Academic Program Improvement

8th Annual Progress Report

AY 2016-2017

R·I·T

office of **educational** effectiveness assessment

Academic Affairs

For further information, contact:
Office of Educational Effectiveness Assessment
Academic Affairs
Rochester Institute of Technology
585.475.2310
rit.edu/outcomes

TABLE OF CONTENTS

OVERVIEW

Rochester Institute of Technology (RIT) continues to implement meaningful, campus-wide processes to support student learning and program improvement. The annual Academic Program Improvement Progress Report survey is an integral component of the university's assessment practices.

The Progress Report survey data is collected and analyzed and provides an in-depth look at how program assessment practices provide evidence of academic quality -- how well students are achieving program benchmarks and how data are used to inform decisions and changes that lead to improvements. The Progress Report results are used to determine how well RIT achieves its two university student learning outcome goals:

1. 90% of programs meeting or exceeding designated student achievement benchmarks
2. 100% of programs practicing data-driven continuous improvement.

UNIVERSITY GOALS AND TRENDS

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

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.

In 2016-17, programs reported that **93%** of student achievement benchmarks were met. This is a 3% increase from the previous year. RIT continues to meet its goal for the percentage of programs meeting or exceeding student achievement benchmarks for the fifth consecutive year. Figure 1 reflects the university's trends related to achieving program benchmarks.

Percent of Programs that Met/Exceeded Student Achievement Benchmarks

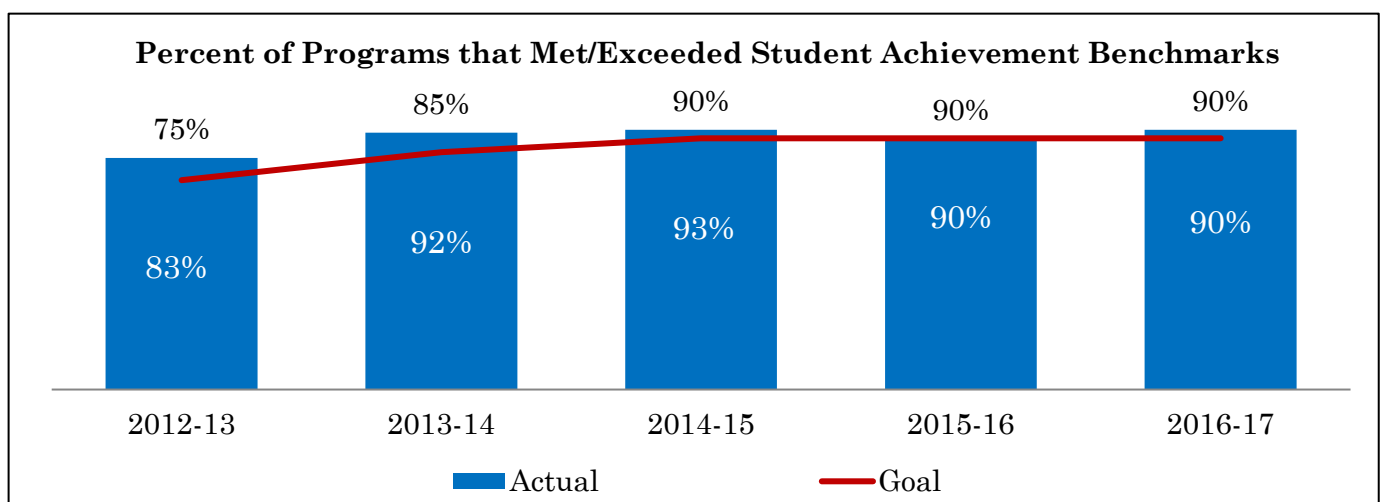|	2012-13	2013-14	2014-15	2015-16	2016-17
Goal	75%	85%	90%	90%	90%
Actual	83%	92%	93%	90%	90%

Actual ▬▬ Goal

FIGURE 1: GOAL 1: % of programs that met or exceeded designated student achievement benchmarks

