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

# NOVA Institutional Effectiveness Audit of Educational Programs: 2011-12 to 2015-16

**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.

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**Institutional Effectiveness Audit of Educational Programs for 2011-12 to 2015-16**

**Introduction**

This Research Report analyzes the college-wide assessment of student learning as it is reported in the *Annual Planning and Evaluation Reports (APER) for Instructional Programs*. This report analyzes the number and type of uses of results for 2015-16 compared to the previous four years.

Assessment is a continuous process aimed at improving student learning. The *Annual Planning and Evaluation Report 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 (SLOs) and two program goals to assess. The segment on student learning outcomes is divided into four sections: (1) what students are learning (Student Learning Outcomes section of the report); (2) how programs evaluate student learning (Evaluation Methods section); (3) assessment results (strengths and weaknesses) and possible areas for improvements (Assessment Results section); and (4) actions based on those results to further improve student learning (Use of Results section). Additionally, programs assess and report on two program goals: graduation totals and 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), and programs conduct a similar analysis to the SLO section of the report.

Over the past nine years, NOVA has offered numerous workshops and presentations on assessment to further develop and promote a culture of assessment. We also meet with faculty, staff, and administrators to discuss the assessment process, collecting and analyzing assessment data, and how to "close the loop" by implementing changes aimed to improve student learning based on assessment data. As a result of these workshops and meetings, the culture of assessment is growing at the College, and expectations about programs' assessment of student learning and resulting reports have grown.

Additionally, the College has improved and clarified its own assessment of the annual 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 was also improved as programs' understanding and awareness of the assessment process has grown. 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 did or will occur.

In 2013-14, a more rigorous rubric was introduced by 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 2015-16 compiled report, like the 2014-15 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**

Table 1 and Figure 1 present the number and percentage of programs submitting *Annual Planning and Evaluation Reports for Instructional Programs* from 2011-12 through 2015-16. Degree-granting programs and select stand-alone certificates are required to submit a report. Results for 2015-16 increased from the previous three years and demonstrate a 100 percent submission rate.

**Table 1. Number of Submissions of Annual Planning and Evaluation Reports by Educational Programs: 2011-12 through 2015-16**

| Academic Year | # of Annual Reports to be Submitted | # of Annual Reports Submitted | % of Annual Reports Submitted |
|---|---|---|---|
| 2015-16 | 56 | 56 | 100.0% |
| 2014-15 | 55 | 54 | 98.2% |
| 2013-14 | 55 | 53 | 96.3% |
| 2012-13 | 52 | 46 | 88.5% |
| 2011-12 | 56 | 56 | 100.0% |

**Figure 1. Submission Rate of Annual Planning and Evaluation Reports by Educational Programs: 2011-12 through 2015-16**
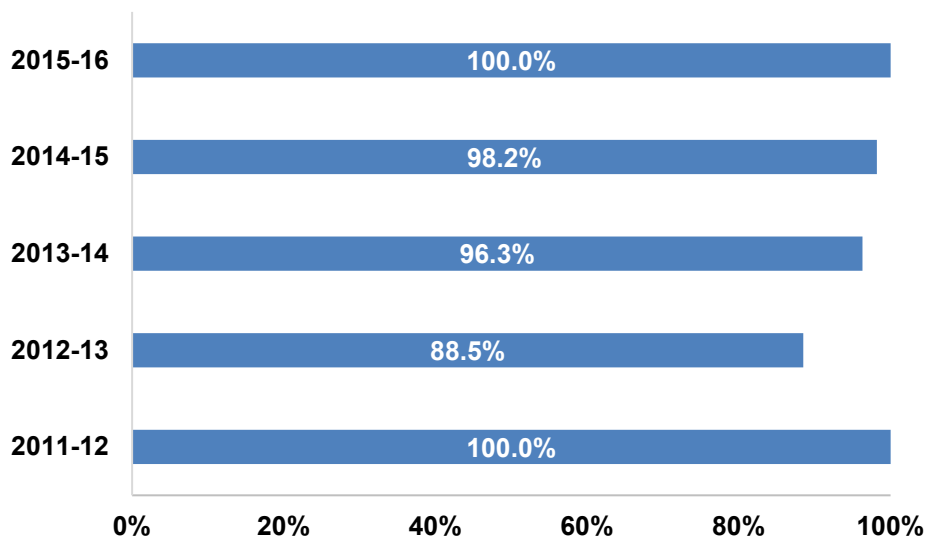
## Section 2. Quality of Reporting in *Annual Planning and Evaluation Reports for Instructional Programs*

As a culture of assessment has spread at NOVA, standards for assessing student learning and program reporting have increased. In 2012-13, an analytic rubric that breaks down the results by the specific requirements of the report was developed and implemented for the assessment of 2013-14s APERs, yielding percentile scores (Tables 3 and 4). Due to this change in assessment method, the 2015-16 overall results are directly comparable only to the 2014-15 results, but not to results from previous cycles.

