Executive Summary

For academic year 2015-2016, Iowa Code Section 262.9(36) required that all undergraduate courses enrolling 100 or more students annually have continuous improvement plans implemented. At Iowa State University, 591 different courses enrolled more than 100 students. Those continuous improvement plans were therefore in place during AY15-16 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 AY14-15 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. 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
- Examples of responses to the open-ended question related to 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) in the Office of Institutional Research or Dr. Karen Zunkel (kzunkel@iastate.edu) in the Office of the Senior Vice President and Provost.
Summary of Continuous Improvement in Iowa State University Courses

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<td>Report period</td>
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### Number of courses, enrollment, and students

- **Total number of courses**: 591
- **Total student enrollment in courses (duplicated enrollment)**: 246,926
- **Number of unique students enrolled in courses**: 32,411

### Number of courses utilizing various continuous improvement assessment strategies

- Faculty review of exam or quiz grades: 448
- Faculty review of scored term paper: 115
- Faculty review of juried exhibit or performance: 30
- Faculty review of student portfolio: 39
- Faculty review of presentation or project: 193
- Faculty review of licensure or standardized tests scores: 15
- Faculty review of student survey/evaluation of course outcomes: 77
- Faculty evaluation of student performance in subsequent courses: 26
- Faculty monitoring of course grades and D/F/W rates: 6
- Faculty discussions across multi-section courses: 1
- Formative assessments such as clicker and quizzes: 563

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

- Change course delivery/pedagogy: 135, 14%
- Change the assessment strategies to gain more accurate insight into students’ achievement of learning outcomes: 101, 10%
- Other (technology/equipment upgrade; modification of experiments; improve TA’s delivery of material; more detailed syllabi): 49, 5%
- Modify class assignment or assignment instructions: 195, 20%
- Revise the course outcome or objective: 29, 3%
- Change student experiences/activities in course: 190, 20%
- Change textbook/learning resources used in course: 79, 8%
- Refine (or enforce more strongly) the prerequisite background needed to enroll in the course: 33, 3%
- Modify the course time spent on this specific course content to better meet student needs and/or abilities: 169, 17%
Examples of Impact

**BIOL 313L (Genetics Laboratory)** - A major success from our CIP is our modifications and evolution of a student-driven, research-based 7-week module. Based on student feedback, this capstone module to our course has provided students with their first experiences in designing and executing their own research studies. An improvement made based on student assessments was the elongation of the module from 4- to 7 weeks in length.

**SP CM 212 (Fundamentals of Communication)** - The most interesting result from the data collected was that, while students reported that the degree to which they experience public speaking anxiety hadn't decreased, in the qualitative portion of the assessment, a majority of students in the sample group did report that they now have strategies and methods to manage their anxiety as a result of taking the course. Students still experience anxiety to similar degrees as at the start of the course, but students indicated that a change in attitude had occurred (around 50% reported improvement for their top fear, and around 80% reported improvement in their second fear). This result is very encouraging because we teach our students that the most skilled speakers do not necessarily have an absence of anxiety; rather, the most skilled speakers accept their anxiety as normal and natural and are confident in their ability to manage their anxiety.

**CE 105 (Introduction to the Engineering Profession)** - While grading standard has not changed, the fraction of students with A, A-, and B+ increased from 66% to 80%.

**TSM 415 (Technology Capstone I)** - Student projects are an important part of the course. Several continuous improvement activities aimed to improve the process of assigning students to projects and team. As a result, student teams function more smoothly and students feel more connected to their projects, leading to improved project outcomes.

**SPAN 202 (Intermediate Spanish II)** - Both students and instructors had previously expressed concerns about the textbook (not enough material, too many drills, gap between explicit knowledge and language abilities, etc.). I therefore knew that we would likely change the textbook after this academic year. Although overall performance was acceptable, only 66% of students met the listening objective during the Fall ’16 semester. I believe that by adopting a more engaging, comprehensive textbook and overhauling our course components we will be able to better promote student learning, which is important at this critical level (202 is the last course in the Lower Division Spanish Language Program). The CIP reports provided additional evidence that the textbook and classroom activities are not functioning as well as they could be.

**HS 105 (First Aid and Emergency Care)** - The implementation of the Continuous Improvement Plan has supported the implementation of McGraw-Hill Connect Get Active 2.0 in most of our physical activity coursework. Use of the online, web-based programming is allowing for consistency across sections of classes, especially if different teaching assistants teach the same course. It's also allowing a better emphasis on not only the psychomotor and affective learning domains but the cognitive too.

**ENGL 250 (Written, Oral, Visual, and Electronic Composition)** - We have identified that our students, while performing relatively well on other aspects of their ePortfolios, are less successful with reflecting deeply and authentically on their strategies and learning. Inasmuch as this metacognition is tied to transfer potential, we want to re-emphasize reflection in ENGL 250. We have additional activities and new reflection prompts to use beginning in Fall 2016.