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

Each program's Progress Report is rated based on providing evidence of demonstrating continuous program improvement. Those who receive a 2 or higher on a four point scale are using assessment results to improve programs and student learning on an annual basis. Based on a review of the AY 2016-17 Progress Report responses, **83%** of academic programs were rated as practicing data-driven continuous improvement, reflecting a 4% decrease from the prior year. The figure below provides RIT's five year trends for this goal.
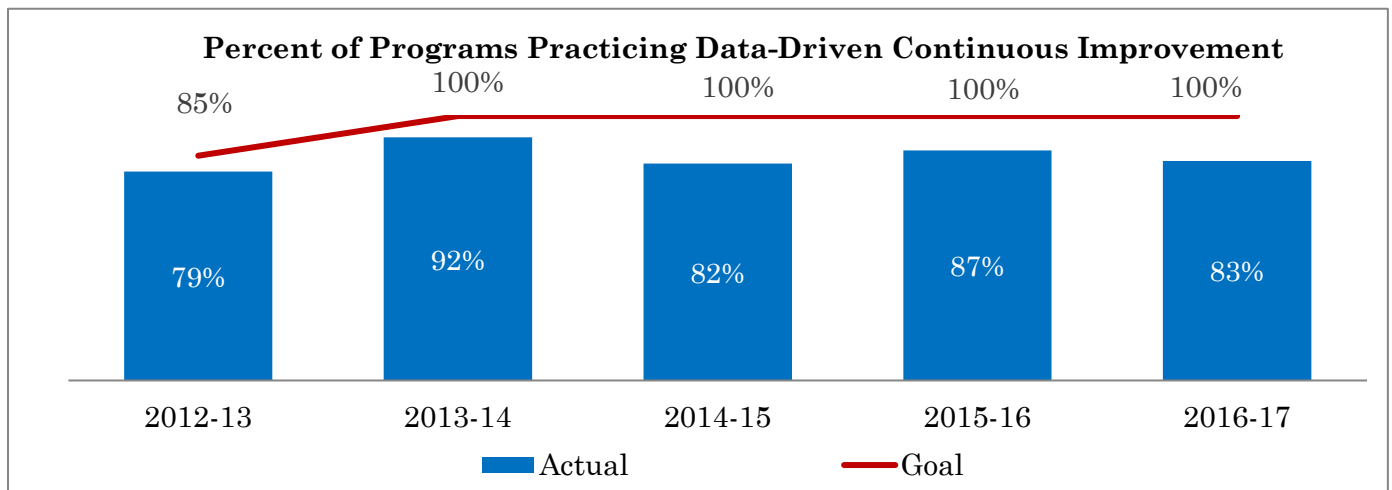
Percent of Programs Practicing Data-Driven Continuous Improvement

Year	Actual	Goal
2012-13	79%	85%
2013-14	92%	100%
2014-15	82%	100%
2015-16	87%	100%
2016-17	83%	100%

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

One of the areas that may have contributed to this year's decrease was that 20 programs (11%) did not respond to Progress Report survey question 5a, *describe how the program used the analysis of data to inform changes intended to improve student learning in the course or program*. Missing information impacts a program's overall rating, often lowering the rubric score.

In addition, several survey items were refined to gather more descriptive evidence of program level assessment practices. Based on incomplete response data in Progress Report 7, modifications were made to several survey items. Programs were asked to:
- Provide a more thorough, detailed description of data collection methods and measures (direct and indirect) used to assess student learning outcomes.
- Provide specific information related to key findings (total number of students and distribution of scores).
- Include opportunities for programs to identify specific instances of additional program assessment practices that informed changes to curriculum, instruction, or any type of program improvement.
- Present an in-depth description of how the analysis of data results informed and guided improvements in curriculum, instructional strategies, assessment processes or support services.

While many programs provided the requisite descriptions, findings, and evidence of improvement, others provided information that lacked clarity, was incomplete or did not provide a response. Feedback was provided to programs and ratings will be monitored in the next reporting cycle.

The annual results of both student learning outcome goals are shared and integrated into two university-wide processes, the provost's Academic Quality Dashboard used to track and report on key university performance indicators and the Annual Program Analysis and Review (APAR) Dashboard used to review and improve academic program performance.