The rubric has four criteria, one for each section of the report: (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 section: two points for having met the requirement, one point for meeting it partially, and zero points for failing to meet 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 3.

**Table 2. Quality of Reporting in Annual Planning and Evaluation Reports: 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 |

The scores for the 2015-16 APERs are given in Table 4. These results show an overall improvement of 2.0 percent in rubric scores over the previous cycle. This finding suggests that faculty are continuing to use assessment results to improve student outcomes and that the quality of assessment methods and reports is improving at NOVA.

**Table 3. Assessment Rubric Results College-Wide: 2014-15 and 2015-16**

| Annual Planning and Evaluation Reports | 2014-15 | 2015-16 | % Points Change from 2014-15 to 2015-16 |
|---|---|---|---|
| Rubric Criteria | % | % | % Points |
| SLOs/Program Goals | 93.6% | 97.2% | 3.6% |
| Evaluation Methods | 92.4% | 96.7% | 4.3% |
| Results | 87.7% | 89.7% | 2.0% |
| Use of Results | 88.1% | 86.0% | -2.1% |
| TOTAL | 90.4% | 92.4% | 2.0% |

## 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 5 and Figure 2, in the 2011-12 academic year, programs indicated, on average, 16.5 changes to improve student learning. Since then, the average number of changes implemented by programs to improve student learning has increased to 26.5 for the 2015-16 academic year, a 60.6 percent increase in the use of results per program over the past five years. There was a decrease in the number of use of results from 2011-12 to 2012-13, when improvements to the coding system produced a more accurate count of the most current actions for improvement. As explained previously, in past reports every change was counted as a use of results. In 2012-13, only changes made since the last assessment or specified to be implemented before the next assessment were counted, and "Target Met" was removed as a use of results. This accounts for the decrease in actions from 2011-12 (16.5) to 2012-13 (12.7), a 23 percent decline. In 2013-14, the number of changes per program returned to 2011-12 levels when measured with the more rigorous coding procedure, and the 2014-15 and 2015-16 reports included more changes than previous years. As indicated in Table 5, the 2015-16 results show a strong increase in overall uses of results year to year, with the average number of actions per program increasing from 19.9 in 2014-15 to 26.5 in 2015-16. In terms of the number of actions, there was a 38.4 percent increase in actions reported in 2015-16 (1,484 actions) over the previous year (1,072 actions). These results point toward significant, ongoing, and targeted improvement over past cycles.

**Table 4. Average Number of Use of Results Per Program: 2011-12 through 2015-16**

| Academic Year | Annual Reports Submitted | Total # of Use of Results | Average # of Use of Results per Program |
|---|---|---|---|
| 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 |
| 2011-12 | 56 | 922 | 16.5 |

