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October 10, 2018

Mr. W. Charles Smithson  
Secretary of the Senate  
State Capitol Building  
Des Moines, IA 50319

Ms. Carmine Boal  
Chief Clerk of the House  
State Capitol Building  
Des Moines, IA 50319

Re: Continuous Quality Improvement

Dear Mr. Smithson and Ms. Boal:

In accordance with 2015 Iowa Code §262.9.36, (which was enacted in 2012 by SF 2284), the Board of Regents, State of Iowa, has prepared a report describing the implementation of continuous improvement of courses with a combined enrollment of 100 or more students in 2017-2018. Enclosed is the annual report.

The strategies used to assess student performance and quality of the learning experience include faculty review of student portfolios, student performance in subsequent courses, faculty review of scored term papers, comparing student learning outcomes across multiple sections of the same course, and faculty comparison of course syllabi across sections.

Some of the improvements made after review and analysis included modifying subsequent course assignments and exams, adding new content modules to courses, improving connections between course content and professional/real-world experiences, and changing course delivery methods or pedagogy—often with multiple changes being made in each course reviewed.

Please feel free to contact me if you have any questions about this report.

Sincerely,

Mark Braun  
Executive Director  
Board of Regents, State of Iowa

Enclosure

cc: Legislative Liaisons  
Legislative Log

# IOWA STATE UNIVERSITY

## 2017-2018 Annual Report to the Board of Regents Course-level Continuous Improvement Plans

### Executive Summary

For academic year 2017-2018, Iowa Code Section 262.9(36) required that all undergraduate courses typically enrolling 100 or more students annually have continuous improvement plans implemented. At Iowa State University, 704 different courses enrolled more than 100 students. Those continuous improvement plans were therefore in place during AY17-18 with a focus on student achievement of outcomes, assessment strategies used, plans for improvement, and impact of their plans on student success. Both summative and formative assessment strategies were used in the improvement plans. The most frequent changes planned to improve student learning in the courses are: modifying class assignments, changing student learning experiences and activities, modifying the time spent on specific course content, and changing course delivery methods and pedagogy. These changes are consistent with the other improvement plans developed from the prior academic year's implementation of the continuous improvement strategy.

### Findings

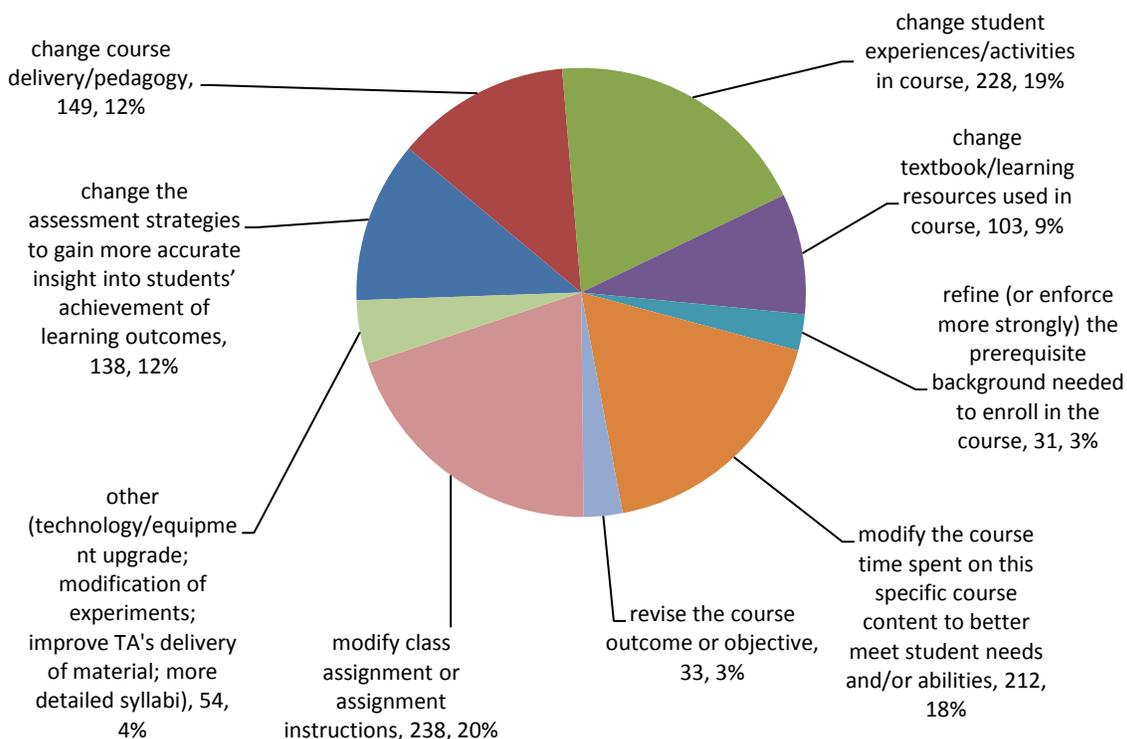
The survey instrument used in AY16-17 was again used for this year's data collection. The survey was completed by a single point of contact for each course, therefore establishing beneficial collaboration across multi-instructor courses. Of the 704 courses that enrolled 100 or more students, 677 had a respondent complete a survey. The results of the survey are shared with departments as a part of ISU's continuous improvement and course refinement process. The following two pages summarize the findings:

