Rio Salado College
Assessment of Student Learning
Annual Report
2015-2016

Introduction

Rio Salado College's first assessment plan was implemented in 1991. Since then, ongoing assessment initiatives aimed at increasing student learning have continued to demonstrate evidence of the College's central focus on this work. Student learning outcomes are measured in five core areas: Critical Thinking, Writing, Information Literacy, Reading, and Oral Communication. These outcomes are assessed at the College level, the program level (as part of Program Review) and via the continuous improvement Plan-Do-Check-Act (PDCA) cycle at the course level. Collectively, these efforts provide a solid infrastructure for assessing and increasing student learning at Rio Salado.

Over the years, the College's assessment plan has progressed from a static document that was reaffirmed on a periodic basis, to a dynamic, ongoing, and evolving series of activities that are integrated across the teaching and learning spectrum.

The Learning Assessment Team includes representation from Faculty Chairs, Senior Administration, Student Affairs, and Institutional Research, and has responsibility for coordinating all aspects of assessment of student learning.

The College maintains a public Assessment of Student Learning website so that the institution's assessment data and processes are transparent and available to all stakeholders. This site may be viewed at: http://www.riosalado.edu/about/teaching-learning/assessment/Pages/SLO.aspx

Overview

During AY2015-16, Rio implemented college-wide initiatives to research, assess, and improve student learning. We developed our online Assessment Data Display, enabling analysis of student scores on assessments across disciplines, courses, and co-curricular groups. Over 80% of students across all disciplines and courses performed at college level (earning 70% or better on the assessment) in a summary all five college-wide student learning outcomes (Critical Thinking, Reading, Writing, Information Literacy, and Oral Communication). Co-curricular student data, including students enrolled in honor societies and specific student groups, revealed 83%-88% performance at or above college level for co-curricular students.

The Rio Outcomes Work Lab (OWL) website was conceived as a "one-stop resource" to facilitate student mastery of the college-level learning outcomes. The site, aligned with the outcomes rubrics, includes comprehensive library-developed guides and resources for student learning. The guides have been embedded in Adjunct Faculty Development modules to familiarize faculty with use of the rubrics for grading assignments, and they are being implemented in multiple courses across disciplines to provide students with just-in-time instruction. In AY2015-16, the OWL website received 20,374 hits.

For AY2016-17, Rio is focusing on using the results from the Assessment Data Display to drive course-level improvements across the curriculum. In addition, we will invite students to complete the ETS nationally-normed assessment when they apply for graduation, and will offer to pay their cap and gown fee as an incentive. Thus, we will encourage participation in graduation while assessing program-level outcomes that will inform future curricular modifications and improve transparency and accountability.

Student Learning Outcomes Work

Rio Salado College is committed to the assessment and improvement of the following College-wide Student Learning Outcomes:

- **Critical Thinking**
- **Writing**
- **Reading**
- **Information Literacy**
- **Oral Communication**

Assessment work focusing on each of these outcomes is detailed below.

Critical Thinking

An analysis of over 129,000 assessment results from subjective assignments submitted from during AY2015-16 shows that 79% of all students performed at a college level on dimensions identified as Critical Thinking, which include descriptors related to the rubric categories of Analysis, Evaluation, Inference, and Deductive and Inductive Reasoning. This falls just short of the college-wide target of 80%. An example of instructional interventions designed to increase student performance on Critical Thinking assessments is included below.

In Dental Assisting I (DAE112), less than 80% of the students were performing at a college level on the Lesson 3 and Lesson 10 Assignments. Course content and assessments were revised to enhance student learning, with a special emphasis on the development of critical thinking skills. Results of this PDCA cycle follow.

Assignment	Before Intervention		After Intervention	
	Average assignment score	% of students performing at the college level	Average assignment score	% of students performing at the college level
Lesson 3 Naming index	54	57%	95	100%
Lesson 10 Cleft palate	66	50%	76	75%

Analysis of Outcomes Assessment Results:

Revision of Lesson 3 Naming Index assignment in DAE112 was successful in reaching our target objective of 80% of students performing at the college level.

Revision of Lesson 10 Cleft palate assignment in DAE112 was successful in that there was a 10% increase in the average assignment score and an increase in the percentage of students performing at the college level by 25%. We were not successful in reaching the objective of 80% of students performing at the college level.

Action to be taken:

1. Lesson 3 assignment – no further action
2. Lesson 10 assignment – review again with the next cohort of students to increase sample size. If necessary, revise content to further enhance student learning and prepare them for taking the assignment.

