**NOVA** | **Northern Virginia Community College**

# NOVA Institutional Effectiveness Audit of Educational Programs: 2012-13 to 2016-17

**NORTHERN VIRGINIA COMMUNITY COLLEGE**

**OFFICE OF INSTITUTIONAL EFFECTIVENESS AND STUDENT SUCCESS**

The purpose of the Office of Institutional Effectiveness and Student Success is to conduct analytical studies and provide information in support of institutional planning, policy formulation, and decision making. In addition, the office provides leadership and support in research related activities to members of the NOVA community engaged in planning and evaluating the institution's success in accomplishing its mission.

4001 Wakefield Chapel Road
Annandale, VA 22003-3796
(703) 323-3129
www.nvcc.edu/oir

**Table of Contents**

# List of Tables

# List of Figures

**Institutional Effectiveness Audit of Educational Programs**
**2012-13 to 2016-17**


**Introduction**

This Research Report examines the number and type of uses of results for 2016-17 *Annual Planning and Evaluation Reports for Instructional Programs* compared to the previous four years.

Assessment is a continuous process aimed at improving student learning. The *Annual Planning and Evaluation Report (APER) for Instructional Programs* is a way for programs to publicly report on student learning outcomes and program goals. Each year programs choose at least four student learning outcomes and two program goals to assess. Student learning outcomes assessment is divided into four sections: what students are learning (Student Learning Outcomes section), how programs evaluate student learning (Evaluation Methods), results of SLO assessments and possible areas for improvements (Assessment Results), and actions based on those results to further improve student learning (Use of Results). Two program goals are required to be assessed each year: one on graduation totals and one on program-placed students. This segment of the report is divided into four sections as well: Program Goals, Evaluation Methods, Assessment Results, and Use of Results.

Over the past nine years, the College has offered numerous workshops and presentations on assessment to further develop and promote a culture of assessment. As a result of those workshops and meetings, faculty and staffs' recognition and understanding of the process of assessment have increased, and the expectations for reports have grown. Additionally, the College has improved and clarified its own assessment of the yearly reports. In 2012-13, reporting requirements were raised, and reports were assessed on a higher scale than previous years. The coding method for the Use of Results section was also improved as programs' understanding and awareness of the assessment process has increased. Results that were counted in prior reports, such as "target met," have been removed as a use of results, and actions were only counted if reports indicated the semester and year when actions were implemented.

In 2013-14, a more rigorous rubric was introduced by the Office of Institutional Research (OIR) to assess program APERs and offer specific, structured feedback to programs on the assessment process. Further, OIR encouraged programs to include actions for improvement on program goals as well as SLOs in this cycle. The 2016-17 report, like the 2015-16 report, is focused on a more precisely defined use of results per category and subcategory that include specific dates (semester/year) for actions. More general items, such as discussing the results at cluster meetings, are now understood to be part of the assessment process and were removed from the coding categories. These changes have increased the accuracy of the classifications as well as the reliability of the total number of actions.

## Section 1. Submission of *Annual Planning and Evaluation Reports for Instructional Programs*: 2012-13 through 2016-17

Table 1 and Figure 1 present the number and percentage of programs submitting *Annual Planning and Evaluation Reports for Instructional Programs* from 2012-13 through 2016-17. Both degree-awarding programs and select stand-alone certificates were required to submit reports. Results for 2016-17 increased from the previous four years and show a 100 percent submission rate.

**Table 1. Number of Submissions of Annual Planning and Evaluation Reports by Educational Programs: 2012-13 through 2016-17**

| Academic Year | # of Annual Reports to be Submitted | # of Annual Reports Submitted | % of Annual Reports Submitted |
|---|---|---|---|
| 2016-17 | 55 | 55 | 100.0% |
| 2015-16 | 56 | 56 | 100.0% |
| 2014-15 | 55 | 54 | 98.2% |
| 2013-14 | 55 | 53 | 96.3% |
| 2012-13 | 52 | 46 | 88.5% |