CONTINUOUS IMPROVEMENT: PROGRAM RUBRIC RESULTS

RIT's *Academic Program Assessment Continuous Improvement Rubric* is used to rate individual program progress reports. The rubric was revised to align with the changes made to the Progress Report survey. The degree to which programs utilize results in their continuous quality improvement efforts is rated on a four point scale ranging from Advanced (4) to No Evidence (0). A comparison of rubric ratings from the previous three years is provided in Figure 3.
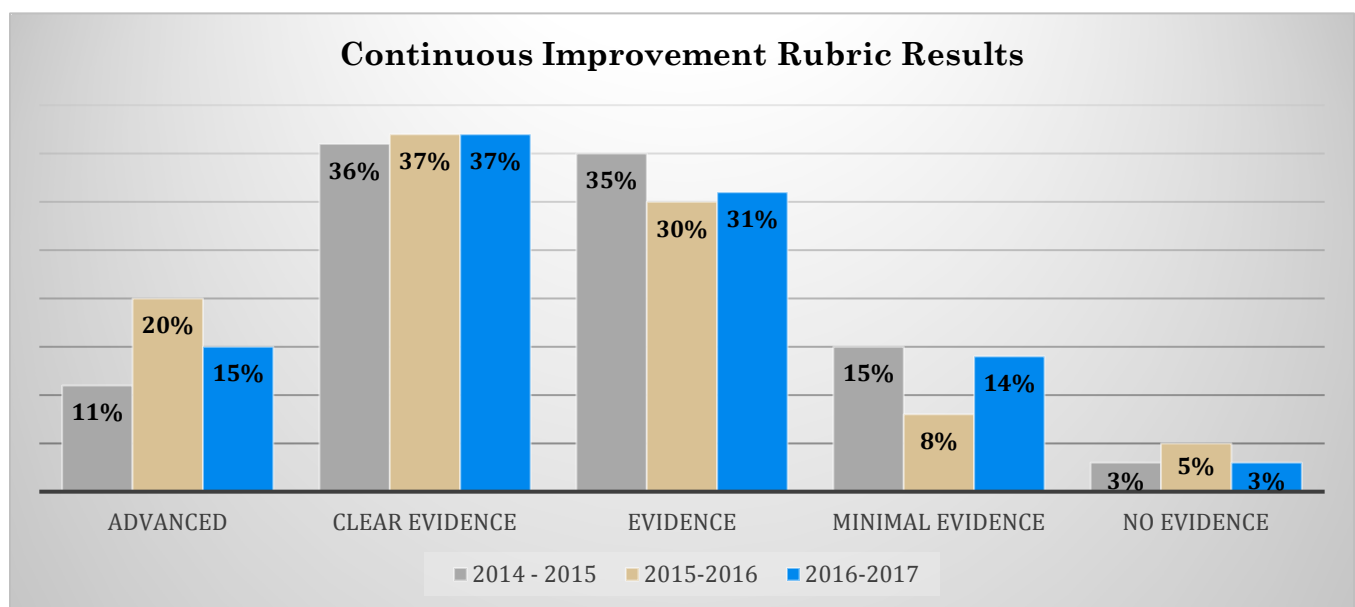

Continuous Improvement Rubric Results

	ADVANCED	CLEAR EVIDENCE	EVIDENCE	MINIMAL EVIDENCE	NO EVIDENCE
2014 - 2015	11%	36%	35%	15%	3%
2015-2016	20%	37%	30%	8%	5%
2016-2017	15%	37%	31%	14%	3%

FIGURE 3: Percent of programs providing evidence of practicing data-driven continuous improvement

AY 2016-2017 Progress Report 8 results indicate a consistent trend in the number of programs rated as practicing data-driven continuous improvement at both the Clear Evidence and Evidence rating levels. However, there remains some variability in the number of program receiving Advanced ratings (28 programs from 37 programs) and those rated Minimal Evidence (27 programs from 15 programs) when compared with the AY 2015-2016 reporting cycle.

Consultations, resources and support (1:1 meeting, progress report and assessment plan review, identification of student learning outcome) will be provided to programs to support their assessment practices and the annual reporting process.

COLLEGE, DEGREE-GRANTING UNIT AND INTERNATIONAL LOCATION RESULTS

Individual college, degree-granting unit, and international location Progress Report 8 results are presented in Appendix A. Five year trend data offers a snapshot of how each college, unit or location are reporting meeting or exceeding student achievement benchmarks and the percentage of programs demonstrating continuous program improvement.

Overall Progress Report 8 results indicate that 50% of colleges, degree granting units, and locations are maintaining or exceeding the number of programs demonstrating continuous program improvement when compared with AY 2015-2016 results. The remaining 50% decreased in the number of programs demonstrating continuous program improvement.

An analysis of AY 2016 -17 Progress Report 8 data revealed the following:

❖ GCCIS, GIS, RIT Kosovo, and RIT Croatia (Zagreb and Dubrovnik) reported 100% of programs meeting/exceeding student achievement benchmarks and provided evidence of using results in their assessment practices.

❖ COS and RIT Croatia (Zagreb and Dubrovnik) increased the percentage of programs meeting/exceeding student achievement benchmarks and those rated 2 (evidence) or higher for demonstrating continuous program improvement.

❖ KGCOE and CAST were consistent from the previous year in the percentage of programs rated 2 (evidence) or higher for demonstrating continuous program improvement.

❖ CHST, CIAS, COLA, NTID, SCB, SOIS, and RIT Dubai decreased from the previous year in the number of program rated 2 (evidence) or higher for demonstrating continuous program improvement.