- Data on student enrollment in courses covered under the legislation,
- Data on the types of assessment approaches used within the continuous improvement plans,
- Data on the types of changes faculty are planning to make based on the results of the plans, and
- Summaries of selected open-ended responses from instructors on the impact of the continuous improvement plans.

Questions related to data contained in this report or the implementation of the continuous improvement plans at Iowa State University should be directed to Dr. Julia LaBianca ([labianca@iastate.edu](mailto:labianca@iastate.edu)) in the Office of Institutional Research or Dr. Karen Zunkel ([kzunkel@iastate.edu](mailto:kzunkel@iastate.edu)) in the Office of the Senior Vice President and Provost.

Summary of Continuous Improvement in Iowa State University Courses	
Report date	July 2018
Report period	AY2017-2018
Number of courses, enrollment, and students	
Total number of courses	704
Total student enrollment in courses (duplicated enrollment)	268,396
Number of unique students enrolled in courses	32,511
Number of courses utilizing various continuous improvement assessment strategies	
Faculty review of exam or quiz grades	527
Faculty review of scored term paper	138
Faculty review of juried exhibit or performance	30
Faculty review of student portfolio	48
Faculty review of presentation or project	243
Faculty review of licensure or standardized tests scores	10
Faculty review of student survey/evaluation of course outcomes	106
Faculty evaluation of student performance in subsequent courses	29
Faculty monitoring of course grades and D/F/W rates	7
Faculty discussions across multi-section courses	1
Formative assessments such as clicker and quizzes	645
Other (lab reports, homework, discussions, observations)	157

**Types of Changes Planned Based on CIP Results, Number of Courses**



## Summaries of Continuous Improvement Plan Impact

**AESHM 342** (*Aesthetics of Consumer Experience*) – Over the course of the last 2 years, the instructor has made improvements to the content, delivery, and assessment methods and techniques. The changes made are creating the desired result of increased understanding and learning, and improved critical thinking in students.

**AN S 270** (*Foods of Animal Origin*) – The continuous improvement approach is a tool to identify strengths and weaknesses of approaches to meet course outcomes. It has helped identify where some topics need to be put in clearer context. Finally, it has helped point out to the students that the defined pre-requisites serve them well in this course

**CE 206** (*Engineering Economic Analysis and Professional Issues in Civil Engineering*) – One of the continuous improvements for this course was the inclusion of a team ethics assignment which involved the students researching an engineering ethics case study or design failure and preparing a report and narrated video on the case study. 100% of the students participated and completed this assignment successfully.

**ECON 466** (*Agricultural Finance*) – This was the first year of assessment recording. The CIP helped the instructor to see that the goal for the first objective [applying agricultural finance concepts to make capital investment decisions] was below expectations but above expectations for the second objective [applying agricultural finance concepts related to risk and return to discern the riskiness of an asset].

**ENGL 101C** (*English for Native Speakers of Other Languages: Academic English II-Undergraduates*) – The identified learning outcomes have always been targeted for instruction and assessment; but collecting data on them has enabled the ability to determine which teaching strategies have been most effective and what other factors contribute to student learning success.

**FIN 330** (*Financial Markets and Institutions*) – During Spring 2017, only 60.4% of students were proficient on the topic related to Monetary Policy and Interest rates. However, this percentage has increased to 72.6% during Fall 2017. This improvement could be attributed to improvement plans.