**Figure 1. Submission Rate of *Annual Planning and Evaluation Reports for Instructional Programs*: 2012-13 through 2016-17**
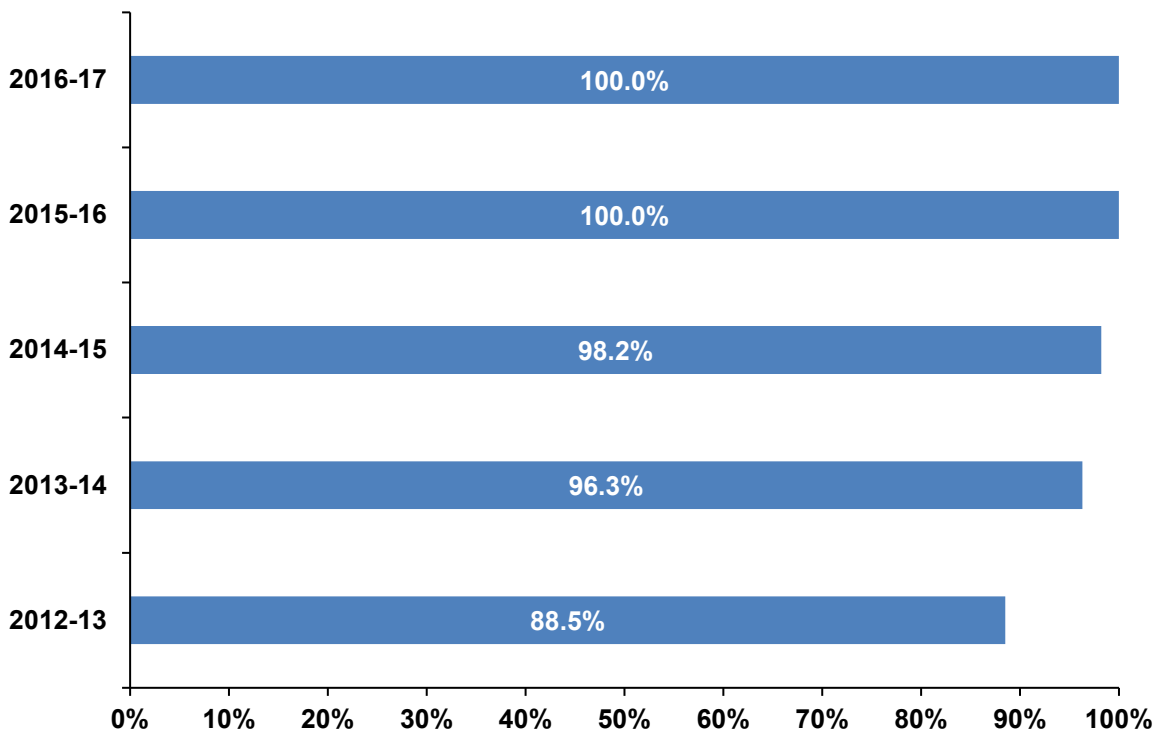
## Section 2. Quality of Reporting in *Annual Planning and Evaluation Reports for Instructional Programs*

As a culture of assessment has spread at NOVA, standards for assessing student learning and the quality of the reports have increased. In 2012-13, an analytic rubric that breaks down the results by the specific requirements of the checklist was developed and implemented for the assessment of 2013-14 APERs, yielding percentile scores (Tables 2 and 3). Due to this change, the 2016-17 overall results are not directly comparable to results prior to 2014-15.

The rubric has four criteria, one for each section of the APER: (1) SLOs/Program Goals; (2) Evaluation Methods; (3) Results; and (4) Use of Results. Points are awarded for addressing each of the components in each column: two points for having met the requirement, one point for partially meeting it, and zero points for not meeting the requirement. Based on the total points, there are four levels of performance: meeting expectations, mostly meeting expectations, partially meeting expectations, and not meeting expectations, as described in Table 2. The scores for the 2016-17 APERs are given in Table 3. The total rubric score is identical to the previous cycle. Although there were improvements in the first three criteria, the criterion Use of Results had a small decline.

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

| Score on Rubric | Color | 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 |

### Table 3. Assessment Rubric Results College-Wide: 2014-15 through 2016-17

| Annual Planning and Evaluation Reports | 2014-15 | 2015-16 | 2016-17 | % Change from 2015-16 to 2016-17 |
|---|---|---|---|---|
| Rubric Criteria | % | % | % | % Points |
| SLOs/Program Goals | 93.6% | 97.2% | 98.2% | 1.0 |
| Evaluation Methods | 92.4% | 96.7% | 97.2% | 0.5 |
| Results | 87.7% | 89.7% | 91.9% | 2.2 |
| Use of Results | 88.1% | 86.0% | 82.2% | -3.8 |
| TOTAL | **90.4%** | **92.4%** | **92.4%** | **0.0** |

## Section 3. Use of Assessment Results to Improve Student Learning

An important component of assessing student learning is using the results from assessments to make changes that lead to student learning outcome improvements. As shown in Table 4 and Figure 2, in the 2012-13 academic year, programs indicated on average 12.7 uses of results to improve student learning. Since then, the average uses of results to improve student learning has increased to 31.6 for the 2016-17 academic year, a 148.8 percent increase in that period for the use of results per program. There was a 17.3 percent increase in actions reported in 2016-17 (1,740 actions) over the previous year (1,484 actions). These figures point toward significant, ongoing, and targeted improvement over past cycles.

**Table 4. Average Number of Use of Results Per Program: 2012-13 through 2016-17**

| Academic Year | Annual Reports Submitted | Total # of Use of Results | Average # of Use of Results per Program |
|---|---|---|---|
| 2016-17 | 55 | 1,740 | 31.6 |
| 2015-16 | 56 | 1,484 | 26.5 |
| 2014-15 | 54 | 1,072 | 19.9 |
| 2013-14 | 53 | 882 | 16.6 |
| 2012-13 | 46 | 583 | 12.7 |

