at the end of the semester, but because of the move to remote learning in Spring 2020, the professor had students videotape their presentation and upload it to the learning management system for all students to view. The professor found two unintended positive outcomes of this modification to the assessment: (1) videotaping improved the quality of student presentations because students were able to rerecord their presentation multiple times after reviewing it, if needed; and (2) the faculty member was able to share one of the student videos with a clinical site where students complete their clinical rotations, which allowed the site to see the quality of students' work before the clinical rotation. The program reported that the clinical instructors and managers were so impressed with the organization and assessment skills of the student, based on the video, that the site specifically invited this student to participate in a clinical rotation the next semester. The modification of videotaping the presentations was a response to COVID-19, but it was so successful that the program will now utilize this format going forward because (1) it produces high-quality presentations; and (2) students can showcase their skills to clinical sites before their clinical rotations.

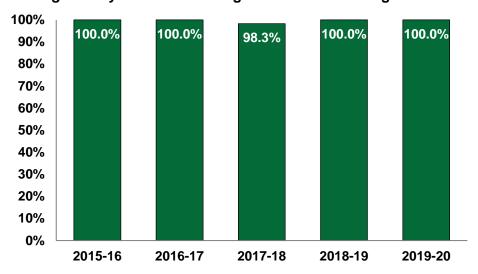
Social Science: Teacher Education Specialization, A.A.S., assesses students' completion of a 40-hour field placement. In Spring 2020, some students' field placement locations were closed due to the pandemic. The program decided to replace field hours for those students with videos of classroom instruction that semester. As a way to address continued closure to field placement sites, starting in Fall 2020 the program partnered with George Mason University to provide an alternative to field placements: Teacher Education students can complete three hours a week of virtual tutoring of K-12 students in lieu of field placement in a classroom. Teacher Education students will be provided with training and coaching related to their tutoring duties, and this activity will serve as a way for Teacher Education students to gain live interactions with teachers and students when field placements are not possible.

Section III. Submission Rates

Figure 1 below presents the submission rates of *Annual Planning and Evaluation Reports for Instructional Programs* from 2015-16 through 2019-20. Over this five-year time period, there was only one year when 100 percent of reports were not submitted: in 2017-18, only one report was not submitted (see Table A1 in the Appendix).

In 2019-20, all 58 required reports were submitted, representing a 100 percent submission rate despite the challenges encountered in Spring 2020 due to the global pandemic.

Figure 1. Submission Rate of *Annual Planning and Evaluation Reports for Instructional Programs* by Educational Programs: 2015-16 through 2019-20



Section IV. Quality of Reporting

NOVA's culture of assessment has become more established over the past decade, so standards for assessing student learning and the quality of the reports have increased. The analytic rubric that was implemented in 2013-14 provides percentile scores for each section of the APER, as well as an average overall score that is calculated from the total number of points earned (see Tables 2 and 3 below).

The four sections of the report that are scored using the rubric are: (1) SLOs, CLOs, Program Goals; (2) Assessment Methods; (3) Assessment Results; and (4) Use of Results (see Table 1 above for a description of these areas). Points are awarded for addressing each of the components in each section of the report: two points for meeting the requirement, one point for partially meeting it, and zero points for not meeting the requirement. Based on the total points earned, an overall percentage score is calculated. From this overall percentage score, reports fall into one of four categories: meeting expectations, mostly meeting expectations, partially meeting expectations, and not meeting expectations (see Table 2).

Table 2. Quality of Reporting in *Annual Planning and Evaluation Reports for Instructional Programs*: Rubric Score Scale

Overall Score on Rubric	Color on Rubric	Performance Level
90% - 100%	Dark Green	Meeting expectations
80 - 89%	Light Green	Mostly meeting expectations
70% - 79%	Yellow	Partially meeting expectations
Below 70%	Red	Not meeting expectations

The scores for 2015-16 through 2019-20 reports are provided in Table 3. It is important to note that all sections of the report as well as the overall average score "meet expectations" this year (i.e., fall in the 90-100% range). The College-wide average increased from 93.8 percent in 2018-19 to 96.2 percent in 2019-20. Rubric scores increased for each section of the report, with a

substantial increase of 5.6 percentage points in the Use of Results category. This category asks programs to provide information on (1) past actions that were implemented as a result of the previous assessment to improve current results; (2) the areas where assessment results are still not meeting targets; and (3) future actions that will be implemented to improve those areas not meeting targets. The improvement in the Use of Results category indicates that programs are regularly using assessment results to take actions to improve student learning and success. Overall, the 2019-20 results confirm that programs are submitting complete assessment reports, improving in their reporting and analysis of assessment results, and implementing actions targeted at continuous program improvement.