**MGMT 414** (*International Management*) – From the previous year, the objective “understand and interpret the main international Business/Management concepts,” went up from 62.2% to 84.2%.

**PSYCH 302** (*Research Methods in Psychology*) – The CIP has improved continuity across different sections of the course. Instructor and peer feedback for hands-on projects and research papers has improved students' understanding of how to conduct research.



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DATE: July 31, 2018

TO: Rachel Boon, Chief Academic Officer, Iowa Board of Regents  
FROM: Wayne Jacobson, Assessment Director, University of Iowa

RE: Update on Compliance with Continuous Quality Improvement Legislation

I am attaching a two-page report of the University of Iowa's compliance with Iowa Code Section 262.9(36). This document is based on the reporting structure that was originally established at the July 2013 meeting of project coordinators for each of the three Regents universities. It presents the total number of courses, the total number of student enrollments in those courses, the number of courses using each of the identified continuous improvement strategies, and one page of selected examples illustrating ways in which these strategies have contributed to course improvements.

This information was collected from academic departments by colleges during Fall 2017 and Spring 2018. The report shows that in the majority of courses, decisions about improving course quality are based on the review of student learning demonstrated through the work they do for the course. In addition, just as we learned with last year's report, most courses consider multiple streams of information when reviewing course quality. An average of 4.4 distinct continuous improvement strategies per course were identified for courses with annual enrollments of 100 or more students.

Other frequently used CQI strategies include reviewing end-of-course student ratings related to course objectives, comparing student learning and progress in multiple sections of the same course, and examining student performance in subsequent courses. Examples of improvements made based on these CQI strategies include modifying course content or class activities based on midterm student feedback, re-designing courses or assignments for future semesters, additional guidance for teaching assistants, and updating courses to better align with curriculum goals.

## UI CQI Strategies 2017/18

Continuous Improvement in University of Iowa Courses	
<i>June 2018</i>	Report Date
<i>2017-18</i>	Report Period <sup>1</sup>
Number of Courses, Students Enrolled	
<i>505</i>	Total Number of Courses
<i>168,951</i>	Total Student Enrollments in Courses
Number of Courses <sup>2</sup> Utilizing Continuous Improvement Strategies <sup>3</sup>	
<i>481</i>	Faculty review of student work during the course
<i>113</i>	Faculty evaluation of student performance in subsequent courses
<i>73</i>	Faculty review of student cohort in multiple courses
<i>262</i>	Faculty review of multiple sections of same course
<i>347</i>	Faculty review of student ratings items related to course outcomes
<i>108</i>	Faculty Course Assessment Report
<i>413</i>	Faculty review of midterm and final grade distribution
<i>262</i>	Department monitoring of DFW rates
<i>155</i>	Other - <i>Examples of other continuous improvement strategies cited by departments:</i> <ul style="list-style-type: none"> <li>○ “discussions with students during office hours and other student feedback.”</li> <li>○ “Instructors meet regularly to discuss course content, course assignments, grading criteria, and grade distributions.”</li> <li>○ “Mid semester evaluations of the instructors teaching, department supervisor meets and discusses with each instructor.</li> <li>○ “Weekly discussion with teaching assistants to ensure quality control, equity, application of standards, and group strategizing.”</li> <li>○ “Independent review of courses conducted by writing certificate steering committee.”</li> <li>○ “input from supervisors in clinical agencies where students are engaged in practicum experiences.”</li> </ul>

**Examples** of ways that information collected through continuous improvement has been used to develop or improve courses include:

<sup>1</sup> Legislation requires Regents Universities to report on continuous improvement in all courses with enrollment greater than 300 during 2013/14. Courses with enrollment greater than 200 are added to the reporting requirement during 2014/15, and courses with enrollment greater than 100 are added during 2015/16.

<sup>2</sup> Total number of strategies in use is greater than the total number of courses because many courses employ more than one continuous improvement strategy.

<sup>3</sup> The list of strategies identified for the Regents Summary may be extended as additional common strategies are identified by colleges and departments.

## **Nursing**

### **NURS 3518 Pathology**

Student responses on ACE forms were lower than expected on the question that asks about students' ability to relate important ideas. The online faculty member decreased the number of quizzes and added case studies which asked the students to apply the information from the lectures/readings to a patient care scenario. Anecdotal student feedback was very positive on this change and ACE form responses to this item went from a median value of 3.5 to 4.2 on a six point scale. This was a one semester change; the trend will be observed and the case study use evaluated in the face to face section.