**Figure 2. Average Number of Use of Results Per Program: 2011-12 through 2015-16**
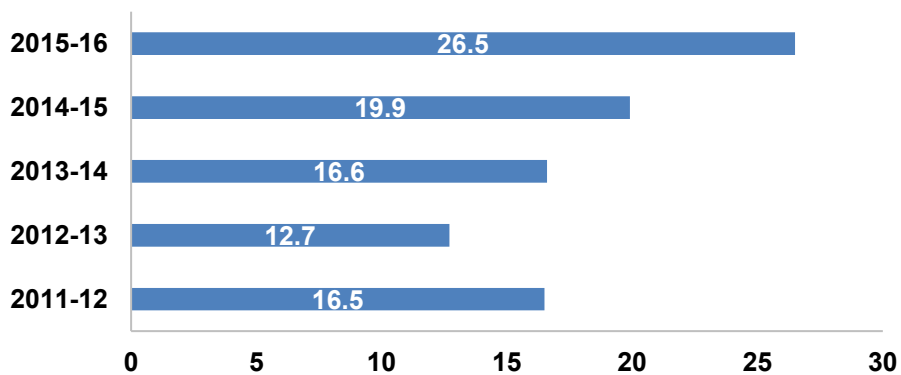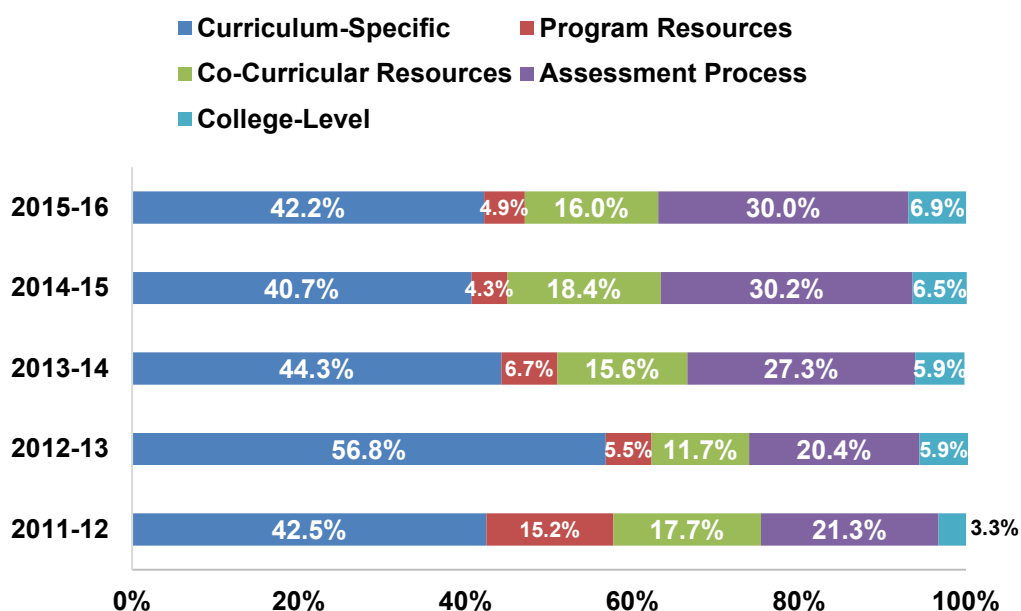
## 3A. Use of Results by Major Category

In addition to counting the total number of changes, programs' APERs 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 6 and Figure 3 present the use of results for the five major categories by both number and percentage of the total. In the 2015-16 academic year, as in the four previous cycles, the most frequent use of results is curriculum-specific (42.2%) and assessment process (30.0%). This trend coincides with the implementation of more rigorous coding and reporting protocols described above.

### Table 5. Use of Results by Major Category: 2011-12 through 2015-16

| | Use of Results Major Categories | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Curriculum-Specific | | Program Resources | | Co-Curricular Resources | | Assessment Process | | College-Level | | Total |
| | # | % | # | % | # | % | # | % | # | % | # |
| 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 | 53 | 5.9 | 583 |
| 2011-12 | 388 | 42.5 | 139 | 15.2 | 162 | 17.7 | 195 | 21.3 | 30 | 3.3 | 914 |

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 2015-16, 42.2 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: 2011-12 through 2015-16



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### 3B. Use of Results by Sub-Categories

The five major categories break down into a total of twelve sub-categories. Table 7 presents the sub-categories by each major category. The "Other" category has not been used since 2012-2013 because of greater clarification in the coding method.

#### Table 6. Use of Results Codes: Major and Sub-Categories

| Major Category | Sub-Categories |
|---|---|
| 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 | Pipeline (Dual enrollment and Transfer to 4-year university) |
| | Recruitment/Marketing |

### Curriculum-Specific

Curriculum-specific changes divide into four sub-categories: curricular change, course revision, pedagogy, and subject-matter expert feedback. This category remains the largest major category. Table 8 and Figure 4 illustrate the changes in usage of these sub-categories. All four categories showed significant increases in overall usage.

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. Roughly 100 more course revisions (371) were reported in 2015-16 than in 2014-15 (275). However, in the context of the overall increases in reported actions in 2015-16, course revision accounts for about the same proportion of total actions taken (25.0 percent) in 2015-16 as in the previous year (25.7 percent).