Table 3. College-Wide Rubric Results: 2015-16 through 2019-20

Annual Planning and Evaluation Reports	2015-16	2016-17	2017-18	2018-19	2019-20	Percentage point change: 2018-19 to 2019-20
SLOs, CLO, Program Goals	97.2%	98.2%	95.3%	94.8%	95.7%	0.9
Assessment Methods	96.7%	97.2%	96.7%	96.2%	97.1%	0.9
Assessment Results	89.7%	91.9%	93.9%	96.3%	97.7%	1.4
Use of Results	86.0%	82.2%	90.4%	89.7%	95.3%	5.6
TOTAL	92.4%	92.4%	93.4%	93.8%	96.2%	2.4

Section V. Use of Results to Improve Student Learning

An important component of the assessment of student learning emphasized at NOVA is the process of "closing the loop." This is a process that involves using the results from assessments to implement actions that lead to student learning outcome improvements. As shown in Figure 2, programs are regularly implementing actions aimed at continuous improvement. In 2019-20, there were 2,234 actions reported college-wide, and the average number of actions reported per program was 38.5. This is a slight decrease from the 2,422 actions (42.5 actions per program) reported in 2018-19, but an increase from the three years prior to 2018-19. It is important to note that the number of actions reported by programs in 2019-20 may have been impacted by the global pandemic in Spring 2020. Programs were forced to adjust instruction and assessments in the middle of that semester, so the events of Spring 2020 likely impacted the number and kinds of actions that programs were able to implement in 2019-20.

Over the five-year time period depicted in Figure 2 (and Table A2 in the Appendix), the average number of actions implemented by programs grew from 26.5 in 2015-16 to 38.5 in 2019-20, with an all-time high in 2018-19 of 42.5 actions per program. Overall, Figure 2 demonstrates that programs are increasing the number of actions that they are implementing as a result of the assessment process.

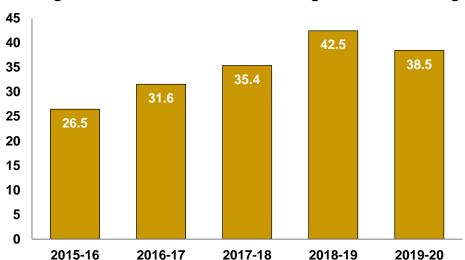


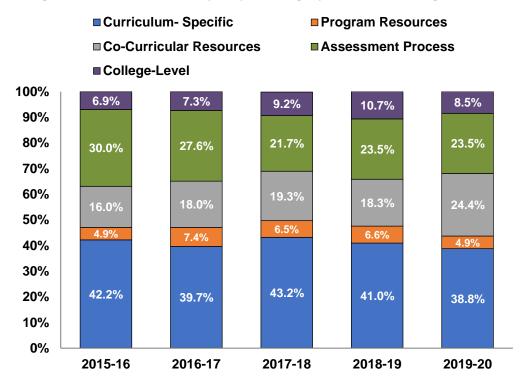
Figure 2. Average Number of Use of Results Per Program: 2015-16 through 2019-20

Section VI. Use of Results by Major Category

The previous section discussed the number of actions that programs are taking to improve student learning. In addition to quantifying how many actions are reported in the Use of Results section of APERs, assessment reports are analyzed to determine the *kinds* of actions that programs take to improve student learning and the assessment process. Reported actions/changes in the Use of Results section are coded into five major categories: (1) Curriculum-Specific; (2) Program Resources; (3) Co-Curricular Resources; (4) SLO Assessment Process; and (5) College-Level. Each of these major categories contains several subcategories, explained in Section VII below.

Figure 3 displays the five major categories and how often each category was utilized by programs in the past five academic years. Curriculum-Specific actions remain the most frequently implemented category reported by programs. Over the past five years, this category has made up approximately 40 percent of all actions that programs reported, with 38.8 percent of actions falling into this category in 2019-20. Co-Curricular Resources overtook the SLO Assessment Process category this year as the second most frequently cited category with 24.4 percent of all actions. The SLO Assessment Process made up 23.5 percent of all actions, while the least frequently cited categories, College-Level and Program Resources, both shrank this year: College-Level actions consisted of 8.5 percent of all actions, and Program Resources made up 4.9 percent. The category with the largest gain in 2019-20 was Co-Curricular Resources, with 544 actions in 2019-20 compared to 442 actions the previous year.

Figure 3. Use of Results by Major Category: 2015-16 through 2019-20



Section VII. Use of Results by Subcategories

The five major categories discussed in the previous section break down into a total of 18 subcategories. Table 4 presents the major categories and their subcategories. A complete description of each subcategory with examples is provided in the Appendix.

Table 4. Use of Results Codes: Major Categories and Subcategories

Major Category	Subcategories
	Curricular Change
Curriculum-Specific	Course Revision
Carriculani-Specific	Pedagogy Change
	Subject-Matter Expert Feedback
	Financial
Program Resources	Human Resources
	General Resources
Co-Curricular Resources	Co-Curricular Opportunities
Co-Curricular Resources	Academic Support/Advising
	SLO Assessment Change
	Data Analysis Method Change
SLO Assessment Process	Student Learning Outcome Change
OLO Assessment Process	Target Changed
	Increase Sample Size
	Communication on the Assessment Process

Table 4 (cont.). Use of Results Codes: Major Categories and Subcategories

Major Category	Subcategories
	Dual Enrollment
College-Level	Articulation Agreement
	Recruitment/Marketing

Figure 4 below illustrates the 18 subcategories in order of most frequently to least frequently utilized by programs in 2019-20. Course Revision has historically been the most-frequently cited action reported by programs, but Academic Support/Advising overtook that subcategory in 2019-20 and made up 22.6 percent of all actions taken by programs in 2019-20. Course Revisions consisted of 19.2 percent of all actions this year with Pedagogy Change remaining in third place at 10.7 percent of all actions. All other subcategories comprise less than 10 percent each of the total number of actions cited in the assessment reports.