## **Journalism and Mass Communication**

### **JMC 3412 Strategic Communication Writing**

The SJMC has a standing undergraduate committee. Among other things, this committee is charged with ensuring that the appropriate assessment data are collected, with organizing and analyzing these data. The committee collects data during the fall semester and analyzes the data during the spring semester. Recommendations to the faculty, if needed, for curricular changes are made toward the end of the spring semester.

## **Education**

### **EDTL 3172 Elementary Reading Practicum**

EDTL:3172 Elementary Reading Practicum continues to use a variety of strategies for assessment: Faculty review of student work, student performance in subsequent courses, student cohorts in multiple courses, multiple sections of same course, and student ratings, and midterm and final grade distribution, and department monitoring of DFW rates. These strategies have proven to be very effective methods to make continuous improvements to the course. Examples include:

- Course instructors meet two or three times each year with the Elementary Education program's coordinator for the edTPA program completion assessment. During those meetings we analyze how EDTL:3172 affects student performance on the components of edTPA, and what course revisions could enhance teacher candidate (student) performance, individually and collectively. This process brought about a number of helpful revisions to the course.
- The course instructors routinely use feedback from classroom teachers concerning the strengths and weaknesses of our students as a group and use that feedback to make minor and major revisions to EDTL:3172.

## **Communication Sciences and Disorders**

### **CSD 1015 Intro to Speech & Hearing Process & Disorder**

CSD 1015 is an introductory survey course designed to expose new as well as undecided majors to the fields of speech-language pathology and audiology. Course content and the roster of guest lecturers are evaluated on a yearly basis and, if warranted, curricular changes are made based on emerging trends in the field and student feedback.

**To:** Rachel Boon, Chief Academic Officer, Iowa Board of Regents  
**From:** Megan Vogt-Kostner, Office of Institutional Research and Effectiveness  
**Re:** Report on 2017-2018 Compliance with Continuous Quality Improvement Legislation  
**Date:** July 25, 2018

The attached report provides information on course-level assessments conducted at the University of Northern Iowa in compliance with Iowa Code Section 262.9 (36). Information for this report was gathered through a Qualtrics survey administered in May 2018. The survey was given to University of Northern Iowa faculty teaching courses enrolling 100 or more students in all sections over the 2017-2018 academic year. Faculty were invited to respond to the survey individually or in collaboration with other faculty teaching the same course.

In addition to requesting information on the types of course-level assessments being implemented and the kinds of improvements made in response to what was learned from the assessments, the survey also requested information related to the ways in which learning outcomes were communicated to students. A majority of faculty provided information on learning outcomes to their classes through multiple methods including:

- 80% of faculty included learning outcomes on course syllabi
- 72% discussed learning outcomes verbally in class
- 51% included learning outcomes on course websites and eLearning pages
- 35% discussed learning outcomes with students in individual meetings
- 38% provided learning outcomes associated with individual assignments

The attached report provides information on the types of course changes faculty reported making as a result of what they learned from their assessments of student learning. It is noteworthy that, of the top five changes reported, four deal directly with the student learning experience—the assignments they are asked to do, their activities and experiences in the course, the class time spent on specific course content, and to review or revise course texts and other resources. The fifth most frequently recognized course change noted by faculty was to change the assessment strategies to gain more accurate insight into what students are learning.

In addition to multiple-response survey items, the 2017-2018 CQI faculty survey included an open-ended question asking faculty to provide more detailed information on changes they made to their classes as a result of their assessment of student learning; half of the survey respondents shared stories of their experiences. An examination of these personal narratives showed several repeated themes— instructors chose to continuously reassess coursework used in previous semesters to ensure students were obtaining the necessary outcomes, instructors repeatedly attained feedback through the use of reflection papers and course evaluations for students' thoughts regarding the course, instructors provided students stronger connections between coursework and life outside the classroom to better solidify the material being discussed, and instructors who taught the same course throughout the year collaborated to examine best practices for teaching particular subject areas. Selected examples of the narratives collected are included in the attached report.

At UNI we believe in the power and critical importance of good teaching. The Continuous Quality Improvement survey for this year again provides evidence of this belief in action.