Curricular change relates to broader changes in to the degree program itself: e.g., adding a course or other requirement (including pre-requisite courses), changing the sequence of courses or the program focus, or how or when a program offers classes. While the percentage of overall actions coded as curricular change has declined slightly in 2015-16 (7.6 percent) from 2014-15 (8.8 percent), 17 more actions classified as curricular change were taken in 2015-16 (112 actions) than in the previous year (95 actions).

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. Actions classified as pedagogy nearly doubled in 2015-16 (108 actions) over 2014-15 (57 actions), representing 7.3 percent of all actions reported in 2015-16.

Subject-matter expert feedback involves 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 sub-categories in 2015-16. Its use more than doubled in frequency (42 actions) over the previous year (19 actions), representing 2.8 percent of overall actions reported in 2015-16.

**Table 7. Use of Results by Subcategory: 2011-12 through 2015-16 - Curriculum-Specific**

| Use of Results Sub-Categories: Curriculum-Specific | 2011-12 | | 2012-13 | | 2013-14 | | 2014-15 | | 2015-16 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % |
| Curricular Change | 85 | 9.2 | 61 | 10.5 | 75 | 8.5 | 95 | 8.8 | 112 | 7.6 |
| Course Revision | 175 | 19.0 | 107 | 18.4 | 241 | 27.3 | 275 | 25.7 | 371 | 25.0 |
| Pedagogy | 83 | 9.0 | 111 | 19.0 | 44 | 4.9 | 57 | 5.3 | 108 | 7.3 |
| Subject-Matter Expert Feedback | 45 | 4.9 | 63 | 10.8 | 33 | 3.7 | 19 | 1.8 | 42 | 2.8 |
| **Total** | **388** | **42.1** | **342** | **58.7** | **393** | **44.4** | **446** | **41.6** | **633** | **42.7** |

**Figure 4. Use of Results by Subcategory: 2011-12 through 2015-16 - Curriculum-Specific**
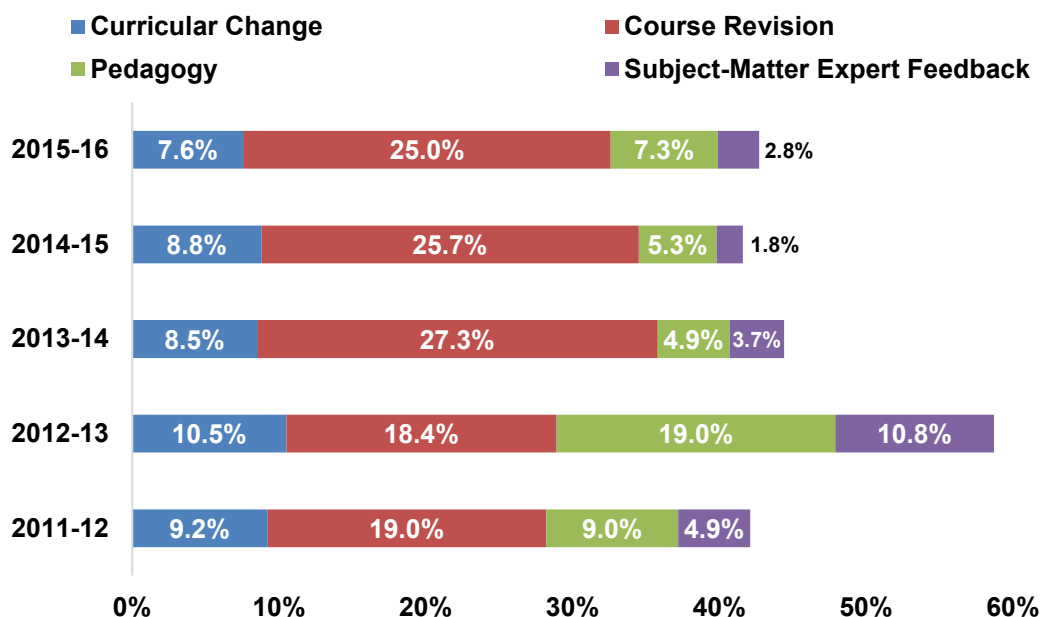
**Program Resources**

The program resources category comprised 4.9 percent of total use of results for 2015-16, a slight increase from the previous year. Program resources include three sub-categories: financial, human resources, and general resources. Financial resources entail requesting or allocating additional funds to achieve student learning outcomes or program goals. Human resources include professional development for faculty or staff or hiring new faculty or lab instructors. General resources consist of physical resources, such as new software or computers, expansion of physical space, or utilizing external partners, for example as guest speakers. Table 9 and Figure 5 show that while financial resources accounted for 11.3 percent of actions reported in 2011-12, in the subsequent four years it has declined to one percent or less. The use of general resources showed a modest gain in 2015-16 (2.9 percent) over the previous year (2.2 percent), while human resources changes decreased.