Figure 4. Use of Results by Subcategory in Descending Order: 2019-20

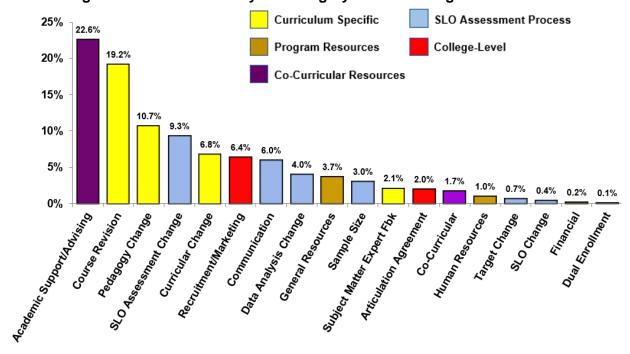


Figure 5 below displays the top five most frequently cited subcategories over the past two years. In 2018-19, the top five subcategories were Course Revision, Academic Support/Advising, Pedagogy Change, SLO Assessment Change, and Recruitment/Marketing. This year, in 2019-20, Course Revision and Academic Support/Advising switched places, with Academic Support/Advising moving into the number one spot with 22.6 percent of all actions reported. Course Revision, which had been the most-frequently reported subcategory for the previous 4 years, is now in second place with 19.2 percent of actions reported. Pedagogy Change and SLO Assessment Change remained in third and fourth place, respectively, while Recruitment/Marketing is not on this year's top five list. Curricular Change moved into the number five spot with 6.8 percent of all changes reported.

The top five subcategories in 2019-20 accounted for 68.6 percent of all actions reported, an increase of 3.6 percentage points from 2018-19 when the top five subcategories comprised 65.0 percent of all changes reported by programs. An analysis of each subcategory change is provided in subsequent sections below.

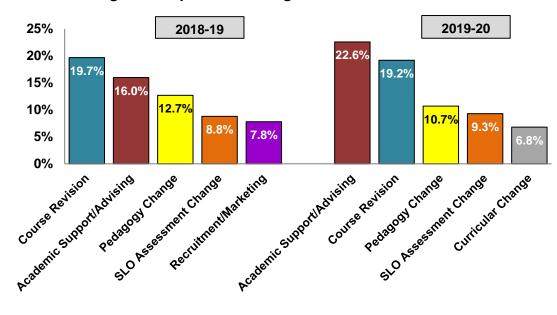


Figure 5. Top Five Subcategories: 2018-19 and 2019-20

A. Curriculum-Specific

The Curriculum-Specific category is the most frequently utilized category for actions that programs implement as a result of the assessment process (38.8 percent of all actions reported). Curriculum-Specific actions consist of four subcategories: Curricular Change, Course Revision, Pedagogy Change, and Subject-Matter Expert Feedback. Figure 6 below illustrates the trends over the past five years in this category.

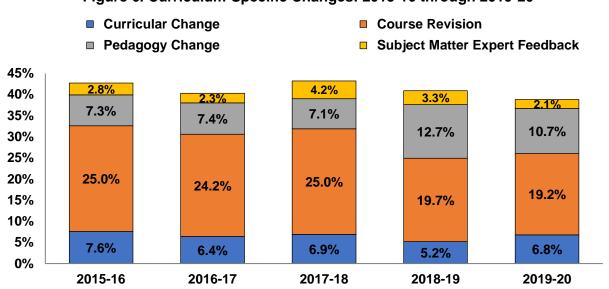


Figure 6. Curriculum-Specific Changes: 2015-16 through 2019-20

The Course Revision subcategory is used to capture actions taken to "what" students learn, i.e., the content of the course. This category decreased slightly in 2019-20 to 19.2 percent of all actions compared to 19.7 in the previous year. This subcategory was the most frequently cited subcategory for the previous four years but moved to second place in 2019-20 of the 18 subcategories (following Academic Support/Advising; see Figure 4 above).

Pedagogy Change refers to changes in "how" students learn and how teachers structure the learning environment, including adding or replacing on-campus courses with online or hybrid modalities; integrating technology into the course; and including more experiential activities, including labs. Actions classified as Pedagogy Change decreased slightly from 12.7 percent in 2018-19 to 10.7 percent in 2019-20. It is important to note that, because all programs moved to remote learning modalities in Spring 2020 due to the global pandemic, these changes in Spring 2020 were not included in the Pedagogy changes reflected in this report. Pedagogy changes in this report include those changes that programs took on an intentional basis, based on program responsiveness to assessment results, student needs, and program improvement. Because programs were required to move to a remote modality in Spring 2020, those actions were not counted in this *Audit* as actions that were based on assessment results.