**Figure 2. Average Number of Use of Results Per Program: 2012-13 through 2016-17**
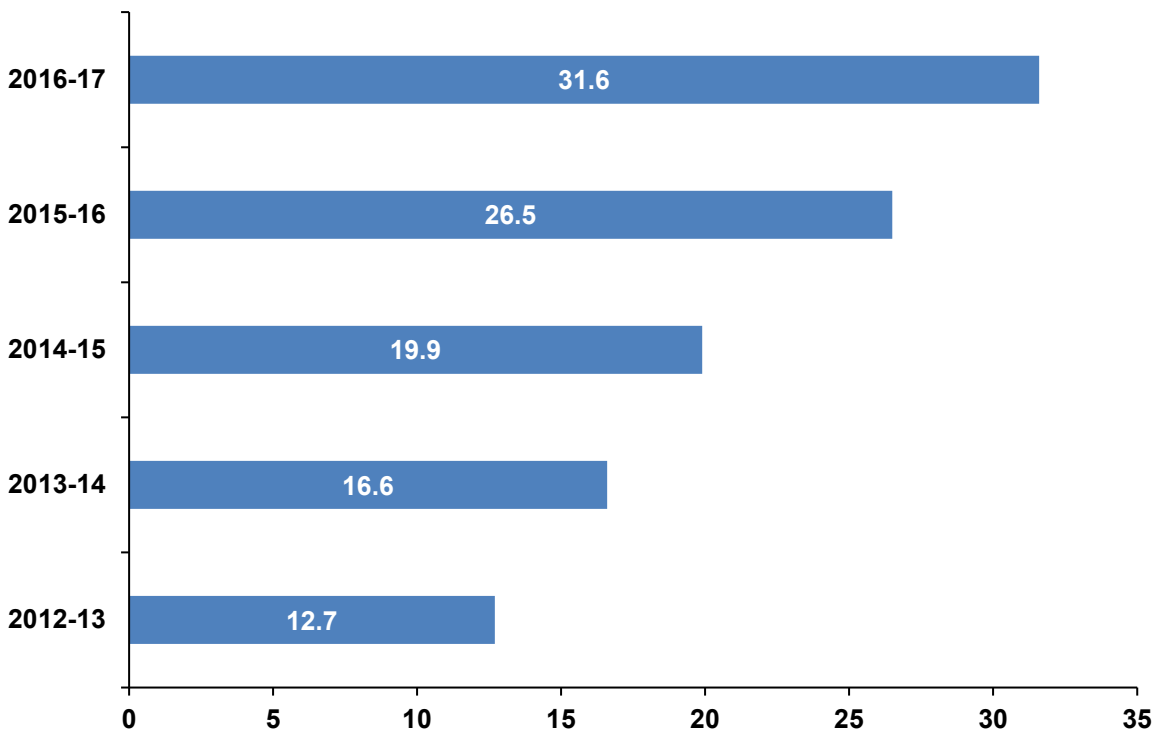
## 3a. Use of Results by Major Category

In addition to counting the total number of use of results, *Annual Planning and Evaluation Reports for Instructional Programs* are analyzed to determine how programs are using the results from assessments to improve student learning and assessment processes. The five major types of actions that programs make include: Curriculum-Specific, Program Resources, Co-Curricular Resources, Assessment Process, and College-Level. Table 5 and Figure 3 present the use of results for the five major categories by both number and percentage of the total. In the 2016-17 academic year, as in the four previous cycles, the most frequent use of results is curriculum-specific (39.7%) and assessment process (27.6%).

### Table 5. Use of Results by Major Category: 2012-13 through 2016-17

| Use of Results Major Categories | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Curriculum-Specific | | Program Resources | | Co-Curricular Resources | | Assessment Process | | College-Level | | Total |
| | # | % | # | % | # | % | # | % | # | % | # |
| 2016-17 | 691 | 39.7 | 128 | 7.4 | 312 | 17.9 | 480 | 27.6 | 129 | 7.4 | 1,740 |
| 2015-16 | 626 | 42.2 | 72 | 4.9 | 238 | 16.0 | 445 | 30.0 | 103 | 6.9 | 1,484 |
| 2014-15 | 436 | 40.7 | 46 | 4.3 | 197 | 18.4 | 324 | 30.2 | 75 | 6.5 | 1,078 |
| 2013-14 | 391 | 44.3 | 59 | 6.6 | 138 | 15.6 | 241 | 27.3 | 53 | 5.9 | 882 |
| 2012-13 | 331 | 56.8 | 32 | 5.5 | 68 | 11.7 | 119 | 20.4 | 33 | 5.7 | 583 |

Figure 3 illustrates how programs remain consistently focused on using results to address Curriculum-Specific concerns, such as course revisions or pedagogical or curricular changes to improve student learning. In 2016-17, 39.7 percent of actions taken by programs were classified as Curriculum-Specific, meaning that they directly impacted student learning in the classroom.