Writing

During AY2015-16, more than 400,000 assessments were analyzed for the Writing learning outcome. The analysis indicates 82% of all students performed at college-level in the areas of Content, Organization, Grammar and Mechanics, and Voice and Diction. Though summary data shows that Rio Students performed above the target overall, there were specific courses in which students performed below the target. The following is an example of a PDCA cycle focusing on college-level writing.

The Computer Technology Department focuses on grammar and writing skills in all written assessments submitted by students. Instructors use the following intervention to assist students in improving their grammar and writing skills:

Writing Skills - To grade how well the student is writing at a college level. This includes the organization of the essay, spelling, grammar, and citations of all sources used. It can also include the effectiveness of internal/external code documentation.

1. *Essays require a minimum of 3 paragraphs and APA formatting (references and in-text citations).*
2. *If essay does not meet minimum requirements, score essay with zero points and feedback to revise and resubmit for credit.*
3. *Essays may be resubmitted up to two times per assignment.*
   a. *The 3rd submission must be graded with no option to resubmit; if the essay still does not meet minimum requirements, it should be graded with zero points with no option to resubmit.*

Using data from 2014-15 course sections of CIS102 (Interpersonal and Customer Service Skills for IT Professionals), this intervention improved students' "grammar/writing skills" scores over the duration of the course. For Lesson One, 41% of students scored at or above college-level for "grammar/writing skills." By the end of the course, student scores increased to 60% in the last written assessment.

Data from 2014-15 course sections of CIS250 (Management of Information Systems) also indicate this intervention improved students' "grammar/writing skills" scores over the duration of the course. Fourteen percent of students scored at or above college-level for "grammar/writing skills" in Lesson One. This percentage increased to 75% in the last written assessment of the course.

Further intervention for CIS102:

For spring 2016, CIS102 instructors provided students with additional detailed information regarding the Writing Skills requirements to the "Instructor Notes" section of the Course

Introduction. The intention was to highlight the Writing Skills requirement for students before they begin the first lesson of the course. While this information is already in the Syllabus and on the Course Homepage, via Announcement, adding it to the Course Introduction provided the information in three different areas.

In October 2016, data was compared to see if "grammar/writing skills" scores improved for the Lesson 1 Essay. Unfortunately, the percentage of students at college-level decreased from 41% to 27%. However, when reviewing students' "grammar/writing skills" scores over the duration of the course, from summer 2015 to fall 2016, they increased dramatically. Only 36% of students scored at or above college-level for "grammar/writing skills" for Lesson One; however, this percentage increased to 80% for the Lesson 7 Final Project. Although the additional "writing skills" requirements in the "Instructor Notes" section of the Course Introduction did not improve students' writing skills at the beginning of the course, the Department policy of enforcing college-level writing skills improved students' writing skills over the duration of the course.

Due to the decrease in the percentage of students writing at a college-level when the Writing Skills requirements were added to the "Instructor Notes" section of the Course Introduction, this practice will be discontinued. The Computer Department will continue to provide this information for students in the Syllabus and on the Course Homepage as an Announcement. In addition, instructors in the Computer Department will also continue the policy of enforcing college-level writing skills by returning essays that do not meet the minimum requirements, requesting they be revised and resubmitted for credit.

Reading

Reading Student Learning Outcome data results from AY 2015-2016, indicated that 79% of all students performed at college level in Reading. Over 100, 000 subjective assessments were analyzed to determine student performance in the following rubric dimensions: Application, Central Idea and Textual Evidence, Inferences and Valid Conclusions, and Analysis. The current percentage is slightly lower than the college-wide target of 80%. An instructional intervention is included below that was designed to increase student performance in Reading.

In the Counseling and Personal Development Department, scores on the Midterm Exam for CPD150 (Strategies for College Success), indicated that less than 80% of students were performing at college level in the Application dimension of the Reading rubric.

	Assignment	Dimension	# of Students	Avg. Score	Stds @ College Level	Pct of Stds @ College Level
Before Intervention	Lesson 6: Midterm Exam	Application/Analysis (Examples, experiences, evidence)	154	84	121	79%

In order to support student performance in Reading, the rubric for the CPD150 Midterm Exam was revised. The new exam rubric included the following dimensions of the Rio Salado Reading Rubric: Inferences and Valid Conclusions and Application.

