Academic Program Improvement

9th Annual Progress Report 2017.2018

RIT | Division of Academic Affairs
Office of Educational Effectiveness Assessment

Table of Contents

Overview

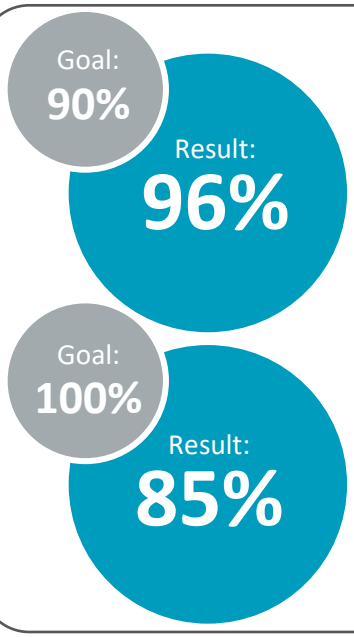
Over the past decade, Rochester Institute of Technology (RIT) established and maintains a culture of continuous academic program improvement. The annual RIT Academic Program Improvement Progress Report involves academic leaders and faculty in an iterative process designed to gather evidence on the use of student learning outcomes results to inform program decisions and pedagogical practices. Progress Report submissions are reviewed by members of the Student Learning Outcomes Assessment Committee (SLOAC) who serve as part of the university's review team. Progress Reports are analyzed to determine if RIT has achieved its two student learning outcomes goals:

Goal #1: 90% of programs meeting or exceeding designated student achievement benchmarks

Goal #2: 100% of programs practicing data-driven continuous improvement

Of the 195 academic programs (includes all of RIT's colleges, degree granting units, and international locations) that completed Progress Report 9 (PR9), 98% reported assessing program-level student learning outcomes in AY 2017-2018. The university goals and results are provided below.

2017-18 University Goals



Student Achievement Benchmark:

Student achievement benchmarks, established by each program, provide detailed descriptions of an expected level of student performance and determine if the selected student learning outcome was met based on assessment results.
RIT exceeded the 90% goal.

Data-Driven Continuous Improvement:

RIT's *Academic Program Assessment Continuous Improvement Rubric* is used to rate each program's Progress Report. Those programs rated a "2" (Evidence) or higher on a four point scale are using assessment results to guide decisions to improve student learning and programs. RIT did not meet the 100% goal.

Five-Year Trend Analysis

Trend data are utilized to determine progress in achieving university goals and developing methods to improve program-level assessment processes. Over the past five years, academic programs are consistently meeting and exceeding established student achievement benchmarks (see Figure 1). The percentage of academic programs demonstrating data-driven continuous improvement, however, remains in the 80% range (see Figure 2) with the goal of 100%. Four factors emerged as contributing to not achieving the university's continuous improvement goal.

1. Incomplete or missing information (15%) resulted in lower progress report ratings.
2. Progress report data was not aligned with supporting material and evidence (i.e. student learning outcomes with appropriate measures).
3. Progress reports lack clarity on how results are used to guide decisions or changes to improve the program or student learning.
4. Outdated assessment plans do not facilitate quality reporting processes.