### Figure 3. Use of Results by Major Category: 2012-13 through 2016-17
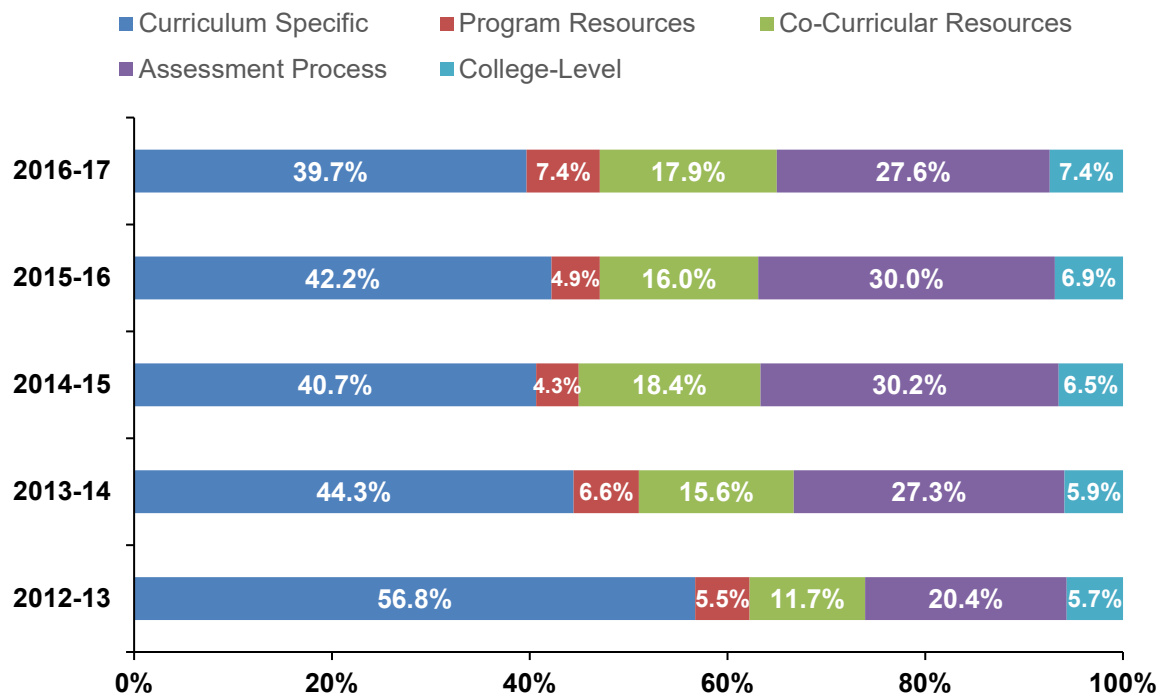
### 3b. Use of Results by Subcategories

The five major categories break down into a total of thirteen subcategories. Table 6 presents the subcategories by each major category.

**Table 6. Use of Results Codes: Major and Subcategories**

| Major Category | Subcategories |
|---|---|
| Curriculum-Specific | Curricular Change |
| | Course Revision |
| | Pedagogy |
| | Subject-Matter Expert Feedback |
| Program Resources | Financial |
| | Human Resources |
| | General Resources |
| Co-Curricular Resources | Co-Curricular Opportunities |
| | Academic Support/Advising |
| Assessment Process | Assessment Methodology |
| College-Level | Dual Enrollment |
| | Articulation Agreement |
| | Recruitment/Marketing |

### Curriculum

Curriculum-Specific changes divide into four subcategories: curricular change, course revision, pedagogy, and subject-matter expert feedback. This category remains the largest major category. Table 7 and Figure 4 illustrate the changes in usage of these subcategories.

Curricular change relates to broader changes in to the degree program itself: e.g., adding a course or other requirement, changing the sequence of courses or the program focus, how or when a program offers classes, and changes to program and/or course prerequisites. There has been a decline in the overall percentage of curriculum changes from 2015-16 (7.6 percent) to 2016-17 (5.8 percent).

Course revision describes "what" students learn, i.e., the content of the course. Examples of course revision could be adding to or revising course content; supplementing or revising assignments, tests, reading, projects, handouts; or changing textbooks. In the context of the overall increases in reported actions in 2016-17, course revision accounts for about the same proportion of total actions taken (24.2 percent) as in the previous year (25.0 percent).

Pedagogical changes are related to "how" students learn and consequently how teachers structure the learning environment. This could mean fewer lectures, more student involvement (e.g., class discussion or small group work), or more interactive or experiential activities, such as labs, role-playing, hands-on learning, or even gaming. More actions were classified as pedagogy in 2016-17 (129 actions) than in 2015-16 (108 actions), representing 7.4 percent of all actions reported in 2016-17.

Subject-matter expert feedback includes seeking recommendations from the faculty cluster or external stakeholders, such as employers, on-site clinical supervisors, the program advisory board, or an accreditation body. Subject-matter expert feedback was the least frequently reported action of these four subcategories in 2016-17. The use of subject-matter expert feedback in 2016-17 (40 actions) is consistent with 2015-16 (42 actions), representing 2.3 percent of overall actions reported in 2016-17.

**Table 7. Use of Results by Subcategory: 2012-13 through 2016-17 - Curriculum-Specific**

| Use of Results Subcategories: Curriculum-Specific | 2012-13 | | 2013-14 | | 2014-15 | | 2015-16 | | 2016-17 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % |
| Curricular Change | 61 | 10.5 | 75 | 8.5 | 95 | 8.8 | 112 | 7.6 | 101 | 5.8 |
| Course Revision | 107 | 18.4 | 241 | 27.3 | 275 | 25.7 | 371 | 25.0 | 421 | 24.2 |
| Pedagogy | 111 | 19.0 | 44 | 4.9 | 57 | 5.3 | 108 | 7.3 | 129 | 7.4 |
| Subject-Matter Expert Feedback | 63 | 10.8 | 33 | 3.7 | 19 | 1.8 | 42 | 2.8 | 40 | 2.3 |
| Total | 342 | 58.7 | 393 | 44.4 | 446 | 41.6 | 633 | 42.7 | 691 | 39.7 |