Curricular Changes relate to broader changes to the degree program itself, for example adding a course or other requirement (including a new prerequisite), increasing the number of course sections offered, or changing the sequence of courses. Curricular Changes increased from 5.2 percent of all actions in 2018-19 to 6.8 percent in 2019-20. This subcategory moved into the list of the top five subcategories for the first time in 2019-20 (see Figure 5 above).

Subject-Matter Expert Feedback involves seeking recommendations from internal or external stakeholders, such as Pathway Councils, employers, on-site clinical supervisors, the Program Advisory Board, or an accrediting body. This subcategory also includes the program review process that programs undergo every five years since program review involves feedback and recommendations from stakeholders across the College. Subject-Matter Expert Feedback decreased slightly in 2019-20 from 3.3 percent to 2.1 percent.

B. Program Resources

The Program Resources category shrank from the previous two years to 4.9 percent of all actions in 2019-20. This is on par with the 2015-16 level (4.8 percent), and this category represents the least frequently utilized of the five major categories. It is not surprising that with shrinking budgets across the College, state, and higher-education community at large, due in part to the global pandemic that started in Spring 2020, additional funding for program resources would be in limited supply.

The Program Resources category includes three subcategories: Financial, Human Resources, and General Resources. Financial resources entail requesting or allocating additional funds to achieve learning outcomes and/or program goals. Human Resources include hiring new personnel and providing professional development training for faculty and staff. General Resources consist of increasing/improving physical resources, such as new software or

computers, expansion of physical space, obtaining new lab equipment, or utilizing external partners as guest speakers.

Figure 7 demonstrates that the Financial subcategory remained the same at 0.2 percent of all actions. The other two subcategories, Human Resources and General Resources, both decreased in 2019-20. Overall, the Program Resources category decreased by 1.7 percentage points over the past year, with 51 fewer actions reported in 2019-20 (109 actions) compared to 2018-19 (160 actions).

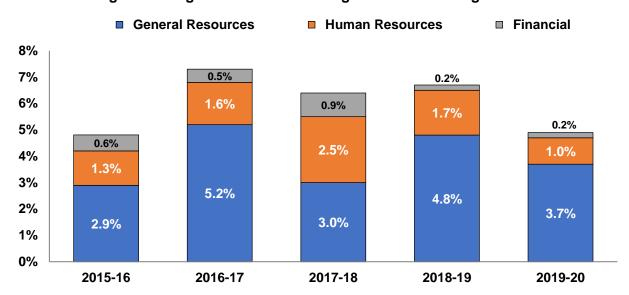


Figure 7. Program Resources Changes: 2015-16 through 2019-20

C. Co-Curricular Resources

The Co-Curricular Resources category was the second most-frequently utilized category of the five major categories in 2019-20. It comprised 24.4 percent of all actions, having increased 6.1 percentage points from the previous year. This category includes two subcategories, Co-Curricular Opportunities and Academic Support/Advising.

Co-Curricular Opportunities are coordinated activities for students to engage in outside of the classroom and which are not a required part of a course. These activities include field trips, internships, social gatherings, career fairs, study sessions, and participation in professional or student organizations. Co-Curricular Opportunities shrank in 2019-20 to 1.7 percent of all actions. This can be attributed to the decreased opportunities for students to take part in co-curricular activities in Spring 2020 due to the global pandemic. Many programs reported that activities and internships had to be cancelled in Spring 2020 due to the closing of venues, both on and off campus, and restrictions on public gatherings.

Academic Support/Advising actions refer students to academic support resources such as student advisors, the Writing Center, Science Lab, Math Lab, or peer tutoring. This subcategory also includes orientation activities, faculty advising sessions, and improving guidance provided

to students about degree-related topics. Academic Support/Advising actions increased dramatically from the previous year: it comprises 22.6 percent of all actions in 2019-20 compared to 16.0 percent in 2018-19 (see Figure 8). The number of Academic Support/Advising actions increased by 117 actions in 2019-20 (from 388 in 2018-19 to 505 in 2019-20). This subcategory became the most-frequently utilized subcategory in 2019-20, likely due to students requiring more guidance and advising through the global pandemic of 2020.