In the area of Inferences and Valid Conclusions, students were required to use evidence from the course textbook to explain the factors that contribute to college success. Students were also required to give examples from their own experiences and draw conclusions about their own preparedness for college work.

In the area of Application, students were required to apply the strategies learned at the midpoint of the course to themselves as learners. Students assessed their progress and determined areas of improvement.

The Grading Rubric is included below with areas of the Reading rubric highlighted:

Criteria	GPS Locked in/ Excellent A	On the Map/ Getting There B-C	Off the Map/ Bare Minimum D-F
Professional appearance, structure, and organization **5 points**	• Typed and labeled • Paper is well organized and clear • On Course topics are highlighted in bold • Introduction is clear and gives a "road map" of the rest of the paper • Main points are well developed • Supporting details are concrete • Punctuation, spelling and capitalization are correct	• Typed and labeled • On Course topics are highlighted and bold • Introduction is incomplete • Main points are present, but one or more may lack development or relevance • Supporting details are missing or irrelevant • Work contains some (three or four) punctuation, spelling and capitalization errors	• Introduction or conclusion is unclear or absent • Paragraphs are disorganized, incoherent or absent • Main points are insufficient and/or vague • Supporting details are missing or irrelevant • Work contains many (more than four) punctuation, spelling and capitalization errors

Content Review <mark>(Inferences and Valid Conclusions)</mark> 15 points	• There are three or more strategies per Creating College Success chapter	• Two or more strategies per Creating College Success chapter are present	• Fewer than two success strategies are present
Specificity and description of activities, techniques and tools 15 points	• Defines and discusses the strategies with accuracy and depth	• Defines and discusses strategies with some accuracy and depth	• Definitions and discussion of strategies are inaccurate and superficial
Critical Thinking: <mark>(Application)</mark> 15 points	• On Course strategies are applied to issues in student's life using the 4 E's • The problem, strategy and declaration communicated of what behavior the student is committing to and what actions he/she will take to ensure success in strategy	• Strategies are applied to issues in student's life using the 4E's • Some examples are provided, but are poorly chosen or described	• Little or no attempt to apply strategies to student's life • No examples are given

Data collection will continue during AY 2016-2017 to determine if there is growth in student's abilities with Inferences and Valid Conclusions as well as Application.

Information Literacy

An analysis of 258,585 assessment results from subjective assignments submitted during AY2015-16 demonstrates that just over 81% of all students performed at college level on dimensions identified as Information Literacy skills. These include descriptors related to the following rubric categories:

- Identify the type and scope of information needed;
- Access and retrieve appropriate information;
- Evaluate the information
- Incorporate the information appropriately for a specific purpose.

Thus, overall, Rio students met the target for the Information Literacy outcome. However, there were some courses in which students performed below the threshold. As an example, an

examination of the learning outcomes data for ECN211 and 212 showed fewer than 80% of students performing at college level on their library research assignments.

Course	Percentage of Students Performing at College Level for Information Literacy
ECN211 (Macroeconomic Principles)	77%
ECN212 (Microeconomic Principles)	74%

In the Plan phase, ECN Adjunct Faculty were surveyed on the appropriateness of the existing assignment rubric and where they saw students having difficulty. The survey results were discussed with Adjunct Faculty at a department meeting, and a RioLOG grant was subsequently funded to pay for redevelopment of the assignments. Development is complete and the revisions will roll out in May, 2017 in keeping with the course lifecycle (the Do phase). Thereafter, the data will be reviewed to determine if the intervention was successful (Check phase), and adjustments made if indicated (Act phase).

Oral Communication

Throughout the 2016/2016 FY, over 3,400 students were assessed according to the new Oral Communication Rubric. The analysis showed that 84% of all students performed at or above a college level, per the Oral Communication dimensions. These dimensions were identified as Speech Organization, Supporting Evidence, Language Choices, and Oral Delivery. Though Rio students overall met the 80% target, there were individual courses in which students performed below the target. See below for the results of a completed PDCA cycle designed to increase proficiency in Oral Communication.

The following data extracted from Rio's Assessment Data Display show COM225 (Public Speaking) assignments associated with the Oral Communication dimension for AY2014-15, several of which fell below the 80% target (see yellow highlights). After putting a focus on the clear assessment of oral communication and fully training instructors on the importance of speaking competence, scores improved for AY2015-16.