**Figure 4. Use of Results by Subcategory: 2012-13 through 2016-17 - Curriculum-Specific**



Legend: Curricular Change | Course Revision | Pedagogy | Subject-Matter Expert Feedback

2016-17: 5.8% | 24.2% | 7.4% | 2.3%
2015-16: 7.6% | 25.0% | 7.3% | 2.8%
2014-15: 8.8% | 25.7% | 5.3% | 1.8%
2013-14: 8.5% | 27.3% | 4.9% | 3.7%
2012-13: 10.5% | 18.4% | 19.0% | 10.8%
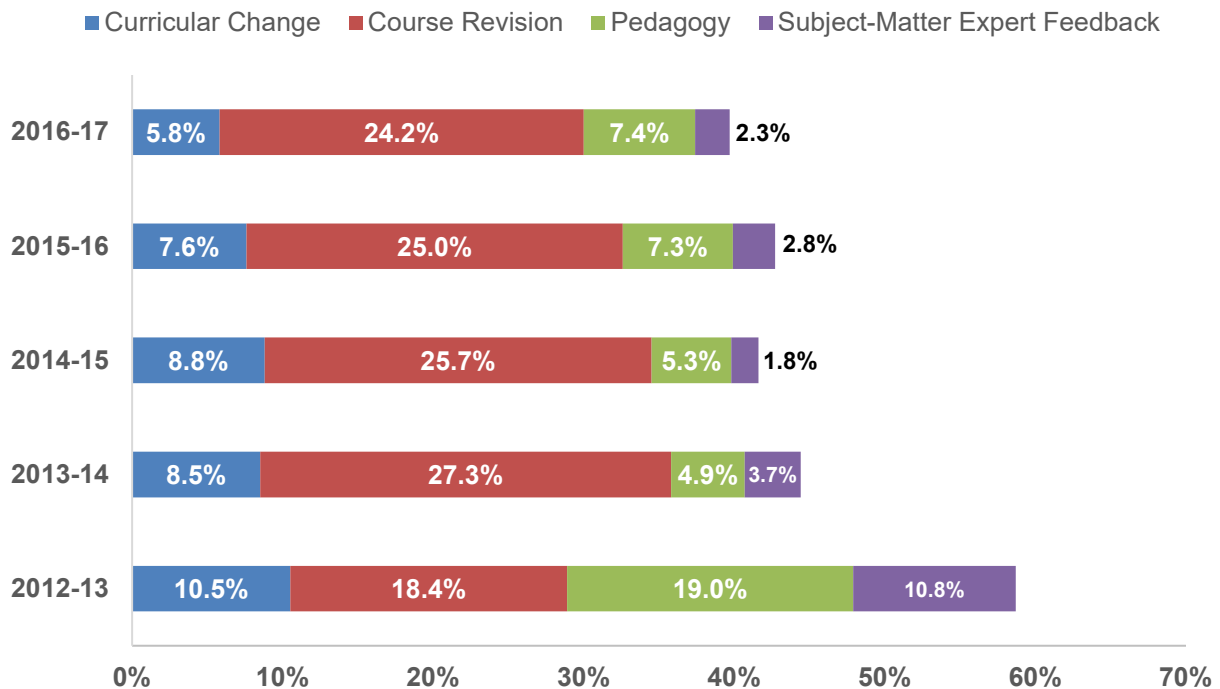
**Program Resources**

The Program Resources category comprised 7.4 percent of total use of results for 2016-17. Program resources include three subcategories: financial, human resources, and general resources. Financial resources entail requesting or allocating additional funds to achieve SLO outcomes or program goals. Human resources could include professional development for faculty or staff or hiring new faculty or lab instructors. General resources consist of physical resources, such as new software, computers, expansion of physical space, or utilizing external partners, for example, as guest speakers. Table 8 and Figure 5 show that the use of general resources have more than doubled in use in 2016-17 (91 actions) over the previous year (43 actions).

**Table 8. Use of Results by Subcategory: 2012-13 through 2016-17- Program Resources**

| Use of Results Subcategories: Program Resources | 2012-13 | | 2013-14 | | 2014-15 | | 2015-16 | | 2016-17 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % |
| Financial | 5 | 0.9 | 3 | 0.3 | 1 | .01 | 9 | 0.6 | 9 | 0.5 |
| Human Resources | 14 | 2.4 | 23 | 2.6 | 21 | 2.0 | 20 | 1.3 | 28 | 1.6 |
| General Resources | 13 | 2.2 | 33 | 3.7 | 24 | 2.2 | 43 | 2.9 | 91 | 5.2 |
| **Total** | **32** | **5.5** | **59** | **6.6** | **46** | **4.3** | **72** | **4.8** | **128** | **7.4** |