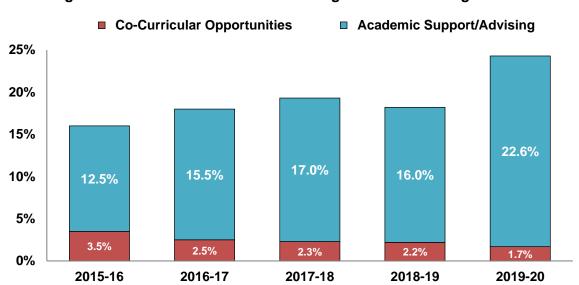
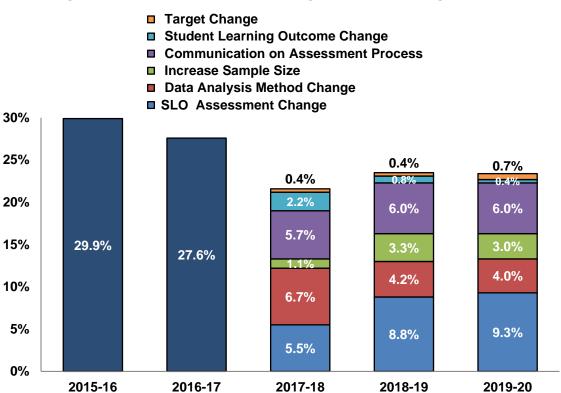


Figure 8. Co-Curricular Resources Changes: 2015-16 through 2019-20

D. SLO Assessment Process

The SLO Assessment Process category was refined in 2017-18; prior to that year, this category only contained one subcategory under which all assessment process changes were captured (see Section I above). In 2017-18, six subcategories were added to more accurately capture and better classify the kinds of changes that programs are making to their assessment process. The six subcategories are: (1) SLO Assessment Change; (2) Data Analysis Method Change; (3) Student Learning Outcome Change; (4) Target Change; (5) Increase Sample Size; and (6) Communication on the Assessment Process. For 2017-18 through 2019-20, changes in these six subcategories are displayed in Figure 9 below; for previous years, data can only be reported on the total percentage of SLO Assessment Process actions that were reported because only one subcategory was in place at that time.





In 2019-20, the SLO Assessment Process category remained at the same level as the previous year (23.5 percent of all changes), although the total number of actions classified into this category actually shrank slightly from 569 actions in 2018-19 to 524 actions in 2019-20. The subcategory that programs utilized the most in 2019-20 was Assessment Change at 9.3 percent of total actions, which is an increase of 0.5 percentage points from 2018-19. Assessment Changes are modifications to the method of assessing the learning outcome (i.e., a new assignment or test), a change to the assessment itself (e.g., new test questions, changing the format from multiple choice to short answer, etc.), or the addition of SLO/CLO components that are individually assessed.

Communication on the Assessment Process involves improving/increasing communication with faculty and other internal constituents in order to clarify or revise the assessment process, train faculty on implementing the assessment, and/or standardize processes and procedures for conducting assessments. This subcategory remained steady at 6.0 percent of actions, the same percentage as the previous year.

Data Analysis Method Changes represent 4.0 percent of the actions that were reported by programs in 2019-20, a slight decrease from the previous year. This subcategory involves changes to how the data is collected or analyzed, and it also includes the development and implementation of a new rubric for scoring assessments.

Increase Sample Size involves changes aimed at improving participation in assessments. Typically, this involves increasing the number of faculty conducting and reporting on assessments and/or including online and off-site dual enrollment sections in the assessment process. This category remained relatively unchanged at 3.0 percent of all actions. Because the culture of assessment at the College is well-established, programs already have a high participation rate in assessments and do not need to take many actions to improve this area.

The Student Learning Outcome Change category decreased to 0.4 percent this year. This category involves the program revising or editing the official student learning outcomes (SLOs) for the program. It is anticipated that this subcategory will continue to represent a small number of actions each year because programs have established and stabilized the student learning outcomes (SLOs) that students must achieve at the program level. Although programs regularly review their SLOs, major revisions do not occur on an annual basis but rather every few years as needed.

The Target Change category increased slightly to 0.7 percent this year. The Target Change category includes instances when the target is increased, decreased, or clarified/changed (e.g., changing the graduation target from a percent increase to calculating it as a percentage of program placed students).

E. College-Level

The College-Level category shrank slightly from 10.7 percent in 2018-19 to 8.5 percent in 2019-20. This category includes three subcategories: Dual Enrollment, Articulation Agreement, and Recruitment/Marketing. Dual Enrollment actions involve increasing the number of off-site, dual enrollment programs/courses that take place at local high schools. Articulation Agreements include increasing the number of agreements for pathways from NOVA to four-year institutions, including the Advance NOVA/Mason Partnership, as well as increasing the number of transferrable credits to specific four-year institutions. Recruitment/Marketing actions are outreach efforts that programs utilize for various potential populations of students, including local high school students, non-traditional students, and non-declared students.

In 2019-20, all three subcategories decreased in usage by programs, resulting in the category decreasing slightly to 6.4 percent of all actions. Overall, the number of actions reported decreased from 259 in 2018-29 to 190 in 2019-20. It is important to note that this category may have also been negatively impacted by the global pandemic that began in Spring 2020.

12% ■ Recruitment/Marketing Articulation Agreement Dual Enrollment 0.5% 10% 0.5% 2.4% 0.1% 1.0% 8% 2.0% 0.3% 0.4% 1.1% 0.8% 6% 4% 7.8% 7.7% 6.4% 5.9% 5.7% 2% 0% 2015-16 2016-17 2018-19 2017-18 2019-20

Figure 10. College-Level Changes: 2015-16 through 2019-20

Conclusion

The 2019-20 academic year was overshadowed by the COVID-19 global pandemic that began to affect programs and students at NOVA in the middle of the Spring 2020 semester. Although programs had to quickly pivot to fully online classes, NOVA was able to meet the needs of students during a time that challenged higher education institutions around the world. Programs were able to move assessments to an online format or innovate to ensure that student skills were assessed in an authentic way.