As noted, several factors including refinement of several survey items may have had an impact on program ratings and some requisite information was not provided. Academic program outreach is discussed in further detail in the Moving Forward section (page 8).

FEATURED RIT PROGRAMS: DEMONSTRATING CONTINUOUS IMPROVEMENT

Each of the featured programs was selected to be highlighted here based on the use of assessment results to guide changes and demonstrate program improvement. Each program received an Advanced (4) rating on their report and reassessed the implemented change and its impact on student learning.

STUDENT LEARNING OUTCOME (SLO)	BENCHMARK AND RESULTS	CHANGE IMPLEMENTED	IMPACT ON LEARNING
NTID AAS/AOS Laboratory Science Technology			
Perform acid/base titrations and corresponding calculations with accuracy and precision	**Benchmark:** 100% of students achieve a score of 2 or higher on complexometric titrations **Results:** 92% (11 of 12 students) achieved a score of 2 or higher on the lab	**Curriculum:** The faculty made adjustments to the course curriculum which focused on methodology and analysis of data. The goal was more procedural clarity and understanding of data collection and calculations.	**Reassessment:** The next time the SLO was reassessed, 100% (15) of students earned a score of 2 or higher. The program indicated the curriculum revisions were an improvement and enhanced student learning.
CIAS BS Media Arts and Technology			
Apply media law concepts and ethics	**Benchmark:** 90% of co-op students will achieve a score of 4 or 5 on co-op employer - ethics and professionalism survey item **Results:** The benchmark was not met as 78% (29) scored 4 or 5 on co-op employer survey	**Curriculum:** Based on the results, faculty worked with the Office of Career Services and Cooperative Education to improve student preparation focusing on ethics and professionalism. A Student Readiness Assessment Tool and Orientation Course were designed and implemented.	**Reassessment:** Student scores on the co-op employer item increased from 78% to 100%, in the next assessment cycle, exceeding the benchmark. The program indicated the tool and course implementation improved student learning.
CAST MS Telecommunications Engineering Technology			
Demonstrate knowledge about the underlying principles of current technologies	**Benchmark:** Median score of 70% on a four-part exam question **Results:** 21 of 22 students achieved benchmark >70%	**Instructional Strategies:** Although the benchmark was met, data from spring, 2015 and spring, 2016 was used to inform changes to the lecture presentation (embedded traffic engineering concepts) to improve student learning on the four-part exam question.	**Reassessment:** In spring 2016, the content section assessments were 77% and 70%. During spring, 2017, assessment of the exam section increased to 89.6% and 90.98% respectively.

METHODS USED TO ASSESS STUDENT LEARNING

Content analysis of Progress Report 8 survey item responses was conducted to gain a greater understanding of what methods program use to assess student learning. This analysis also "enhances and expands program assessment results and the use of results within the campus community" (RIT Self-Study Suggestion 8*). Survey responses from question 4a on the survey, *For the selected student outcome, include the following process information: Data Collection Method (name of assignment and associated measurement tool/rubric),* were analyzed to identify the specific methods faculty use to assess student learning.