**Figure 5. Use of Results by Subcategory: 2012-13 through 2016-17 - Program Resources**
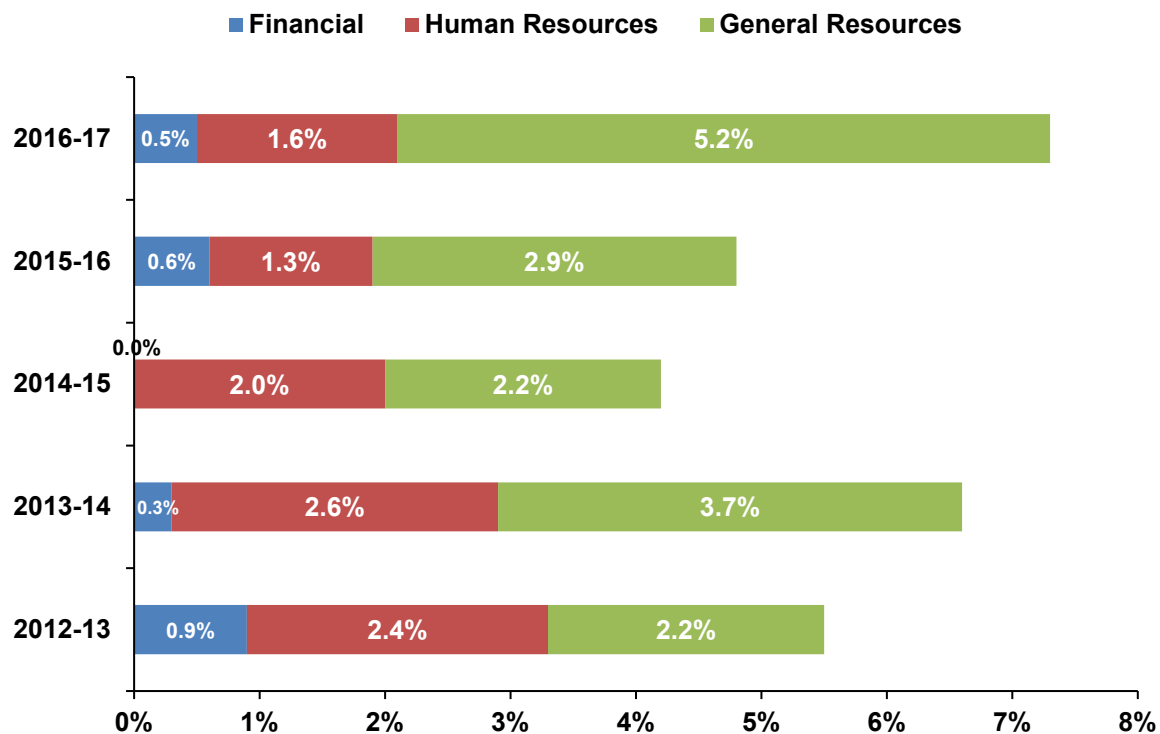
**Co-Curricular Resources**

The Co-Curricular Resources category comprised 17.9 percent of total uses of results for 2016-17. This category includes co-curricular opportunities and academic support/advising. Co-curricular opportunities are coordinated opportunities for students to engage outside of the classroom that are not a required part of a course. They include field trips, internships, social gatherings, career fairs, study sessions, and participation in professional or student organizations. Co-curricular activities declined in 2016-17 (2.5 percent) over 2015-16 (3.5 percent). Academic support/ advising actions refer students to academic support resources like the Writing Center, Science Lab, or Math Lab or peer tutoring. Reported actions classified as academic support/advising increased significantly in 2016-17 (269 actions) over 2015-16 (189 actions), as shown in Table 9 and Figure 6.

**Table 9. Use of Results by Subcategory: 2012-13 through 2016-17 - Co-Curricular Resources**

| Use of Results Subcategories: Co-Curricular | 2012-13 | | 2013-14 | | 2014-15 | | 2015-16 | | 2016-17 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % |
| Co-Curricular Opportunities | 24 | 4.1 | 17 | 1.9 | 33 | 3.1 | 52 | 3.5 | 43 | 2.5 |
| Academic Support/Advising | 44 | 7.5 | 121 | 13.7 | 164 | 15.3 | 186 | 12.5 | 269 | 15.4 |
| **Total** | **68** | **11.6** | **138** | **15.6** | **197** | **18.4** | **238** | **16.0** | **312** | **17.9** |