Oral Communication Flag for AY**2014-15**

Prefix	Course	Course Effective Date	Lesson	Dimension Name	Students	Avg score	Students at College Level	Pct of Stds @ College Level	First Submission	Last Submission	Critical Thinking Flag	Reading Flag	Info Lit Flag	Oral Comm Flag	Writing Flag
COM	COM225	20141020	Lesson 2 Three in the Bag A:	Delivery	450	78.49	357	79.33	2014-10-29	2015-06-28					Y
COM	COM225	20141020	Lesson 4 Informative Introdu	Delivery decisions and	422	79	338	80.09	2014-11-07	2015-06-29				Y	Y
COM	COM225	20141020	Lesson 7 Audience Speech 3	Delivery decisions and	352	74.63	271	76.99	2014-11-21	2015-06-29				Y	Y
COM	COM225	20141020	Lesson 9 Speech Rehearsal 2	Delivery decisions and	333	75.33	255	76.58	2014-12-05	2015-06-29				Y	Y
COM	COM225	20141020	Lesson 10 Informative Speec	Delivery decisions and	320	75.06	239	74.69	2014-12-05	2015-06-28				Y	Y
COM	COM225	20141020	Lesson 11 Audience Speech	Delivery decisions and	323	81.41	275	85.14	2014-12-08	2015-06-29				Y	Y
COM	COM225	20141020	Lesson 12 At Home Final Per	Delivery decisions and	291	87.56	267	91.75	2014-12-08	2015-06-27				Y	Y

Oral Communication Flag for AY**2015-2016**

Prefix	Course	Course Effective Date	Lesson	Dimension Name	Students	Avg score	Students at College Level	Pct of Stds @ College Level	First Submission	Last Submission	Critical Thinking Flag	Reading Flag	Info Lit Flag	Oral Comm Flag	Writing Flag
COM	COM100	20160307	Lesson 11 Assignment Part I: Informati	Delivery	97	82.75	85	87.63	2016-04-23	2016-06-28					Y
COM	COM100	20160406	Lesson 11 Assignment Part I: Informati	Delivery	1		0	0.00	2016-05-24	2016-05-24					Y
COM	COM225	20141020	Lesson 2 Three in the Bag Audience Sp	Delivery	645	82.02	527	81.71	2015-07-01	2016-06-29					Y
COM	COM225	20141020	Lesson 4 Informative Introduction Auc	Delivery decisio	634	77.38	519	81.86	2015-07-01	2016-06-29				Y	Y
COM	COM225	20141020	Lesson 7 Audience Speech 3: Rev Spee	Delivery decisio	568	75.79	460	80.99	2015-07-01	2016-06-29				Y	Y
COM	COM225	20141020	Lesson 9 Speech Rehearsal 2	Delivery decisio	586	75.19	465	79.35	2015-07-01	2016-06-29				Y	Y
COM	COM225	20141020	Lesson 10 Informative Speech	Delivery decisio	567	75.18	453	79.89	2015-07-01	2016-06-29				Y	Y
COM	COM225	20141020	Lesson 11 Audience Speech 6: Persuas	Delivery decisio	589	82.25	525	89.11	2015-07-01	2016-06-29				Y	Y
COM	COM225	20141020	Lesson 12 At Home Final Performance	Delivery decisio	539	87.36	508	94.25	2015-07-01	2016-06-29				Y	Y

Co-curricular Course-Level Data

Using data from over 1.2 million assessments, student learning was evaluated for all five student learning outcomes, with the intent of identifying how often students are performing at or above college level. Over 80% of all students performed at college level in all student learning outcomes. When these data were disaggregated to review co-curricular student performance, a greater percentage performed at college level in all areas, ranging from 83% to 89% of co-curricular students.

All Students

Student Learning Outcome	Total Assessments**	Assessments at College Level	% of Assessments at College Level
Critical Thinking	129,080	102,360	79%
Reading	110,928	88,055	79%
Information Literacy	258,585	209,764	81%
Oral Communication	3,423	2,859	84%
Writing	406,604	333,074	82%

Co-Curricular Students*

Student Learning Outcome	Total Assessments	Assessments at College Level	% of Assessments at College Level
Critical Thinking	5,319	4,676	88%
Reading	5,374	4,634	86%
Information Literacy	11,731	10,357	88%
Oral Communication	307	255	83%
Writing	20,320	17,866	88%

*Co-curricular students are students in Phi-Theta-Kappa, Adult ACE, ACE Puente, Honors, or the National Society for Leadership and Success

The following student groups are used: PTK,A-10,A-11,A-12,A-13,A-14,AA11,AA12,AA13,AA14,AA15,HONP,HON,HONF,HONW,NSLS

**Includes all assignments submitted between 7/1/2015 and 6/30/2016

Grant-funded Assessment Work

In fall 2015, the Psychology Department launched a new version of PSY101 (Introduction to Psychology) using OER (Open Educational Resources), which was partially funded by a Maricopa Millions grant. This version eliminated the cost of textbooks for students by embedding all of the lesson content in the Learning Management System. Some of the assessment questions were modified and the new structure went from two exams (Midterm and Final) to four mid-course exams. This model measures content mastery of smaller chunks of information.