FIGURE 4: % Program's Data Collection Methods

There is a distinction between the direct and indirect methods used to measure student learning. Direct methods include those that directly measure the student's learning - course embedded assessments, capstones, locally developed exams, juried review of student performances and projects, and external evaluations of student performance in co-op and internships. Indirect methods use secondary evidence to draw conclusions about student learning. Student perceptions (surveys), reflections (exit interviews), and self-assessments as well as overall course grades (if not competency based) are indirect evidence of learning. Academic programs listed multiple data collection methods in Progress Report 8. The majority of RIT's academic programs identified direct methods (83%) to assess student learning. Figure 5 indicates those methods most frequently identified.
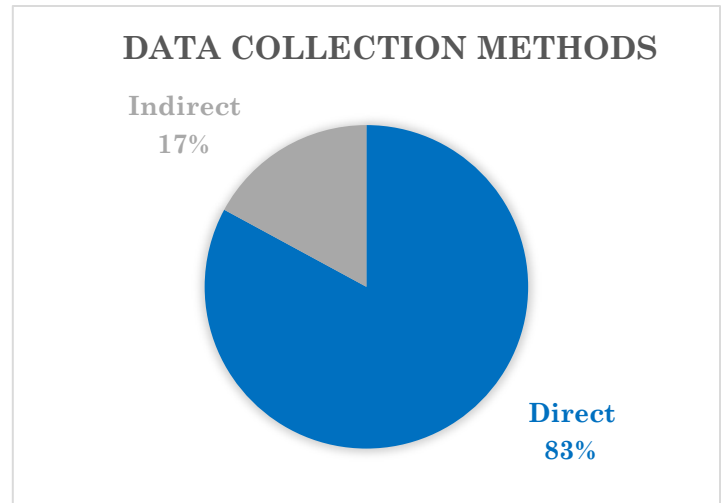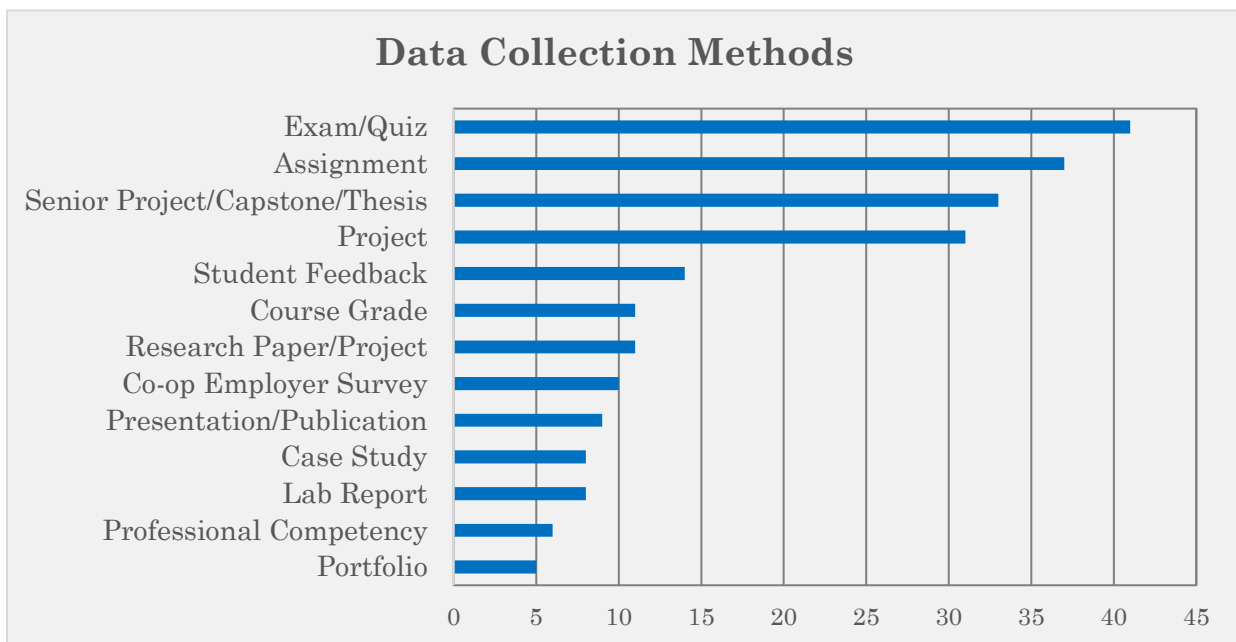