**Figure 6. Use of Results by Subcategory: 2012-2013 through 2016-17 - Co-Curricular Resources**



9
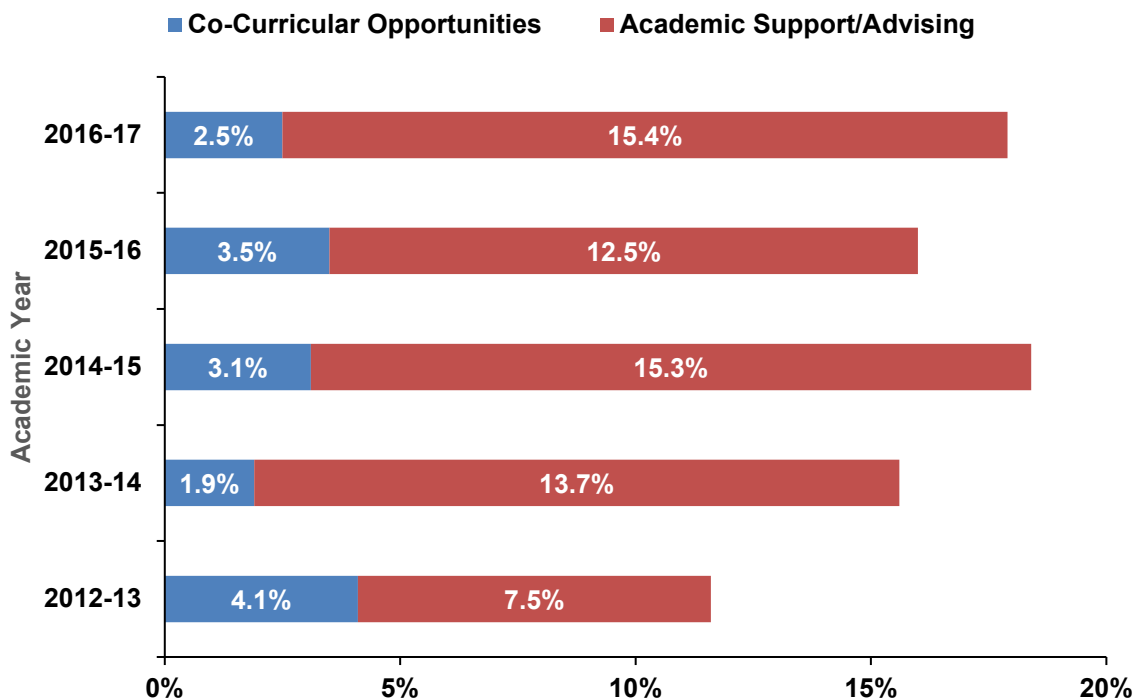
**Assessment Process**

Assessment process describes a variety of topics, such as modifying an assessment, changing the method of data analysis, adding another assessment method, revising the achievement target, and changing the system of gathering data or providing feedback. While the percentage of actions classified as assessment process in declined in 2016-17 (27.6 percent) from 2015-16 (30.0 percent), more assessment process actions were taken in 2016-17 (480) over the previous year (445) as displayed in Table 5 and Figure 7.

**Figure 7. Use of Results to Improve Assessment Process: 2012-13 through 2016-17**
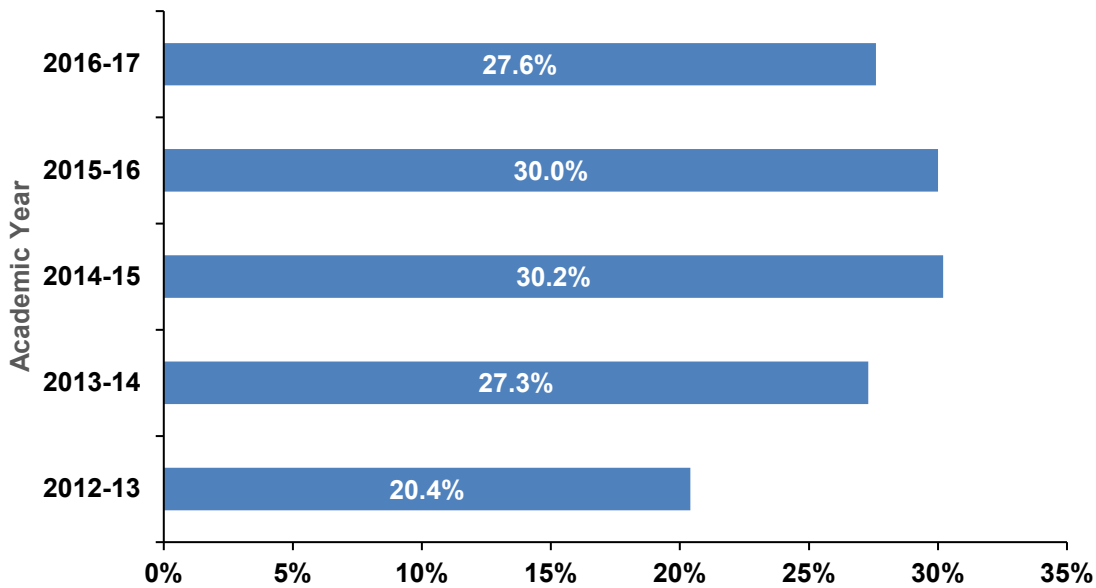


**College-Level**

The College-Level category includes three subcategories: dual enrollment, articulation agreement, and recruitment/marketing. Dual enrollment programs are with local high schools, and articulation agreements are with 4-year institutions. Recruitment/marketing actions are efforts to increase access through outreach to high school students, non-traditional students, and non-declared students. Recruitment/marketing actions have risen to 5.9 percent, continuing a general trend of improvement since 2012-13 (see Table 10 and Figure 8). The results for dual enrollment and articulation agreements are consistent with the results for previous years.

**Table 10. Use of Results by Subcategory: 2012-13 through 2016-17 - College-Level**

| Use of Results Subcategories | 2012-13 | | 2013-14 | | 2014-15 | | 2015-16 | | 2016-17 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % |
| Dual enrollment | 1 | 0.2 | 1 | 0.1 | 4 | 0.3 | 6 | 0.4 | 6 | 0.3 |
| Articulation Agreements | 4 | 0.7 | 5 | 0.5 | 6 | 0.5 | 12 | 0.8 | 20 | 1.1 |
| Recruitment/Marketing | 28 | 4.8 | 47 | 5.3 | 65 | 5.7 | 85 | 5.7 | 103 | 5.9 |
| **Total** | **33** | **5.7** | **53** | **5.9** | **75** | **6.5** | **103** | **6.9** | **129** | **7.4** |