In AY2014-2015, students performed =/>80 in the following dimensions:

PSY101 Assessment 2014-2015					
Lesson	Assignment	Content	Personal Relevance	Analysis	Sentence Structure and Mechanics
1	Short Answers	83	83	84	89
3	Short Answers	86	89	88	89
5	Short Answers	87	91	89	90
6	Short Answers	82	91	82	90
9	Short Answers	90	90	91	93
10	Short Answers	88	93	87	91

11	Short Answers	93	97	95	93
Average		87	91	88	91

Students did not underperform in any of the dimensions on any of the assignments.

In AY2015-2016, students performed =/>80 in the following dimensions:

PSY101 Assessment 2015-2016						
Lesson	Assignment	Content	Personal Relevance	Analysis	Sentence Structure and Mechanics	Comprehension
6	Essay	86	92	83.79	87	86
12	Essay	92	97	91.91	85	94
13	Research Essay	91	98	92.11	87	93
Average		90	95	89.27	86	91

According to the data, students performed equally as well in the OER course, overall, in each of the dimensions measuring content, personal relevance, analysis, and sentence structure and mechanics as the older version of the course.

	2014-2015 Avg. Score	2015-2016 Avg. Score	Difference
Content	87	90	+ 3
Personal Relevance	91	95	+ 4

Analysis	88	89	+ 1
Sentence Structure	91	86	- 5
Comprehension		91	0

Analytical Skills Data Capture:

In the 2014-2015 version, the analytical skills of students were assessed in seven (7) lessons, but only captured in three (3) lessons in the OER version. In the OER version, the analytical skills were assessed in each of the essays and the research based assignment. In the OER version, Comprehension was added as an additional category to measure.

Although students consistently performed =/> 80 in all areas, students performed slightly better in the OER course in the areas of Content, Personal Relevance, and Analysis. Students did not perform as well in the OER course in the area of Sentence Structure.

Closing the PDCA Cycle:

Since the elimination of the textbook did not result in decrease in student performance, and students benefitted from not having to purchase materials, the decision was made to only offer OER versions of PSY101 moving forward, thus completing the "Act" phase of this assessment cycle.

Program Review

Rio Salado College has adopted and implemented a formal Program Review model and process that is systematic, comprehensive, and sustainable. Every review contains the same foundational components, including program goals, student learning outcomes, program resources, and co-curricular outcomes, which are addressed by utilizing a template of questions and data sets. The Program Chair highlights best practices, areas for improvement, and recommendations for future actions. Learning Assessment Team members examine the completed review and provide feedback, which is then submitted to the Vice President of Academic Affairs for final action. Once a review has been completed, an Executive Summary Report is posted to the Rio Salado Assessment public website.

During FY2015-16, program reviews were completed for the following programs:

- eLearning Design Specialist

- Paralegal
- Sustainable Food Systems
- Dental Office Management
- Teacher Education

Four programs are scheduled to undergo comprehensive review during FY2016-17, including General Education.

RioLOGs

Rio **L**earning **O**utcomes **G**rants (RioLOGs) provide a mechanism and the resources to support Faculty Chairs in developing student learning outcomes-based initiatives, directly linked to assessment results data. The instructional initiatives or projects proposed for RioLOG funding require the involvement of adjunct faculty members.

Below is the data from PDCA improvement cycles based on RioLOG work:

Reading Department

Writing Student Learning Outcomes Intervention Project

During the 2015-2016 academic year, the Reading departmental focus was on the Writing Student Learning Outcome. Based on concerns from adjunct faculty regarding the writing of students in CRE101 (College Critical Reading), the department chose to create an intervention for the CRE101 course focused on the Writing Student Learning Outcome. An adjunct faculty member worked with the Faculty Chair to design an intervention focused specifically on the Grammar and Mechanics section of the Rio Salado Writing Rubric. The areas chosen included: spelling errors, incorrect word use, run on sentences, comma splices, and sentence fragments based on feedback from adjunct faculty teaching the course.