Programs continued to complete assessments, Annual Planning and Evaluation Reports for Instructional Programs, and take actions aimed at improving student learning. However, the total number of actions taken in 2019-20 decreased slightly, with 188 fewer actions reported than in the previous year, likely due to the restrictions that programs faced in the number and kinds of actions that they were able to implement in the middle of a global pandemic. The average number of actions taken per program has been steadily increasing each year, indicating that programs are using assessment results to make improvements to the program and enhance student learning. Curriculum-Specific actions continue to be the most frequently implemented category of actions, and Co-Curricular Resources, which includes Academic Support/Advising, increased dramatically in 2019-20. Nearly one-fourth of all actions taken in 2019-20 were classified as Academic Support/Advising (22.6 percent), which is understandable as students had to be advised and guided through their programs of study as the pandemic continued throughout 2020. Curricular Changes increased as programs ensured that their courses and curricular offerings continued to meet the needs of students and transfer partners, and SLO Assessment Changes also increased in 2019-20 as programs monitored the effectiveness of their assessment methods and processes.

Programs' rubric scores increased for all areas of the report in 2019-20, and the college-wide average rose by 2.4 percentage points from the previous year. The area that demonstrated the most improvement was the Use of Results section of the APER which increased by 5.6 percentage points from the previous year. This increase indicates that programs are regularly using assessment results to take actions aimed at improving student learning and success.

In sum, this *Institutional Effectiveness Audit of Education Programs* demonstrates that NOVA's culture of assessment across the College remains strong, even in the face of a global pandemic. Educational programs are committed to continuous improvement of educational quality, assessment processes, student learning, and the student experience.

Appendix

Note: The numbers in each table below are rounded to one decimal place. Therefore, some columns and rows do not sum to the exact number in the "Total" column/row due to rounding.

Table A1. Submission Rate of Annual Planning and Evaluation Reports for Educational Programs: 2015-16 through 2019-20

Academic Year	# of Annual Reports to be Submitted	# of Annual Reports Submitted	% of Annual Reports Submitted
2019-20	58	58	100.0%
2018-19	57	57	100.0%
2017-18	59	58	98.3%
2016-17	55	55	100.0%
2015-16	56	56	100.0%

Table A2. Average Number of Use of Results Per Program: 2015-16 through 2019-20

Academic Year	Annual Reports Submitted	Total # of Use of Results	Average # of Use of Results per Program
2019-20	58	2,234	38.5
2018-19	57	2,422	42.5
2017-18	58	2,053	35.4
2016-17	55	1,740	31.6
2015-16	56	1,484	26.5

Table A3. Use of Results by Major Category: 2015-16 through 2019-20

	, , , , ,										
Use of Results Major Categories											
	Curric	ulum-	Prog	_J ram	Co-Cui	ricular	Asses	sment	Coll	ege-	Total
Year	Spe	cific	Reso	urces	Reso	urces	Pro	cess	Le	vel	Total
	#	%	#	%	#	%	#	%	#	%	#
2019-20	867	38.8	109	4.9	544	24.4	524	23.5	190	8.5	2,234
2018-19	992	41.0	160	6.6	442	18.3	569	23.5	259	10.7	2,422
2017-18	886	43.2	133	6.5	397	19.3	446	21.7	190	9.2	2,053*
2016-17	691	39.7	128	7.4	312	18.0	480	27.6	129	7.3	1,740
2015-16	626	42.2	72	4.9	238	16.0	445	30.0	103	6.9	1,484

^{*}There was one action in 2017-18 that was coded into the "Other" category and is not reflected in this table.

Table A4. Use of Results by Subcategory in Descending Order: 2019-20

Subcategory	Number of Actions	% of Total
Academic Support/Advising	505	22.6
Course Revision	428	19.2
Pedagogy Change	240	10.7
SLO Assessment Change	207	9.3
Curricular Change	151	6.8
Recruitment/Marketing	142	6.4
Communication on the Assessment Process	134	6.0
Data Analysis Method Change	90	4.0
General Resources	82	3.7
Increase Sample Size	68	3.0
Subject Matter Expert Feedback	48	2.1
Articulation Agreement	45	2.0
Co-Curricular	39	1.7
Human Resources	23	1.0
Target Change	16	0.7
Student Learning Outcome Change	9	0.4
Financial	4	0.2
Dual Enrollment	3	0.1
Total	2,234	100.0

Table A5. Top Five Subcategories: 2017-18 through 2019-20

			•			
Rank	2017-18	% of Total	2018-19	% of Total	2019-20	% of Total
1.	Course Revision	25.0	Course Revision	19.7	Academic Support/ Advising	22.6
2.	Academic Support/ Advising	17.0	Academic Support/ Advising	16.0	Course Revision	19.2
3.	Recruitment/ Marketing	7.7	Pedagogy Change	12.7	Pedagogy Change	10.7
4.	Pedagogy Change	7.1	SLO Assessment Change	8.8	SLO Assessment Change	9.3
5.	Data Analysis Method Change	6.7	Recruitment/ Marketing	7.8	Curricular Change	6.8
Total		63.5		65.0		68.6