## University of Northern Iowa CQI Report for 2017-2018

This page provides summary information on the types of assessment strategies used during 2017-2018; the following pages provide an overview of the types of course improvements undertaken by faculty and examples of assessments and related activities in selected courses.

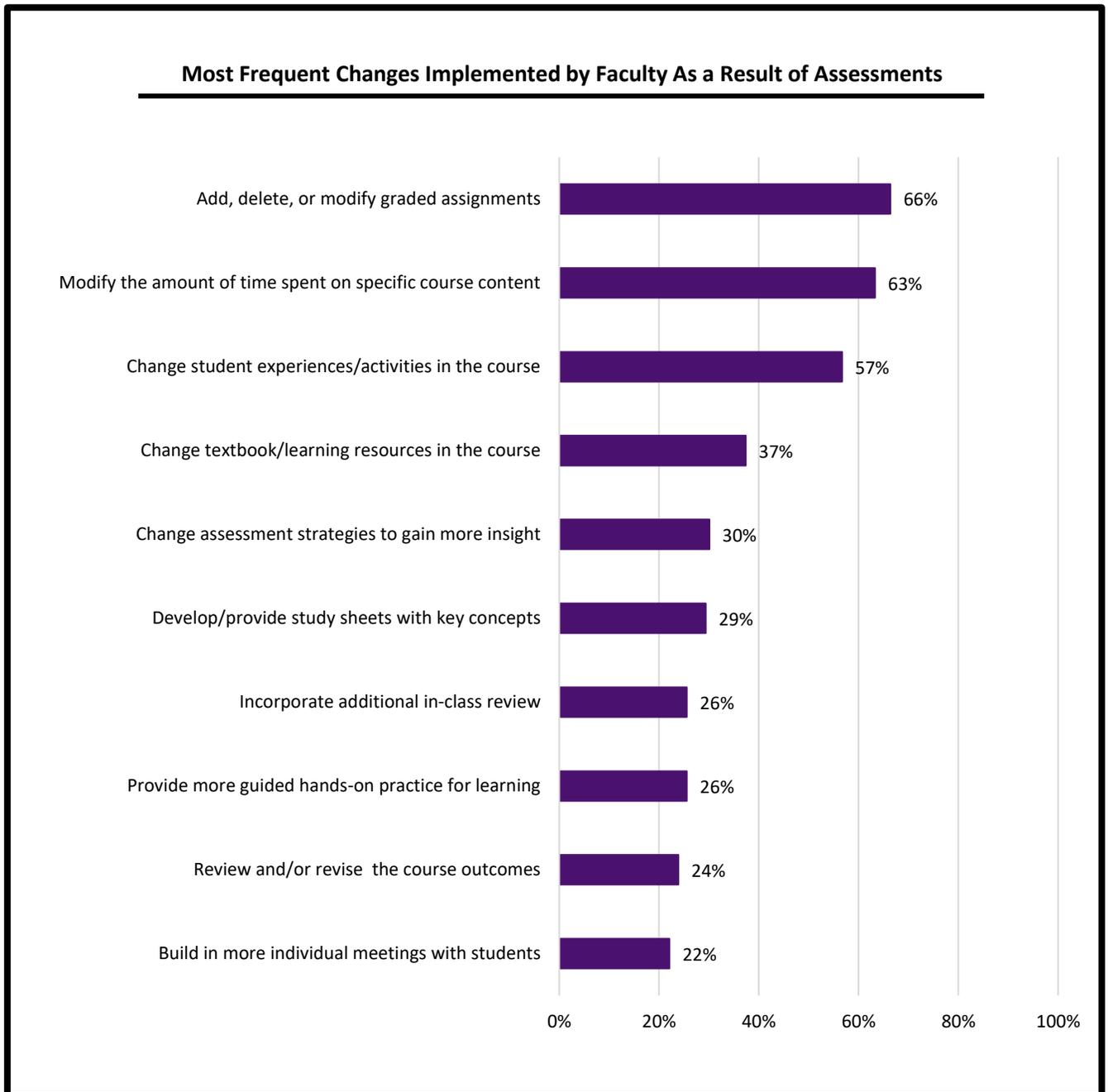
<b>Continuous Improvement in University of Northern Iowa Courses</b>	
<i>July 2018</i>	Report Date
<i>Fall 2017 - Spring 2018</i>	Report Period
<b>Number of Courses, Students Enrolled</b>	
<i>197 courses</i> <i>787 sections</i>	Total Number of Courses Offered (enrollment > or = 100 students) Total Number of Sections Offered in 2017-2018 (enrollment > or = 100 students)
<i>104,135</i>	Total Student Enrollment in Courses
<b>Number of Courses<sup>1</sup> Utilizing Continuous Improvement Strategies linked to and assessing learning outcomes and Percent of Respondents Reporting</b>	
<i>193</i>	Locally-developed tests or quizzes (67%)
<i>166</i>	Graded homework assignments (57%)
<i>164</i>	Student understanding of content and concepts as revealed in class discussions (57%)
<i>146</i>	Observation of students doing in-class activities (51%)
<i>111</i>	Specific questions on tests or quizzes (38%)
<i>103</i>	Written or oral student reflections on their experiences and/or learning (36%)
<i>93</i>	Rubrics or evaluation forms for individual project(s) (32%)
<i>78</i>	Discussion in individual meetings with students (27%)
<i>66</i>	Faculty assessment of presentations or projects (23%)
<i>66</i>	Journaling, discussion boards, blog (23%)
<i>58</i>	Faculty review of mid-term and final grade distributions (20%)
<i>49</i>	Rubrics or evaluation forms for culminating project(s) (17%)
<i>48</i>	Formative (non-graded) assessments over the term (17%)
<i>46</i>	Survey of student perceptions of their learning (16%)
<i>44</i>	Faculty discussion of student performance across sections of course (15%)
<i>40</i>	Comparison of course syllabi and/or assignments across sections (14%)
<i>37</i>	Peer assessment of presentations or projects (13%)
<i>29</i>	Evaluation of student performance in simulations activities (10%)
<i>27</i>	Pre- & post-tests (9%)
<i>24</i>	Student's performance in subsequent courses (8%)
<i>23</i>	Other (8%)