The intervention consisted of additional course content focused on elements of grammar and mechanics. To help students see the alignment of the material in the lessons to the student learning outcomes, the Grammar and Mechanics section of the Writing Rubric was added to the Introduction section of lessons 1-3. In addition, specific content was added in the following subject areas:

Lesson 1-spelling errors and incorrect word use
Lesson 2-run on sentences and comma splices
Lesson 3-sentence fragments

Students engaged in the focus areas through reading resources, videos, interactive activities and quizzes.

Students were also required to submit their assignments for lessons 1-3 to Smarthinking to receive feedback in the area of "Grammar and Documentation Review". An announcement was added to the Course Homepage with directions for students on how to submit the assignment and how to receive their feedback. This feedback was submitted to the instructor before the final assignment was submitted for grading. The purpose of this was to encourage students to review and edit their work before submitting for grading.

Writing Student Learning Outcome Intervention Project Results

The charts below show the student scores on Grammar and Mechanics before and after the intervention for the following assignments:

Lesson 1- Assumptions and Obstacles
Lesson 2-Guided Analysis
Lesson 3-Editorial Analysis

	Assignment	Dimension	Students	Average Score	Students @ College Level	Percent of Students @ College Level
Before Intervention	Lesson 1 Assumptions and Obstacles	Grammar/Mechanics:	384	93	358	93%
After Intervention	Lesson 1 Assumptions and Obstacles	Grammar/Mechanics:	313	76	232	74%

	Assignment	Dimension	Students	Average Score	Students @ College Level	Percent of Students @ College Level
Before Intervention	Lesson 2 Guided Analysis Assignment	Grammar/Mechanics:	410	96	396	97%
After Intervention	Lesson 2 Guided Analysis Assignment	Grammar/Mechanics:	268	85	228	85%

	Assignment	Dimension	Students	Average Score	Students @ College Level	Percent of Students @ College Level
Before Intervention	Lesson 3 Editorial Analysis	Grammar / Mechanics	429	91	393	92%
After Intervention	Lesson 3 Editorial Analysis	Grammar / Mechanics	249	85	209	84%

As evidenced in the data charts above, the intervention did not improve the percentage of students at college level in Grammar and Mechanics. In actuality, the intervention decreased the average scores of students as well as the percentage of students at college level for Grammar and Mechanics in lessons 1-3 where the intervention was placed.

One of the positive results of the intervention, was an increase in the average score and the percentage of students at college level for the lesson 4 (subsequent) assignment which did not include the intervention (data below). Adjunct instructors also reported that many students asked if their lesson 4 assignment could be submitted to Smarthinking, though this was not included in the lesson nor was this a requirement.

	Assignment	Dimension	Students	Average Score	Students @ College Level	Percent of Students @ College Level
Before Intervention	Lesson 4 Advertising Analysis	Grammar / Mechanics	392	94	363	93%
After Intervention	Lesson 4 Advertising Analysis	Grammar / Mechanics	207	96	199	96%

The results of the intervention provide data to support the observations of assessment practices by adjunct faculty teaching CRE101. Student scores for Grammar and Mechanics were inconsistently aligned with student performance on class assignments. Though faculty were concerned with the writing abilities of students in the course, student scores did not reflect the grammatical and spelling errors in student assignments. Points were not being consistently deducted in the Grammar and Mechanics section of the rubric, though students had several errors in grammar and spelling.

The results support the continued work in the department on assessment practices as it relates to providing quality feedback and consistent scoring to ensure that students are able to meet the College's writing student learning outcomes and become proficient writers.
Though there was no improvement in student scores for the targeted lessons, the intervention will continue through fall 2016. Data will be reviewed at the end of the semester to determine if the intervention will continue or if parts of the intervention will continue to be embedded in the course.

Physical Sciences Department

During the 2015-2016 year, the departmental focus was on assessments and utilized the Rio Learning Outcomes Grant (RioLOG) to complete the work. An analysis was completed in the following courses: AST101, PHY111, PHY112, CHM138, CHM130, SUS110, FON100, and GLG101. Most of the assessment work focused on midterm and final exam success. Assessment items that had a success rate under 60% were analyzed and, where necessary, adjustments were made to improve the success on the question. This was done by either altering the question or by improving the course content to better reflect the objective

and/or competency. Results and further adjustment will be reviewed and made during the Fall and Spring of 2016.