Table A6. Curriculum-Specific Actions: 2015-16 through 2019-20

Curriculum-Specific	2015-16		2016-17		2017-18		2018-19		2019-20	
Curriculum-Specific	#	%	#	%	#	%	#	%	#	%
Curricular Change	112	7.6	112	6.4	141	6.9	127	5.2	151	6.8
Course Revision	371	25.0	421	24.2	514	25.0	478	19.7	428	19.2
Pedagogy Change	108	7.3	129	7.4	145	7.1	307	12.7	240	10.7
Subject-Matter Expert Feedback	42	2.8	40	2.3	86	4.2	80	3.3	48	2.1
Total	633	42.7	702	40.3	886	43.2	992	41.0	867	38.8

Table A7. Program Resources Actions: 2015-16 through 2019-20

Program Resources	201	5-16	2010	6-17	201	7-18	2018	3-19	2019	9-20
Frogram Resources	#	%	#	%	#	%	#	%	#	%
Financial	9	0.6	9	0.5	19	0.9	5	0.2	4	0.2
Human Resources	20	1.3	28	1.6	52	2.5	40	1.7	23	1.0
General Resources	43	2.9	91	5.2	62	3.0	115	4.8	82	3.7
Total	72	4.8	128	7.3	133	6.5	160	6.6	109	4.9

Table A8. Co-Curricular Resources Actions: 2015-16 through 2019-20

Co-Curricular	2015	15-16 2016-17		2017-18		2018-19		2019-20		
Co-Curricular	#	%	#	%	#	%	#	%	#	%
Co-Curricular Opportunities	52	3.5	43	2.5	47	2.3	54	2.2	39	1.7
Academic Support/ Advising	186	12.5	269	15.5	350	17.0	388	16.0	505	22.6
Total	238	16.0	312	18.0	397	19.3	442	18.3	544	24.4

Table A9. Assessment Process Actions: 2015-16 through 2019-20

Assessment Process*	201	2015-16		2016-17		2017-18		2018-19		2019-20	
Assessment Process	#	%	#	%	#	%	#	%	#	%	
SLO Assessment Change	N/A	N/A	N/A	N/A	112	5.5	214	8.8	207	9.3	
Data Analysis Method Change	N/A	N/A	N/A	N/A	138	6.7	101	4.2	90	4.0	
Student Learning Outcome Change	N/A	N/A	N/A	N/A	46	2.2	20	8.0	9	0.4	
Target Change	N/A	N/A	N/A	N/A	3	0.1	4	0.2	16	0.7	
Increase Sample Size	N/A	N/A	N/A	N/A	22	1.1	79	3.3	68	3.0	
Communication on Assessment Process	N/A	N/A	N/A	N/A	118	5.7	145	6.0	134	6.0	
Total	445	29.9	480	27.6	446	21.6	569	23.5	524	23.5	

^{*}Assessment Process only had one subcategory before 2017-18 ("Assessment Methodology"). In 2017-18, six subcategories were added, and Assessment Methodology was removed (see Section I). Thus, no data exists before 2017-18 for the current subcategories.

Table A10. College-Level Actions: 2015-16 through 2019-20

Callaga Laval	201	5-16	2016-17		2017-18		2018	B-19	2019-20	
College-Level	#	%	#	%	#	%	#	%	#	%
Dual Enrollment	6	0.4	6	0.3	10	0.5	12	0.5	3	0.1
Articulation Agreement	12	8.0	20	1.1	21	1.0	59	2.4	45	2.0
Recruitment/Marketing	85	5.7	103	5.9	159	7.7	188	7.8	142	6.4
Total	103	6.9	129	7.3	190	9.2	259	10.7	190	8.5

Table A11. Descriptions and Examples of Actions by Major Categories and Subcategories