**Table 8. Use of Results by Subcategory: 2011-12 through 2015-16—Program Resources**

| Use of Results Sub-Categories: Program Resources | 2011-12 | | 2012-13 | | 2013-14 | | 2014-15 | | 2015-16 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % |
| Financial | 104 | 11.3 | 5 | 0.9 | 3 | 0.3 | 1 | .01 | 9 | 0.6 |
| Human Resources | 13 | 1.4 | 14 | 2.4 | 23 | 2.6 | 21 | 2.0 | 20 | 1.3 |
| General Resources | 22 | 2.4 | 13 | 2.2 | 33 | 3.7 | 24 | 2.2 | 43 | 2.9 |
| **Total** | **139** | **15.1** | **32** | **5.5** | **59** | **6.6** | **46** | **4.3** | **72** | **4.9** |

**Figure 5. Use of Results by Subcategory: 2011-12 through 2015-16 - Program Resources**
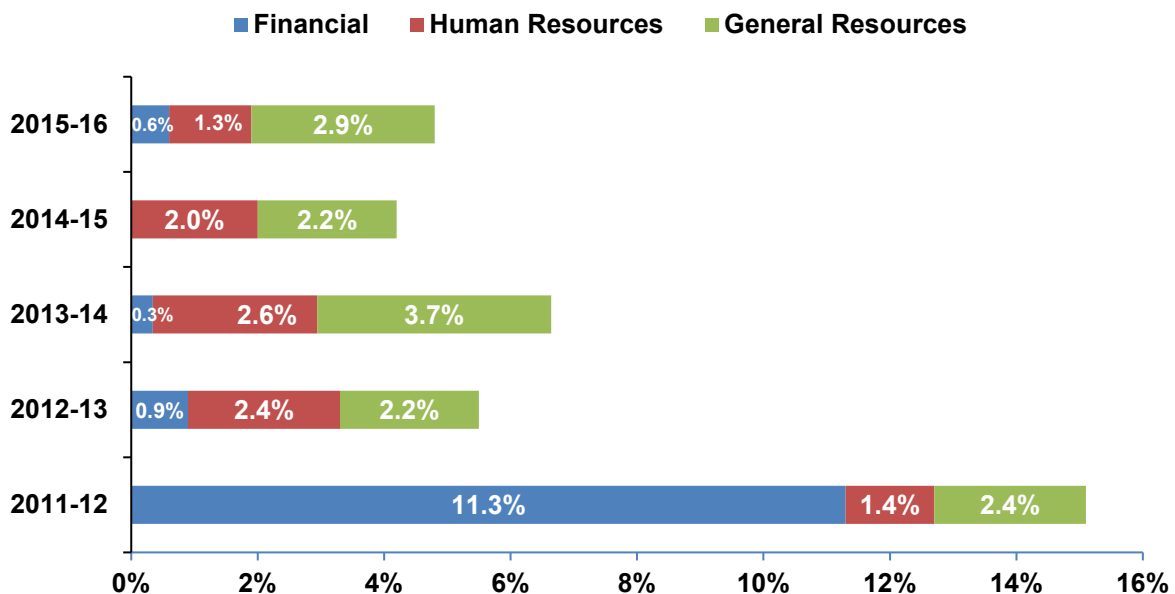
**Co-Curricular Resources**

The co-curricular resources category comprised 16.0 percent of total uses of results for 2015-16. This category includes co-curricular opportunities and academic support/advising. Co-curricular opportunities are coordinated opportunities 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 increased in 2015-16 (3.5 percent) over 2014-15 (3.1 percent). Academic support 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 in 2015-16 (186 actions) over 2014-15 (164 actions), but represent a smaller share of overall actions reported in 2015-16 (12.5 percent) than the previous year (15.3 percent), as shown in Figure 6.