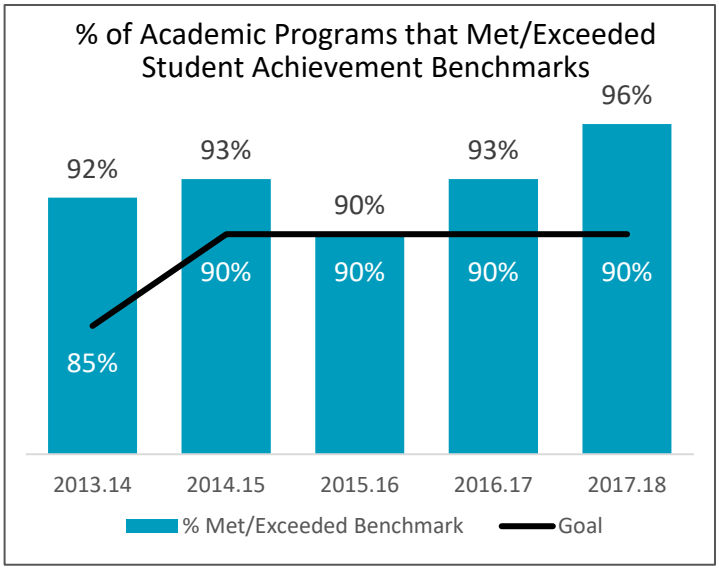


Figure 1: % of Academic Program that Met/Exceeded Student Achievement Benchmarks

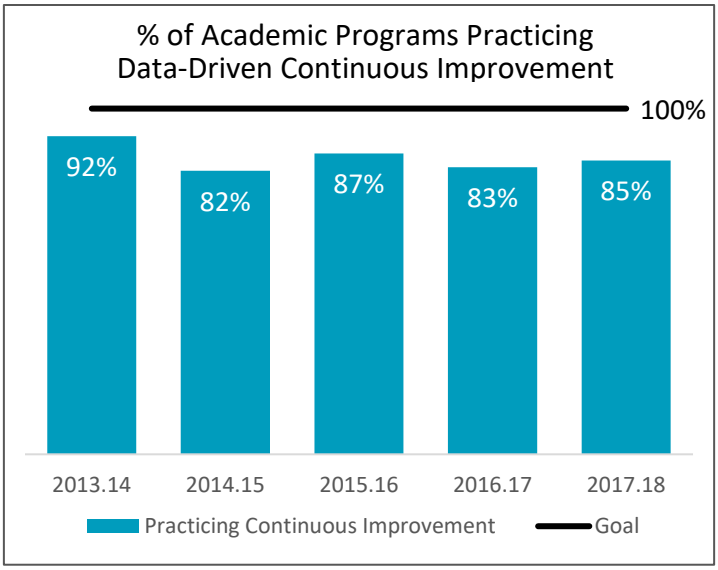


Figure 2: % of Academic Programs Practicing Data-Driven Continuous Improvement

Academic program trend data by college, degree-granting unit and international location are available in Appendices A and B. The following have consistently achieved the university's student achievement benchmark from 2013-2018: The College of Health, Science and Technology, College of Art and Design, Golisano College of Computing and Information Sciences, Kate Gleason College of Engineering, National Technical Institute for the Deaf, and Golisano Institute of Sustainability. The Golisano College of Computing and Information Sciences has consistently achieved the university's data-driven continuous improvement benchmark during the same time period.

Best Practices in Demonstrating Continuous Improvement

In PR9, 68% percent (n = 132) of academic programs were rated "2" or "3" (Evidence) and 17% (n=34) were rated as "4" (Advanced) in their use of data to guide decisions or changes to improve student learning or the program. The following examples highlight programs receiving an "Advanced" rating for using data to guide assessment processes, instructional strategies, and academic support.

Improving Assessment Processes

The **BS Computer Science** program assessed the student learning outcome: *Apply the theory and principles of computer science* using the final exam in *Analysis of Algorithms* (CSCI-261).
Benchmark: 70% of students will attain a grade of B- or better on the traditional in-class exam.

Findings: Data were collected from two sections. The total number of students in the combined sections was 79 and the findings: 7.8% scored a B- or higher on the exam, 45% scored a C-or higher. The program benchmark was not achieved.

Use of Results: The faculty analyzed the data and concluded:

- The final exam did not fully reflect student learning in the course as a whole. A follow-up faculty meeting determined that using written homework assignments during the semester would be a better measure of the student learning outcome.
- The benchmark was also adjusted (60% of students will achieve an average homework grade of 80% or better) based on the change in assessment strategy.