Major Catawara	Cubagia	Subcategories
Major Category	Subcategory	Description and Examples
	Curricular Change	Curricular change to degree program, e.g., added a course or other requirement; changed sequence of courses, paradigm shift—i.e., change in program focus based on industry standards and evolving technology; change in time schedule (when classes are offered); added courses online or in hybrid format; added/increased number of sections of a course to accommodate more students; coordinated course scheduling with other campuses, designing a common course syllabus, competitive admission, designing a common course curriculum; changed entrance requirements/prerequisites to program, e.g., require completion of MTH 151 or ENG 111 before entering program, changed GPA requirement; requirement of computer competency test before program placed.
Curriculum Specific	Course Revision	Revised existing course or courses; added or revised assignment, tests, readings, projects; modified assignment; modified course content, changed textbook; added or modified study guides, checklists, or other course handouts; revisited course topics for greater comprehension; emphasized/improved content; posted material online; added rubric; added review session or practice test; revised time spent on topic, remediation.
	Pedagogy Change	Revised methodology of delivering course material, e.g., less lecture, more student involvement, more interactive or experiential activities (lab); integrated learning technology (video, Blackboard), smaller class size, added or replaced some in person courses with on-line or hybrid courses (differs from offering entire degree program on-line); added peer learning methods.
	Subject Matter Expert Feedback	Sought recommendations from external and internal stakeholders, e.g., employers, on-site clinical coordinator/supervisor, program advisory board/committee, accreditation body, faculty cluster, and program review.
	Financial	Requested additional fiscal resources; allocated funds from other budget area to focus on achieving SLO.
Program Resources	Human Resources	Provided faculty or adjuncts with development or training, e.g., faculty attend teaching workshops or conference to keep current with industry changes; hired new faculty.
	General Resources	Utilized external partners as guest speakers or resources for students; physical resources, e.g., new software, computers, open lab time, expansion of physical space.
Co-Curricular Resources	Co-Curricular Opportunities	Coordinated opportunities to engage in learning outside classroom: e.g., faculty and students interaction outside classroom; optional field trips; internships (if not a part of course), social gatherings, career fairs, speakers, study sessions, participation in professional or student organizations.
	Academic Support/ Advising	Connected students with peer tutors; referred to NOVA Academic Support Resources like Writing Center, Science Lab, Math Lab; referred student to see academic advisor, counselor; improved or increased faculty advising and guiding students on degree related topics; program placement, transfer info sessions for 4 year colleges; orientation activities.

Major Category	Subcategory	Description and Examples
	SLO Assessment Change	Changed or added to the assessment method for the SLO; broke out SLO components and assessed those individually.
	Data Analysis Method Change	Changed or modified data analysis method, e.g., developed a new rubric; added indirect measures such as surveys or student self-assessment.
	Student Learning Outcome Change	Refined or modified student learning outcome(s).
SLO Assessment Process	Target Change	Increased target for success (e.g., increased the target number of students achieving a certain score on an assessment from 70% to 80%; increased the target assessment score from 60% to 70%); decreased target (e.g., decreased the target number of students achieving a certain score on an assessment from 90% to 80%; decreased the target assessment score from 100% to 90%); target was created/determined; target was revised or modified to be more clear or specific; target was changed (e.g., changing graduation target from percent/number increase per year to a percent of program placed students each year).
	Increase Sample Size	Improved/increased sample size, e.g., assessed more sections of a course; assessed more courses for the same SLO; increased faculty/campus participation in assessment.
	Communication on Assessment Process	Communicated with faculty to clarify or revise the assessment process; discussions/training about implementing the assessment (e.g., standardizing processes and procedures).
	Dual Enrollment	Allowed students to take program courses during high school.
College-Level	Articulation Agreement	Increased number of transferrable credits to specific 4 year institutions; Agreement with 4 year institution to accept NOVA graduates; change/update transfer requirements with transfer partners.
	Recruitment/Marketing	Efforts to increase access, e.g., outreach to high schools, non-traditional students, non-declared students.

Table A12. College-Wide Core Learning Outcome (CLO) Assessment Schedule: 2017-18 to 2022-23

CLO	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Civic Engagement		Х			Х	
Critical Thinking	Х			Х		
Professional Readiness			Х			Х
Quantitative Literacy	Х			Х		
Scientific Literacy			Х			Х
Written Communication		Х			Х	

PATHWAY TO THE AMERICAN DREAM—NOVA'S STRATEGIC PLAN 2017-2023

THE NOVA COMMITMENT

As its primary contributions to meeting the needs of the Commonwealth of Virginia, Northern Virginia Community College pledges to advance the social and economic mobility of its students while producing an educated citizenry for the 21st Century.

THE STRATEGIC PLAN GOALS AND OBJECTIVES¹

To deliver on this commitment, NOVA will focus its creativity and talent, its effort and energy, and its resources and persistence, on achieving three overarching goals—success, achievement, and prosperity. It will strive to enable **Every Student to Succeed, Every Program to Achieve,** and **Every Community to Prosper.** These strategic goals are grounded in our college's commitment to equity, excellence, empathy, evidence, and economic and social mobility (NOVA's 5Es).

GOAL 1: Every Student Succeeds

- Objective 1: Adopt a college-wide approach to advising
- Objective 2: Achieve equity in student outcomes

GOAL 2: Every Program Achieves

- **Objective 3:** Establish comprehensive, fully-integrated, Informed Pathways (high school to NOVA to four-year college/university) for every program
- Objective 4: Sustain and, where needed, establish effective, equity-minded NOVA collegewide processes, protocols, policies, and accountabilities for services and programs
- **Objective 5:** Align NOVA's culture, structure, and talent management/development with its access and equity mission and commitment to inclusive excellence
- Objective 6: Stabilize, grow, and sustain resources required to support mission and innovation

GOAL 3: Every Community Prospers

• **Objective 7:** Elevate and empower NOVA as the region's leading workforce provider across all essential and high demand industry sectors

¹ Strategic Plan Objectives were revised in Fall 2020.



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