AST101 (Survey of Astronomy): Due to low Midterm and Final Exam averages in this course, work was done to assess the questions on both the Midterm and Final Exam to ensure the questions were well-worded and there was content in the lessons to support the knowledge in the question. Adjustments were made to lessons as needed and many questions on the exams were altered or replaced. The Midterm Exam did not see significant changes in the results but the Final Exam did (as shown on table below). The work on this course continues as these numbers are still too low. Future work will include adjustments to number of questions as time has been an issue for students to complete the 100 questions as well as a continued look at the alignment of the questions to the content.

	% of questions resulting in the correct answer by 60% or more of the students **BEFORE CHANGES**	% of questions resulting in the correct answer by 60% or more of the students **AFTER CHANGES**
Midterm Exam	28%	33%
Final Exam	35%	53%

PHY111/PHY112 (General Physics I/II): Similar to AST101, the Midterm and Final Exam averages were low so assessment work was done to look at these concerns and to make adjustments. Adjustments were made to lessons as needed and many questions on the exams were altered or replaced. The length of the exam was also reduced as the high number of math problems asked during the exam. Results for this work will be analyzed in the Spring once a substantial number of students have taken the new exam.

CHM138 (Chemistry for Allied Health): Many of the assignments in this course are "essays" but students often misunderstand what that term means in the context of this course. Sometimes it is a short "essay" response while other times it is showing work for a calculation. In order to increase student performance on the essays (especially the first one that has an average score of 58%), a rubric and explanation of expectations was developed to help guide students. This changes was implemented in September of 2016 and thus there is not enough data to look at yet. These results will be further analyzed in the Spring.

CHM130 (Fundamental Chemistry): CHM130 contains written responses to conceptual questions within the chemistry content. The SLO goal of writing is a flag for these assessments as the students have to demonstrate their understanding through their written thoughts. Before the RioLOG work was completed, the average was 85.2% for the writing flag. A number of modifications were made to the prompts including clarifying the questions through better wording as well as a few questions in which the content focus was changes. The new average for the writing flag is 88%.

SUS110 (Sustainable World): Much like the other course assessment work, this development focused on analyzing the exams to ensure the question alignment with objectives and competencies. The exam questions were well done and were aligned with the objectives and competencies so time was spent enhancing the curriculum in the lessons to increase achievement.

	% of questions resulting in the correct answer by 60% or more of the students **BEFORE CHANGES**	% of questions resulting in the correct answer by 60% or more of the students **AFTER CHANGES**
Midterm Exam	74%	84%
Final Exam	74%	80%

FON100 (Introductory Nutrition): The focus of this redevelopment was to modify the current course to match a new version of the textbook. We took this time to look under the hood of the course and make updates. Changes were made to update the content and make relevant links to real world situations as the content is very applicable to everyday life. Although it is still early, preliminary data shows an increase in the Midterm and Final Exam essays where students convey their understanding of the concepts.

	Average before changes	**Average after changes**
Midterm Exam - Essay	77%	80%
Final Exam - Essay	81%	83%

GLG101 (Introduction to Geology): Assessment work was completed for GLG101 to help raise the average on the Midterm and Final Exams. Modifications focused on changes to the test items (rewording, clarification, deletion, addition) as well as some content changes to enhance

students understanding of concepts. The data collection on this work is limited due to the short time since implantation. Data will be analyzed in the Spring.

STEM (Science, Technology, Engineering, and Mathematics) Department

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In the 2014-2015 Academic year, two areas were identified from the College's Assessment Data Display for further analysis: CIS159 (Visual Basic Programming I) Lesson 2 and CIS162AD (C#: Level I) Projects 2-4. Both had the writing dimension of "Completeness" at below the 80% proficient expectations. Two adjunct faculty members accepted RioLOG funding to analyze the data and make recommendations for improvement. As a result of this analysis, both instructors were offered redevelopment contracts in AY 15-16 to implement changes and to update to the latest edition of the text. The development projects are complete, but it is too early to have data from course completers to see if the RioLOG work has moved the needle. Results are expected in the 16-17 Academic year.

Allied Health Department

The following rubric was developed to assess Student Learning Outcomes in Allied Health courses. The rubric is being integrated at the course level over the 2016-17 academic year.