Assessing the Change: The student learning outcome was re-assessed in 2017-2018 and the new benchmark was not met. Data was collected from three sections and 56.2% earned an average homework

grade of 80% or above. Although the data collected now more directly reflects the assessment of the outcome, the new benchmark was not met. After extensive faculty consultation, the following recommendations are under consideration:

- Algorithms currently has a 200 level course designation which may not accurately reflect the level of rigor. Student feedback further suggests the impression of an introductory level course. Faculty recommend a change to a 300 level course.
- Students are not prepared to take the course so soon after discrete math as they often lack mathematical maturity. Moving the course by one term (fifth instead of fourth semester) would allow students to take additional (required) math courses and thus be more prepared for the Algorithms course. Further course grade analysis found that student who have taken Introduction to CS Theory before Algorithms have a higher level of academic achievement.

Developing Instructional Strategies

The **BS in Hospitality and Tourism Management, RIT Croatia** assessed the student learning outcome: *Develop professional business skills to work successfully in global environments; use effective oral, written and visual communication* using a research project grade from Senior Project (HSPT-490).
Benchmark: 75% of students will earn a grade of "B" or better on the research project.

Findings: The benchmark was exceeded in 2016-2017, 83.3% of students achieved a grade of "B" or better.

Use of Results: While the benchmark was met, faculty concluded further improvements and changes to improve the process.

- 'Milestones' were introduced that required students to complete portions of the project throughout the semester to help students stay on track.
- Structured deadlines (lateness penalties were implemented) and pre-spring semester topic/methodology discussions with mentors were encouraged to support adequate planning.

Assessing the Change: Re-assessed in 2017-2018, the benchmark was exceeded, 85.7% of students earned a grade of "B" or better. Introduced milestones and deadlines helped students to better manage their time, activities, and to approach the course in a more organized and professional manner.

Improving Academic Support

The **MS Criminal Justice** program assessed the student learning outcome: *Develop pre-doctoral research skills required to pursue a doctoral degree* using the Capstone (CRIM-775) project.
Benchmark: 100% of students will successfully pass the research project defense.

Findings: Three students enrolled and successfully completed the project with an average grade of "A -" in AY 2016-2017.

Use of Results: While the benchmark was met, the program implemented a committee-based approach for the comprehensive review of Capstone projects to:

- Improve the feedback process to support student's academic support and
- Enhance greater collaboration between the graduate program director, department chair, sponsoring faculty member, and the instructor of record.

Assessing the Change: Three students received grades of 'A' on the Capstone project in AY 2017- 2018. The team/committee-based faculty structure improved the feedback process. This is an approach that we will continue to embrace with the anticipation of an increased number of BS/MS Capstone projects. The instructor will be developing a web-based platform/course shell to assist with the review of capstone working papers. This will help facilitate communication and feedback between all parties involved.

PR9 Summary

Overall, academic programs consistently attain student achievement benchmarks and meet the university goal; however, evidence shows that data-driven continuous improvement remains in the 80% range. Three international locations (China, Croatia, and Kosovo) and four colleges (College of Liberal Arts, Health Sciences and Technology, Golisano Computing and Information Sciences, and the Saunders College of Business) demonstrated 100% continuous improvement in all academic programs. Further PR9 analysis identified a number of opportunities to improve both assessment and reporting processes.

Improving Assessment Processes and Practices

In addition to program's using data to guide decisions, the Office of Educational Effectiveness Assessment (EEA) also does a meta-review of the results to guide decisions at the university level to improve assessment processes and practices. As a result of the PR9 data analysis, EEA developed and implemented the following changes to support the annual reporting and review process.

Assessment Process

- Continued expansion of the peer review team in order to build capacity for campus-wide best practices and inform Progress Report content (i.e. missing information, alignment) development. Peer reviewers have found that the experience has informed and enhanced their work with college program directors and department chairs.
- Earlier reporting of results allowed for program outreach within the annual cycle. A modified PR9 timeline increased timely outreach to enhance faculty assessment practices in preparation for the next reporting cycle.

Assessment Practice

- Designed and implemented on-time and need-based college and program specific communications and professional development for programs not demonstrating data–driven continuous improvement.
- Continue to develop college and program-specific resources and Progress Report exemplars to enhance assessment practices and support the annual reporting cycle.

