

4.B - Core Component 4.B

The institution demonstrates a commitment to educational achievement and improvement through ongoing assessment of student learning.

1. The institution has clearly stated goals for student learning and effective processes for assessment of student learning and achievement of learning goals.
2. The institution assesses achievement of the learning outcomes that it claims for its curricular and co-curricular programs.
3. The institution uses the information gained from assessment to improve student learning.
4. The institution's processes and methodologies to assess student learning reflect good practice, including the substantial participation of faculty and other instructional staff members.

Argument

4.B.1. The development and assessment of student learning outcomes is led by faculty at the level closest to the student. Program level assessment is managed by the department; achievement of outcomes at the course level is managed by the faculty teaching those courses. As mentioned in 3.B.2. and described within the [Faculty Handbook](#), colleges have oversight responsibility for program, college and university outcomes expectations.

As noted in the University's previous HLC review, the decentralization of outcomes assessment can create challenges in ensuring that all colleges or departments are appropriately engaged. Since the last review, there has been additional institutional monitoring, and the implementation of legislation that have started to provide an increased consistency and focus on student outcomes across the university, especially its undergraduate programs. The D.V.M. program has a very comprehensive outcomes assessment program that aligns with accreditation expectations. The Graduate College has begun to look at the student experience from a university-level, including the administration of institutional surveys and the AAU survey of doctoral students. With the large number of interdisciplinary programs at the graduate level, there is still work to be done establishing strong program-level outcomes assessment plans across all graduate programs.

Institutional Monitoring

The Provost's Office collects information from instructors, departments, and via national surveys to monitor progress at an institutional level.

Program Level Continuous Improvement Plans

ISU monitors the program assessment plans of all undergraduate programs annually, through a survey distributed to department chairs and program leaders. Iowa Board of Regent's Strategic Plan Goal 6 requires Iowa's public universities to develop student outcomes assessment plans and establish targets for collecting and using assessment results.

A [dashboard report](#) is used to monitor academic programs' progress in implementing their assessment plans. The percent of programs that had not yet developed an assessment plan dropped from 21.4% to 5.4% from 2011 to 2015. As of June 30, 2015, 100% of programs are in some stage of outcomes assessment; 87.5% of programs have developed an outcomes assessment plan which includes targets

for collecting and using assessment results, up from 42% in 2011.

Course-level Continuous Improvement Plans (CIP)

Iowa Administrative Code 262.9(36) began requiring course-level improvement plans in academic year 2013-14. In 2014-2015, all undergraduate courses enrolling 200 or more students annually (a total of 285 courses) were required to implement CIP. Faculty are given flexibility in the design and implementation of improvement plans, but every plan is based on three key elements: identification of course-level outcomes, use of assessment data to identify and implement changes, and the feedback loop of iterative continuous improvement. The [CIP Reporting Survey](#) was developed with input from the Faculty Senate Student Outcomes Assessment Committee to gather information on plans and impact.

ISU submits an [annual CIP report](#) to the Board that provides summary statistics on the plans and their impact. In 2014-2015, 30,075 unique students were enrolled in courses required to implement CIP. The report shows the most common changes to improve courses for the next year, including modified course activities and assignments, changes to pedagogy/delivery of topics, and adjustment to time spent on specific course content. Beginning fall 2015 and beyond, all undergraduate courses enrolling over 100 students a year will need to have continuous improvement plans in place. This will bring the total number of ISU courses with CIP to over 650.

HLC Quality Initiative Survey Questions

As a part of the HLC Quality Initiative (described in 4.A.6.), ISU added questions to the survey administered to graduating students by career services that collects information on post-graduation plans. These new questions ask students to reflect on the impact of their curricular and co-curricular experiences on achievement of the six common learning outcomes. Data from the survey pilot in December 2014 show that students perceive their curricular experiences positively impacted their ability to meet the outcomes. The table below provides feedback from 778 students that completed the pilot survey.

My academic experiences have changed my ability to:	Average score (out of 5)
Communicate	4.12
Think critically	4.34
Locate, evaluate, and use information	4.29
Evaluate ethical, moral, social justice issues	3.91
Assess impacts of US cultural diversity	3.70
Assess how world cultures evolve	3.57

These survey questions will be included in the post-graduation surveys administered at the end of each term. An annual review/analysis of progress on student outcomes will occur beginning with the

first full-year of collection, 2015-2016.

National Survey

ISU uses the National Survey of Student Engagement to better understand our students' perception of learning/activities, and to benchmark against peers. As it relates to the six common outcomes, the institution monitors the Academic Challenge ([First Year](#) and [Senior](#)) questions in the areas of Higher-Order Learning, Reflective and Integrated Learning, and Quantitative Reasoning, and the Learning with Peers ([First Year](#) and [Senior](#)) questions on Discussions with Diverse Others.

4.B.1, 4.B.2, 4.B.3 and 4.B.4 College/Program Level Outcomes Assessment

Perspective

There have been several attempts to define "institutional level learning outcomes" over the past 30 years, but it remains the deeply held conviction of faculty to focus learning outcomes and academic program development, delivery and continuous improvement at the college level, to remain responsive to the diverse demands of ISU's mission.