<sup>1</sup> Total number of strategies in use is greater than the total number of courses because many courses employ more than one continuous improvement strategy.

Other responses included the following methods for assessing student learning: written lab reports, multiple public performances of course content, unit projects, analysis of responses to individual test items, analysis of the grade distribution on individual exams and how it relates to the item analysis, cooperating teacher observations, interactions with students during the end of course portfolio conferences, praxis scores, and the assessment of science teaching performances.

### Overview of CQI Activities at UNI

As part of the Qualtrics survey administered in May 2018 to faculty teaching courses serving 100 or more students per academic year, one question asked faculty what kinds of changes they were making as they gathered assessment information and worked on continuous improvement. The table below summarizes their responses.



## Selected Examples of Assessments

The Qualtrics survey responses for the 2017-2018 academic year included many examples of the efforts made by faculty to keep their courses current and engaging, and to support student learning. The examples below are just a very small sample of those provided.

**Principles of Marketing (MKTG:2110)** “During the past two years I have worked hard to change the content of the course and the learning outcome rubrics. We have changed to online textbooks which can help students monitor their understanding of the chapter content, answering questions as they read and gain greater insights into the connection of one unit of instruction and the ones they have studied previously. Test scores have improved for all unit exams by 8 to 12% each; thus raising the final grades for students. Students who may have struggled in the past can now be tested during the reading as a way of improving their understanding.”

**Beyond Google (LIBRARY:1030)** “This course had two groups of objectives - those associated with the mechanics of literature review and database searching - and those associated with developing a deep understanding of the various economic, political, and technological forces at play within our current online information ecosystem(s). As this is a blended/flipped course that has both significant in-class and out-of-class components, (it is possible - though not advisable - to complete the course as an online-only learning experience), a variety of assessments were interlaced throughout the seven week experience. All students were required to show mastery on a series of seven quizzes that primarily tested the ability to use optimum search techniques with a variety of top tier databases. In class activities provided real-time hands-on opportunities to also demonstrate and reinforce mastery of search skills. Out-of-class exercises also allowed students to demonstrate their facility with information retrieval techniques. A variety of reading (and writing) options allowed students to demonstrate their increasing awareness and understanding of the issues of information. In class discussions also provided a measure of student understanding and served as a forum for synthesizing and relating various "issue" threads throughout the seven week course. Anonymous course feedback opportunities and end-of-course discussions helped professors guide and modify Beyond Google to better facilitate student understanding and to improve the chances of meeting all objectives. Interdepartmental discussion and reflection on the course was ongoing throughout the year both to improve the student experience and to better align the class with rapidly changing database technologies and the rapidly evolving realities of our ever-changing information world.”