FIGURE 5: Data Collection Methods

USING FINDINGS TO INFORM CHANGE THAT LEADS TO PROGRAM IMPROVEMENT

Additional content analysis was conducted to determine how programs used assessment data to inform program or course level change intended to improve student learning or program quality. Survey responses from question 5a, *Describe how the program used the analysis of data,* were reviewed and themed into four areas: curriculum, instructional strategies, academic support services, or assessment processes. Figure 6 provides an overview of results.
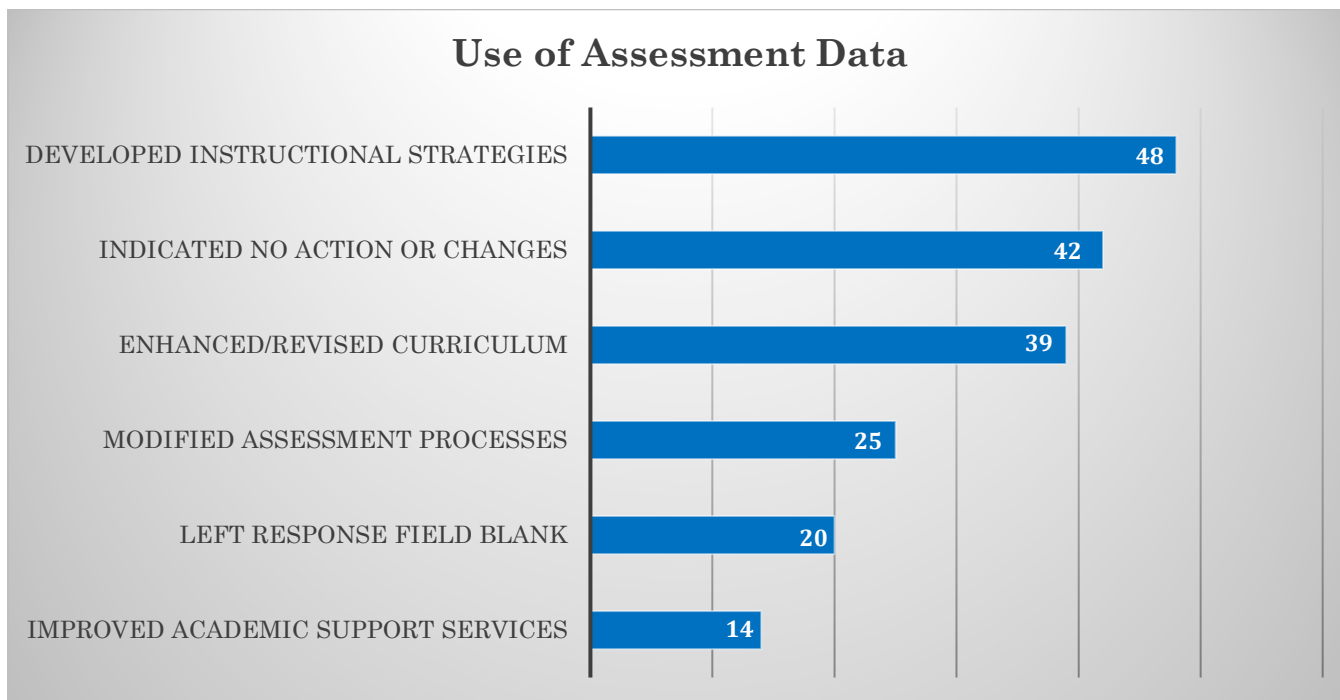
Use of Assessment Data

Category	Value
DEVELOPED INSTRUCTIONAL STRATEGIES	48
INDICATED NO ACTION OR CHANGES	42
ENHANCED/REVISED CURRICULUM	39
MODIFIED ASSESSMENT PROCESSES	25
LEFT RESPONSE FIELD BLANK	20
IMPROVED ACADEMIC SUPPORT SERVICES	14

FIGURE 6: Use of Assessment Data

The majority of programs are using results to inform various program or course level changes. Instructional strategies were the most frequently referenced modification or change. Further analysis identified a percentage of programs (23%) indicating no change or action. These programs intentionlly determined no changes were needed based on analysis of data. This response was often associated with meeting the student achievement benchmark. Some programs that met the benchmark also reported on either corresponding or related data or findings which informed program improvement. An example of this is featured in Demonstrating Contiuous Improvement (page 5). A smaller percentage of programs (11%) left the item response section blank. This in-depth analysis presents an opportunity to work with academic programs and inform the reporting of assessment results.

The Office of Educational Effectiveness Assessment (EEA) will:
- Reinforce the need for programs to complete all sections of the survey as the next reporting cycle begins in mid-August.
- Encourage programs (who indicated no action or change) to report out on any additional assessment results or provide follow-up from previous progress report results.

SUMMARY

RIT continues to meet its annual goal for the percentage of programs meeting or exceeding student achievement benchmarks for the sixth consecutive year. This year's results (83%) for RIT's second goal, percentage of programs practicing data-driven continuous program improvement, reflects a 4% decrease from the previous year. Some of the decline may be attributed to modifications to the survey tool and corresponding rubric and the non-responses from programs. The second goal will be closely monitored again next year to determine if the changes to the Progress Report survey and rubric had any impact on the program responses. The content analysis on Progress Report 8 responses proved informative in guiding support and resources to programs.

- The majority of academic programs (83%) use direct methods to measure student learning.
- Two thirds of RIT's academic programs (66%) are reporting on using data to guide decisions and inform changes that lead to improvements (curriculum, instructional strategies, assessment processes, or academic support services).
- A third (34%) of programs either left the response field blank or indicated no action or change.

MOVING FORWARD

We remain committed to supporting academic programs and providing timely feedback as part of RIT's ongoing continuous improvement of assessment practices. As we look toward the beginning of a new academic year, the Office of EEA will focus on:

- Outreach to academic programs rated no or minimal evidence of continuous improvement is the priority. During AY 2017-2018, 30 assessment meetings occurred with academic programs that either had not reported assessing student learning or provided minimal evidence of continuous improvement during the previous reporting cycle. Eighteen of the 30 programs (60%) improved their reporting of assessment practices and subsequent Progress Report 8 rubric rating.