Next Steps: Achieving Our Continuous Improvement Goal

As we move into the new academic year and reporting cycle, the Office of Educational Effectiveness Assessment will reassess to determine if these and other outreach strategies have had a positive impact on achieving the university's continuous improvement goal. The efficacy of outreach efforts will be measured by comparing previous results of those programs who received resources and support with Progress Report 10 ratings. Previous Progress Report analysis has determined that programs receiving EEA outreach have increased their year to year rating after 1:1 meetings, college/department presentations or electronic correspondence. There will be a continued emphasis on the revision of program-level outcomes assessment plans to ensure relevancy and the use of assessment results to guide decisions, inform pedagogical practices, and improve student learning and programs.

Appendix A: University Goal – Student Achievement Benchmarks

College or Degree- Granting Unit	Met or Exceeded Student Achievement Benchmarks				
	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
CAD	96%	100%	100%	100%	**100%**
CET	94%	94%	94%	94%	**88%**
CHST	100%	100%	100%	100%	**100%**
COLA	88%	94%	100%	78%	**94%**
COS	91%	96%	83%	83%	**96%**
GCCIS	100%	93%	100%	100%	**100%**
KGCOE	91%	95%	91%	95%	**91%**
NTID	100%	100%	100%	94%	**100%**
SCB	62%	79%	40%	88%	**100%**
SOIS	100%	100%	100%	67%	**67%**
GIS	100%	100%	100%	100%	**100%**
TOTAL	**92%**	**93%**	**90%**	**93%**	**96%**
International Location	**Met or Exceeded Student Achievement Benchmarks**				
	2013-2014	**2014-2015**	**2015-2016**	**2016-2017**	**2017-2018**
RIT China	N/A	N/A	N/A	N/A	**100%**
RIT Croatia	100%	60%	40%	100%	**100%**
RIT Dubai	55%	82%	100%	100%	**100%**
RIT Kosovo	100%	100%	100%	100%	**100%**

Appendix B: University Goal – Data Driven Continuous Improvement

College or Degree- Granting Unit	Data-Driven Continuous Improvement				
	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
CAD	93%	96%	89%	86%	**93%**
CET	94%	82%	94%	94%	**88%**
CHST	100%	100%	100%	86%	**100%**
COLA	88%	65%	94%	89%	**100%**
COS	91%	70%	87%	91%	**63%**
GCCIS	100%	100%	100%	100%	**100%**
KGCOE	81%	73%	77%	77%	**64%**
NTID	87%	94%	94%	72%	**78%**
SCB	100%	71%	60%	56%	**100%**
SOIS	100%	33%	100%	67%	**67%**
GIS	100%	100%	100%	100%	**33%**
TOTAL	**92%**	**82%**	**87%**	**83%**	**85%**
International Location	**Data-Driven Continuous Improvement**				
	2013-2014	**2014-2015**	**2015-2016**	**2016-2017**	**2017-2018**
RIT China	N/A	N/A	N/A	N/A	**100%**
RIT Croatia	80%	80%	40%	100%	**100%**
RIT Dubai	55%	73%	100%	64%	**93%**
RIT Kosovo	100%	100%	100%	100%	**100%**

The Provost's Excellence in Student Learning Outcomes Award

This annual award is given to recognize an academic degree program that is committed to best practices in assessment, improving student learning, and continuous program improvement.

RIT's 2019 winner is the Master of Science for Teachers (MST) Visual Arts—All Grades program in the College of Art and Design.

The MST Program has established a continuous quality improvement culture with systematic and sustainable assessment methods and practices which include utilizing data, developing and assessing experiential learning opportunities, and building community engagement and partnerships. The faculty consistently model what they teach students: to collect and use evidence of student learning to inform their teaching and improve student learning. Program Director Lauren Ramich accepted the award at the Celebration of Teaching and Scholarship ceremony on April 16.

Congratulations to the following programs for being nominated by their colleges:

BS Civil Engineering Technology (CET)

BS Biotechnology and Molecular Bioscience (COS)