**General Chemistry I (CHEM:1110)** “The main change that I made to the course in the Spring 2018 semester was to change my lab schedule so that after the first three lab reports had been handed in the class spent a whole three hour lab period on lab report writing, focusing on how to review and revising their draft reports. This change was made because in my Fall 2017 General Chemistry I class I observed that even with the change to having students only do partial lab reports for each of the first three labs most groups still struggled with writing the reports and were not effective at proof reading the draft reports and fixing the mistakes that they had made.”

**Educational Technology & Design (INSTTECH:1031)** “As part of an ongoing review of the course INSTTECH:1031 Educational Technology & Design, the six instructors meet continuously every Tuesday to discuss the effectiveness of our instructions and to prepare for the new sessions. After attending the Fall Faculty workshop (The Transparency Project Decoding the Unwritten Rules of College to Increase Student Success) we decided to make major modifications on the structure and the language of the assignments. We clarified and simplified the directions, removed jargons and restructured it to be consistent in every assignment. Every assignment in a course is now divided into clear sections such as ‘The Purpose’, ‘Assignment’, ‘Submitting’ and ‘Helpful Resources’.”

### **Methods of Teaching Visual and Performing Arts Integration in the Elementary Classroom**

**(ELEMECML:4123/5123)** “As part of the ongoing review of Methods of Visual and Performing Arts Integration in the Elementary Classroom all sections of the course have the same assignments requiring them to create lesson plans and teach them to elementary aged students. The assessments have been revised to meet the needs of the students and connect to the required reading material. Final exam questions are reviewed every semester and the course content is adjusted if necessary. When students were not able to explain how the arts help diverse learners, the instructors added in course content focusing on this content. A section was added on the lesson plan template requiring the students to discuss how the arts help differentiate the curriculum.”

**General Physics I (PHYSICS:1511)** “At the end of the course, I determine what went well and what did not go according to expectations. Then I evaluate why the information provided went well and why it did not go well. In evaluating what did not go well, I evaluate what I could have done to make it better. If it is determined that I could not make it better, I look at other methods that I could have used to do so. I am constantly doing research on the various methods that I could use to better present the information to improve student learning. These methods involve better presentation skills, activities, and simulations. They are all evaluated to improve student participation and their understanding of how they will use this information in their future.”

**Business Professionals in Training (BUSINESS:2000)** “Students in this course participate in weekly seminars and workshops designed to prepare them for success in their professional lives. Students submit a survey following each workshop, asking how valuable they feel the content presented is, how effective the speaker is, and for open-ended comments. One session that has greatly evolved over time is our Innovation in Business workshop. The faculty member and alumna who lead this session identified a disconnect between intended outcomes and student perceptions, as to the relevance of the session. They have incorporated changes each semester and the session has evolved to better connect with students.”

**Teaching Mathematics in the Elementary School (MATH:3203)** “Each semester that I have taught elementary methods (MATH 3203) I have made adjustments to my readings, course assignments, lesson plans, and activities to make the course better. However, there were a few major changes I made to the course recently based on my student performance on assessments. After making major changes to the structure of the course in previous semesters (when and in what order topics are introduced), I didn’t feel that I was getting to the bulk of the most important content until later in the semester. I felt that I could get to this content quicker and spend more time engaging with it to improve student learning. I decided to incorporate different topics into the course for the Fall 2017 & Spring 2018 semesters. Specifically, for the Fall 2017 & Spring 2018 semesters I decided to have my students look more carefully at the Common Core/Iowa Core standards for mathematics by creating a short project where they analyzed some of the standards within the Number and Operations in Base-10 strand and looked at some of the available resources related to teaching to these standards. I also decided to spend more time looking at mathematics curriculum materials by providing students an opportunity to carefully analyze and critique different curriculum series and how to modify it. Both of these projects will serve students well when they obtain their first teaching jobs and will be expected to teach to a set of standards (the Iowa Core or Common Core for most of them) using a set of curriculum materials that the school has adopted. I have also incorporated lessons on Number Talks (which are short 15-20 minute lessons where the teacher gives students a problem related to number and operations to support their conceptual understanding and procedural flexibility and fluency). These number talks have deepened my students’ own understanding of the content as well as their learning how to support their future students’ understanding.”