- Emphasize completeness and quality of information in communications with programs.

- Provide focused professional development opportunities to support effective assessment practices.

- Continue to implement the Middle States Commission on Higher Education Self-Study 2017 suggestions for ongoing continuous improvement of assessment practices as previously noted in Progress Report 7.

  - *Suggestion 7*: Enhance usage of indirect data by academic programs to support quantitative results on program quality.

  - *Suggestion 9*: Develop additional methods to engage, acknowledge, and reward faculty for supporting university and program educational outcomes.

APPENDIX A: COLLEGE, DEGREE-GRANTING UNIT, INTERNATIONAL LOCATION RESULTS

COLLEGE OR DEGREE-GRANTING UNIT	MET OR EXCEEDED BENCHMARKS					USE OF RESULTS				
	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
CAST	82%	94%	94%	94%	**94%**	71%	94%	82%	94%	**94%**
CHST	100%	100%	100%	100%	**100%**	100%	100%	100%	100%	**86%**
CIAS	79%	96%	100%	100%	**100%**	91%	93%	96%	89%	**86%**
COLA	71%	88%	94%	100%	**78%**	65%	88%	65%	94%	**89%**
COS	73%	91%	96%	83%	**83%**	68%	91%	70%	87%	**91%**
GCCIS	94%	100%	93%	100%	**100%**	100%	100%	100%	100%	**100%**
KGCOE	95%	91%	95%	91%	**95%**	77%	81%	77%	77%	**77%**
NTID	100%	100%	100%	100%	**94%**	100%	87%	94%	94%	**72%**
SCB	33%	62%	79%	40%	**88%**	33%	100%	71%	60%	**56%**
SOIS	67%	100%	100%	100%	**67%**	0%	100%	33%	100%	**67%**
GIS	100%	100%	100%	100%	**100%**	100%	100%	100%	100%	**100%**
TOTAL	**81%**	**93%**	**96%**	**92%**	**93%**	**73%**	**94%**	**81%**	**90%**	**83%**

INTERNATIONAL LOCATION	MET OR EXCEEDED BENCHMARK					USE OF RESULTS				
	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
RIT Croatia	60%	100%	60%	40%	**100%**	60%	80%	80%	40%	**100%**
RIT Dubai	0%	55%	82%	100%	**100%**	0%	55%	73%	100%	**64%**
RIT Kosovo	0%	100%	100%	100%	**100%**	0%	100%	100%	100%	**100%**

APPENDIX B: CONTINUOUS IMPROVEMENT RUBRIC RESULTS*

	YES: PROGRAMS PROVIDING EVIDENCE OF PRACTICING DATA-DRIVEN CONTINUOUS IMPROVEMENT REPORT:
15% (28)	**Advanced (4):** Analyzed and used direct student learning outcomes assessment results to inform changes intended to improve student learning by enhancing or revising curriculum, developing instructional strategies or conducting professional development activities, improving assessment processes or improving academic support services **AND** Described why changes were needed and indicated next steps or follow-up assessment **AND** Discussed prior progress report results or assessment efforts and provided clear evidence of following up and assessing the identified change to determine if student learning improved
37% (70)	**Clear Evidence (3):** Analyzed and used direct student learning outcomes assessment results to inform changes intended to improve student learning by enhancing or revising curriculum, developing instructional strategies or conducting professional development activities, improving assessment processes or improving academic support services **AND** Described why changes were needed and indicated next steps or follow-up assessment **OR** Met Evidence (2) and discussed **prior** progress report results or assessment efforts and provided clear evidence of following up and assessing the identified change to determine if student learning improved
31% (59)	**Evidence (2):** Analyzed and used student learning outcomes assessment results and determined that changes are not needed at this time. Program explained why changes were not needed and described next steps or follow-up assessment **OR** Analyzed and used program information or data to inform changes intended to improve student learning by enhancing or revising curriculum, developing instructional strategies or conducting, professional development activities, improving assessment processes or academic support services **OR** Met Minimal Evidence (1) and discussed **prior** progress report results or assessment efforts and provided clear evidence of following up and assessing the identified change to determine if student learning improved

	NO: PROGRAMS NOT PROVIDING EVIDENCE OF DATA-DRIVEN CONTINUOUS IMPROVEMENT:
14% (27)	**Minimal Evidence (1):** Described program improvements without linking to assessment results **OR** Analyzed data and decided not to make improvements **OR** Described assessment data collection without providing sufficient evidence of the use of results to improve student learning or program improvement **OR** No assessment information provided for current year; however, described looking back on prior assessment results with reference to closing the loop
3% (6)	**No Evidence (0):** No information provided for current assessment year