**Figure 8. Use of Results by Subcategory: 2012-13 through 2016-17—College-Level**
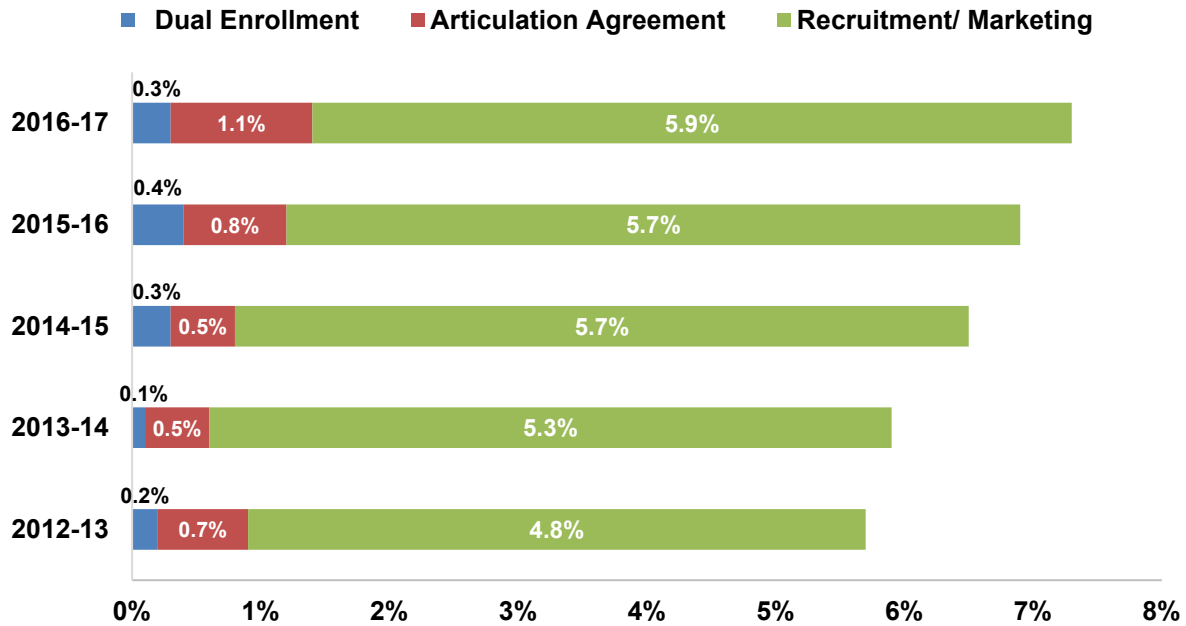


**Conclusion**

In summary, NOVA's educational programs continue to increase the quality of their efforts to improve student learning through academic assessment. The results of the 2016-17 *Institutional Effectiveness Audit of Educational Programs* demonstrate that at NOVA, assessment results are consistently used to make curriculum-specific changes aimed to improve student learning (39.7 percent of total changes), and the subcategory with the largest use by programs was course revision (24.2 percent of total changes). The number of use of results per program is 31.6, higher than the score for any previous year. The average overall rubric score for all NOVA programs is 92.4 percent; thus, programs largely meet the assessment requirements. The culture of assessment at NOVA is clearly growing stronger with each assessment cycle as more faculty and staff participate in the process and gain a better understanding of the purpose and benefits of assessment to improve student learning.

**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, the 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 OBJECTIVES**

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.**

To advance the completion agenda described above, thereby promoting students' success and enhancing their social mobility, ensuring that programs achieve, and producing an educated citizenry for the 21st Century, the following goals and objectives are adopted:

## GOAL 1: Every Student Succeeds
- **Objective 1:** Develop a College-wide approach to advising that ensures all students are advised and have access to support throughout their time at NOVA
- **Objective 2:** Implement VIP-PASS System as the foundational technology based on NOVA Informed Pathways for student self-advising, assignment and coordination of advisors, and course registration

## GOAL 2: Every Program Achieves
- **Objective 3:** Develop comprehensive, fully integrated Informed Pathways for every program to ensure seamless transitions from high school and other entry points to NOVA, and from NOVA to four-year transfer institutions or the workforce
- **Objective 4:** Develop effective processes and protocols for programmatic College-wide collective decisions that include consistent, accountable leadership and oversight of each academic program with designated "owners," active advisory committees, clear student learning outcomes and assessments, and program reviews in all modalities of instruction
- **Objective 5:** Align NOVA's organizational structures, position descriptions, and expectations for accountability with its overarching mission to support student engagement, learning, success and institutional effectiveness

## GOAL 3: Every Community Prospers
- **Objective 6:** Enhance the prosperity of every community in Northern Virginia by refocusing and prioritizing NOVA's workforce development efforts
- **Objective 7:** Further develop NOVA's IT and Cybersecurity programs to support regional job demand and position NOVA as the leading IT community college in the nation
- **Objective 8:** Re-envision workforce strategies and integrate workforce development into a NOVA core focus
- **Objective 9:** Plan to expand the breadth and reach of NOVA's healthcare and biotechnology programs, and prioritize future programs to support regional economic development goals economic development goals

# NOVA

## Northern Virginia
## Community College

**703–323–3000** | *www.nvcc.edu*