	Excellent	Very Good	Good	Needs Improvement
Completeness (40%)	Every portion of assignment fully addressed with sufficient depth and scope to demonstrate comprehensive achievement of the learning objectives. 12pts	Every portion of assignment addressed but response could demonstrate greater depth and scope. 11pts	Every portion of assignment addressed; depth and scope of response demonstrate basic understanding of subject. 10pts	Either portions were left incomplete, or the scope and depth of response is not adequate to demonstrate basic understanding of subject. 9pts or less

Knowledge (40%) [Information Literacy and Reading]	The student has clearly identified the central idea and provided substantial evidence from the text as support. Content is of superior depth and is well-organized, effectively communicated, and consistently and appropriately cited. 12pts	The student has clearly identified the central idea and provided some evidence from the text as support. Content is sufficient, organized and communicated; sources may be inconsistently cited. 11pts	The student has clearly identified the topic but has not clearly identified the central idea and provided little evidence from the text as support. Content is disorganized and poorly communicated, and citations are incomplete. 10pts	The student has not identified the topic or central idea and has not provided evidence from the text as support. There is insufficient content to support the thesis, and citations are not present. 9pts or less
Analysis (10%) Critical Thinking	Response analyzes key information, questions and problems clearly and precisely. Response evaluates material insightfully and logically based on instructional and supplemental material and includes facts, data, key terminology, and detailed explanations. 3pts	Response analyzes key information, questions, and problems competently. Response evaluates material competently based on instructional and supplemental material and includes facts, data, key terminology, and detailed explanations. 2pts	Response inconsistently analyzes key information, questions and problems in a competent manner. Application of the material in the lesson at a basic level, but additional analytic techniques to demonstrate depth of understanding are not evident. 1pt	Response does not analyze information, questions and problems, or does so superficially. The material in the lesson is not appropriately applied to examples. Analysis is based on informal personal opinion and does not integrate facts, data, key terminology and concepts, or detailed explanations. 0pts
Writing (10%)	Response maintains clear and obvious purpose and organization, with well-developed paragraphs, and appropriate transitions that emphasize the connection between ideas. Accurate spelling, grammar, and punctuation. Resources, including textbook, are properly cited and a resource list is included. 3pts	Response contains purpose that is inconsistently clear. Uses a suitable organization plan with adequate paragraphs. Only some transitions emphasize the connection between ideas. Few instances of awkward grammar, syntax or spelling that do not affect reader understanding. Included in-text citations and a resource list but they were not properly formatted. 2pts	Presents a vague purpose, with inadequate paragraphing and few transitions. Writing exhibits some difficulties with fragments, grammar, punctuation, subject-verb agreement or other distracting features. Response omits either in-text citations or a resource list. 2pts	The response does not present a unified purpose and exhibits no organizational plan. Unclear paragraphs and transitions. Multiple difficulties with sentence fragments, grammar, punctuation, subject-verb agreement or other distracting features. Complete absence of any in-text citations or resource list. 1pt or less

Significant Accomplishments in Learning Assessment Work, 2015-16

- The 16th Annual Assessment and Learning Experience meetings were held on January 28th and 30th, 2016, with over 500 adjunct faculty members attending.
- Dr. Angela Felix published a peer-reviewed article in the *Journal of Second Language Teaching and Research* titled "Using Pre/Post Testing to Evaluate the Effectiveness of Online Language Programs."
- Eleven Outstanding Adjunct Faculty were recognized for *Contributions to Assessment of Student Learning* for AY2015-16. The Outstanding Adjunct Faculty Reception was held on August 24, 2016.
- Rio applied for the Excellence in Assessment designation sponsored by the Voluntary System for Accountability (VSA), the National Institute for Learning Outcomes Assessment (NILOA), and the American Association of Colleges and Universities (AAC&U).
- A Rio team attended the Higher Learning Commission Annual Conference in Chicago in April, 2016.
- A new Oral Communication rubric was developed.
- The Assessment Data Display was deployed, enabling just-in-time access to course-level data on Critical Thinking, Writing, Reading, Information Literacy, and Oral Communication.
- Over $14,000 was allocated for course-level assessment work.
- Five Program Reviews were completed.
- Rio Salado submitted the required fourth year Assurance Argument accreditation review to the Higher Learning Commission in December, 2015.
- Over 300 Adjunct Faculty Development workshops were completed during AY2015-16.
- The Learning Assessment Report was compiled and posted to the Learning Assessment SharePoint and Adjunct Faculty SharePoint sites for access by residential faculty, adjunct faculty, and College employees.
- The Learning Assessment Report will be presented to all adjunct faculty during the January, 2017, Spring All Faculty Assessment and Learning Experience, and posted to the College's Public Website.

Learning Assessment Team Members

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