* Totals include international locations

PROVOST'S AWARD FOR EXCELLENCE IN STUDENT LEARNING OUTCOMES

## Congratulations to the BS Chemical Engineering in KGCOE

The Chemical Engineering program was selected based on their commitment to engage faculty, students, alumni and employers in the program's assessment practices and focus on using results to inform program improvement. Program highlights are provided below:

- The faculty members are integral to the program's assessment model, and use multiple direct and indirect measures including course assignments, exams, focus groups, and co-op evaluations to assess student learning.
- The program emphasizes that assessing student learning is a "natural part of the program's day-to-day operations."
- Careful planning resulted in a streamlined and sustainable assessment process.
- The program uses student learning evidence to inform course development, enhance instructional support for both writing and reading, and increase MATLAB training time to enrich the academic experience
- The program consistently and effectively monitors student performance and makes informed programmatic improvements.

In addition to receiving the provost's award, the department also received $4,000 for professional development.

ANNUAL STUDENT LEARNING @ RIT ASSESSMENT GRANT
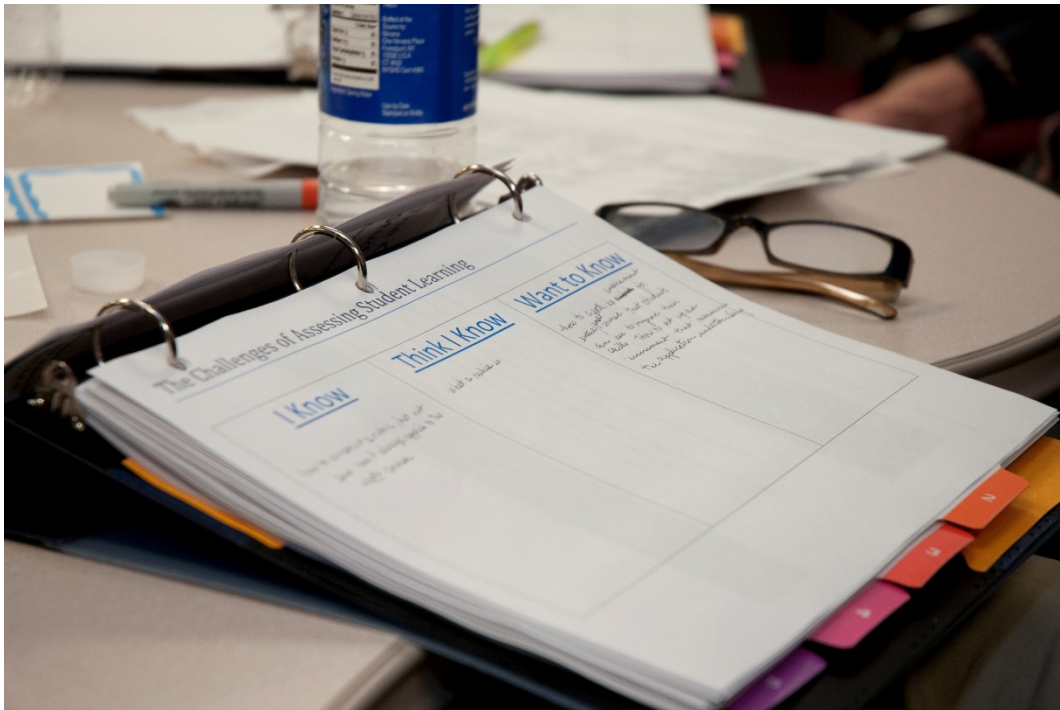
The Office of the Provost and the Office of Educational Effectiveness Assessment (EEA) are pleased to announce the annual Student Learning @ RIT Assessment Grant. This assessment grant is designed to support the development and implementation of student learning assessment activities in academic programs and the General Education curriculum.

The purpose of the grant is to provide one-time funding for faculty to facilitate one or more of the following: the continued development and implementation of Program Level Outcomes Assessment Plans (PLOAPs), innovative assessment approaches to assessing one or more of the General Education student learning outcomes in an approved General Education Course from Perspectives/GE Framework, design and implementation of new rubrics or instruments (e.g., capstone projects, research) as well as data collection and analysis for either program level assessment or general education assessment to facilitate continuous improvement practices.

Previously funded projects have included assessment instrument development, new or revised Program-Level Outcomes Assessment Plans, implementation and analysis of standardized tests, and curriculum mapping. The Call for Proposals opens in March, 2019 with awards made in the amount of $1250 each. Visit student-learning-rit-assessment-grant for more information.