**Table 9. Use of Results by Subcategory: 2011-12 through 2015-16 - Co-Curricular Resources**

| Use of Results Sub-Categories: Co-Curricular | 2011-12 | | 2012-13 | | 2013-14 | | 2014-15 | | 2015-16 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % |
| Co-Curricular Opportunities | 41 | 4.4 | 24 | 4.1 | 17 | 1.9 | 33 | 3.1 | 52 | 3.5 |
| Academic Support/Advising | 121 | 13.1 | 44 | 7.5 | 121 | 13.7 | 164 | 15.3 | 186 | 12.5 |
| Total | 162 | 17.5 | 68 | 11.6 | 138 | 15.6 | 197 | 18.4 | 238 | 16.0 |

**Figure 6. Use of Results by Subcategory: 2011-2012 through 2015-16 - Co-Curricular Resources**
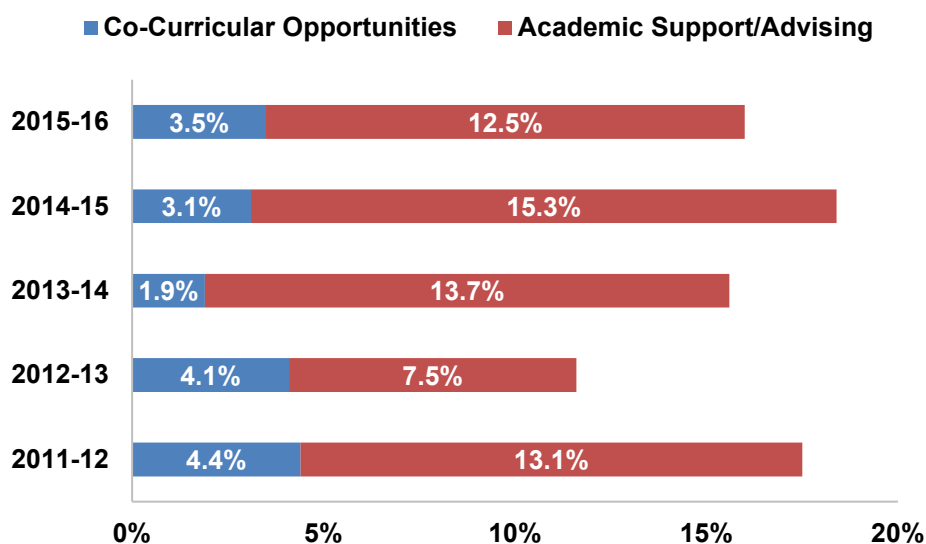
**Assessment Process**

Assessment process describes a variety of topics, such as modifying an assessment, changing a method of data analysis, adding another assessment method, revising an achievement target, and changing a system of gathering data or providing feedback. The assessment process category aligns directly with the assessment methodology subcategory currently since the subcategory "Target Met" was removed after 2011-12. Results for assessment process in 2015-16 show continuity from the previous year at 30.0 percent of actions reported (see Table 6 and Figure 7).

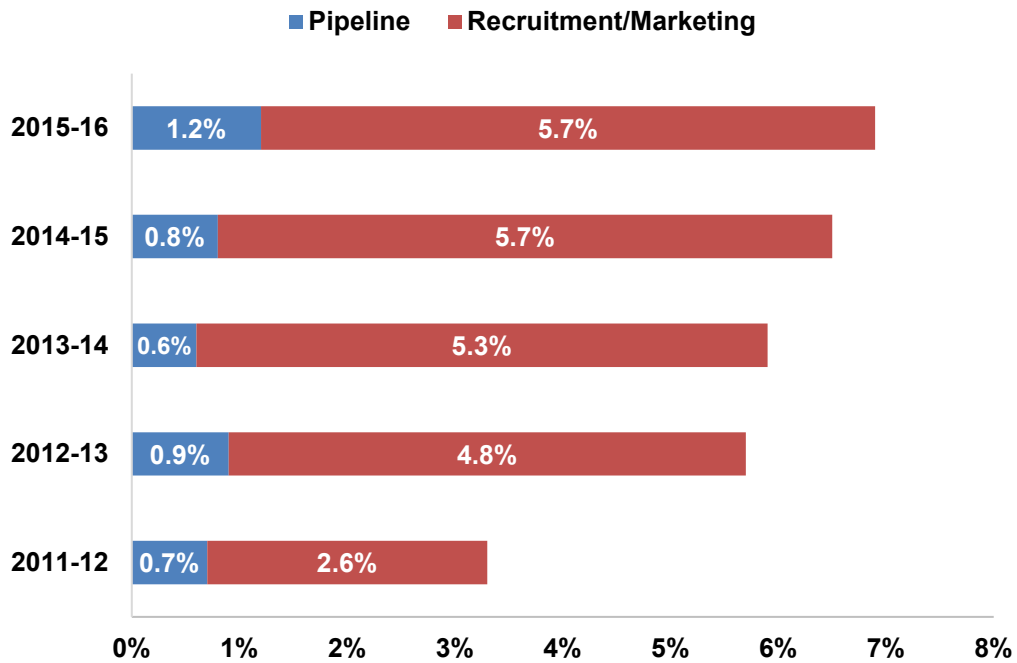**Figure 7. Use of Results to Improve Assessment Process: 2010-11 through 2015-16**
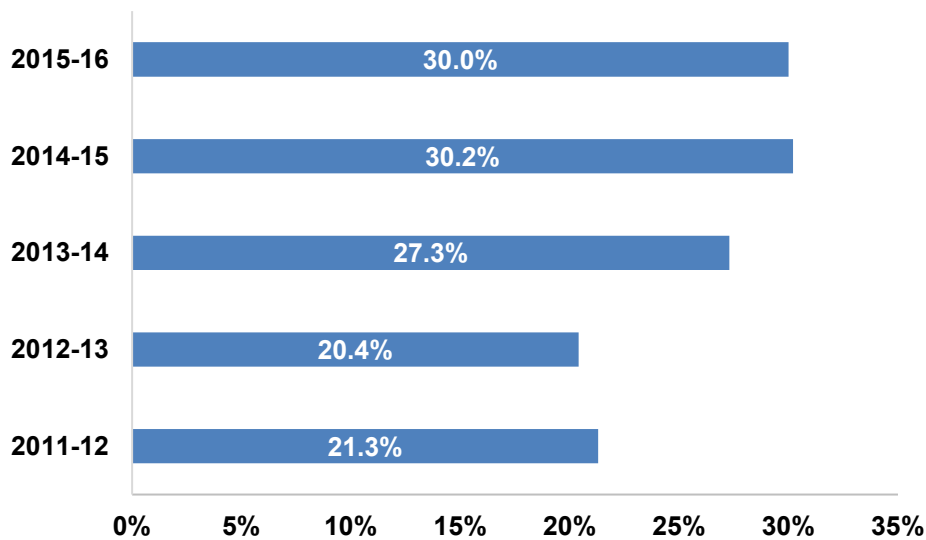


**College-Level**

The College-level category includes two sub-categories: pipeline and recruitment/marketing. Pipeline actions include dual enrollment programs with local high schools and articulation agreements 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 represent 5.7 percent of all actions taken, continuing a general trend of improvement since 2011-12 (Figure 8). The results for pipeline actions (1.2 percent) are consistent with the results for previous years with a slight increase in 2015-16.

**Table 10. Use of Results by Subcategory: 2011-12 through 2015-16—College-Level**

| Use of Results Sub-Categories | 2011-12 | | 2012-13 | | 2013-14 | | 2014-15 | | 2015-16 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % | # | % |
| Pipeline (Dual enrollment and Transfer to 4-year university) | 6 | 0.7 | 5 | 0.9 | 6 | 0.6 | 10 | 0.8 | 18 | 1.2 |
| Recruitment/Marketing | 24 | 2.6 | 28 | 4.8 | 47 | 5.3 | 65 | 5.7 | 85 | 5.7 |
| **Total** | **30** | **3.3** | **33** | **5.7** | **53** | **5.9** | **75** | **6.5** | **103** | **6.9** |

**Figure 8. Use of Results by Subcategory: 2010-11 through 2015-16—College-Level**



■ Pipeline  ■ Recruitment/Marketing

| Year | Pipeline | Recruitment/Marketing |
|------|----------|----------------------|
| 2015-16 | 1.2% | 5.7% |
| 2014-15 | 0.8% | 5.7% |
| 2013-14 | 0.6% | 5.3% |
| 2012-13 | 0.9% | 4.8% |
| 2011-12 | 0.7% | 2.6% |

## 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 2015-16 *Institutional Effectiveness Audit of Educational Programs* show that at NOVA, assessment results are consistently used to make curriculum-specific changes aimed to improve student learning directly (42.2 percent). The subcategory with the largest percentage of use of results was course revision (25.0 percent). The number of use of results per program is 26.5, higher than the score for any previous year. The average overall rubric score for all NOVA programs is 92.4 percent; 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

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## Community College

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