Therefore, each ISU college has a set of learning outcomes specifically defined for the graduates of the departments within that college. Colleges respect expertise at the program level, but require that program outcomes grow from college requirements. In some cases (e.g., in the College of Business), assessments of college outcomes are performed across majors. In others (e.g., in the College of Agriculture and Life Sciences), assessments are performed at the departmental level, and summaries of outcome assessment results and departmental action taken to improve learning are reported to college assessment committees. Most colleges perform a hybrid of both.

It is therefore with respect to the culture and organization of ISU that this section of the argument addresses multiple sub-components of 4B collectively, by providing college specific descriptions of activities and examples.

College of Agriculture and Life Sciences (CALs)

Through a series of workshops open to all faculty, CALs defined [eight domains of student learning outcomes](#) required of each department. Two to five learning outcomes are defined for each domain. For example, in the domain of Problem-Solving/Critical Thinking (PS/CT) Skills, "Students will be able to "apply a holistic approach to solving complex issue laden problems", and "apply a rational and objective process to problem solving." Each CALs department has membership on the college assessment committee to ensure substantial participation of faculty/staff. Each department assesses outcomes and reports in the year specified on the [assessment calendar](#). A collective summary for the college is then constructed and passed to the curriculum committee for their use in making curriculum decisions. This process encourages continuous improvement at both the department and college levels. For a departmental example, in 2013, CALs' Student Outcomes Assessment Committee developed a [procedure and a rubric](#) that programs could optionally use to assess PS/CT outcomes. Four programs chose to use the Critical Thinking Assessment Test (CAT) developed by Tennessee Tech University. A [summary of the program improvement plans](#) showed there were a number of strategies used.

To illustrate application of results, [NREM in 2014](#) used ratings of student performance in problem

solving/critical thinking, with a goal of 80% of students being rated as *competent* or *exemplary*. This goal was met for “Selection and analysis of information,” but not for higher-order “Synthesis and evaluation.” Faculty have developed new approaches to teach synthesis and evaluation skills in a variety of contexts. These approaches include the evaluation of articles from the primary literature in a Forest Biology course (with both writing and peer evaluation components); use of fire behavior and fire planning models to evaluate student-generated burn plans in a Fire Ecology course; use of document analysis to synthesize and evaluate Forest Service land and resource management plans construction in a Forest Ecosystem Management class; and peer evaluations of project presentations in a Wildlife Disease class. The department expects to re-assess problem-solving skills in the future, with a focus on improvement in synthesis and evaluation components.

A college level example comes from the assessment of the CALS communications outcome. The assessment indicated few departments understood the electronic communication component of the outcome. That assessment was reported to the Curriculum Committee. The committee in turn elicited the assistance of the English department to collaborate in educating faculty on what electronic communication is and how they can help students improve in that area.

College of Business (COB)

COB defines seven major learning outcomes for the college. The [2013 ISU COB AACSB report](#) shows outcomes definitions, assessment strategies and successful results. Consistent with its [Strategic Plan](#), the college has assessment plans in action that allow it to meet the high standards required for accreditation by AACSB.

An example demonstrating how the COB approaches assessment and 'closes the loop' is provided for the written communication component of their outcome that a student will be able to “Communicate effectively in written, oral, visual, and electronic formats.” The College has used course embedded assignments and a standard rubric to assess four aspects of written communication (context, content, organization, and mechanics) in different courses over time. On average 73%, 56%, 74%, and 69% of their students scored excellent or good on context, content, organization, and mechanics, respectively. The percentage of students scoring excellent or good on context and organization has improved over the years, while little change has occurred on content and mechanics. The COB has also performed an analysis of the comments/remarks for improvement made by the tutors in the College's Communications Center. This analysis also found more problems with content and mechanics related issues than it did for context and organization.

Several approaches have been tried to improve the written, oral, and visual communications skills of students. For example, in Fall 2012, Spring 2013, and Fall 2013, learning communities were formed that linked students taking one section of English 302– Business Communication with one section of Accounting 387. The results from those efforts were mixed and enrollments were not extremely high. As a result, the COB discontinued this initiative. The COB is currently working with the English department to dedicate sections of English 302 for business students only and to establish standard content linked to the business curriculum in these sections. The COB will monitor the success of students in these special business only sections of English 302 compared to general sections to determine the impact on student achievement of outcomes.

College of Design (COD)

COD departments began generating learning outcomes for their programs almost two decades ago.

These learning outcome sets are reviewed and revised on a regular basis. A recent college reorganization split one department into three, and added a new department with undergraduate and graduate curricula. These four new departments recently generated a set of intended student learning outcomes building off the college standards. The [COD Student Outcomes Report](#) maps student-learning outcome developed by each department against college-wide learning outcomes.

Each semester, students enrolled in design studios make public presentations of their work which are critiqued by faculty and visiting reviewers. These presentations allow faculty to assess the extent to which students have synthesized and applied knowledge gained, as well as developed the skills necessary for their respective discipline. These reviews are the stimulus for amending courses or course sequences.

For example, in 2012, the Department of Community and Regional Planning implemented a set of changes to the undergraduate curriculum in order to better reflect the department's learning outcomes. The number of credits required for the CRP major was reduced, allowing students to take advantage of ISU's extensive study abroad programs, and better learn to work with diverse communities; or to add second majors or minors that create a more diverse educational experience. Faculty evaluation of learning outcomes have influenced hiring recent positions, seeking new faculty that fill gaps in expertise in terms of teaching specific outcomes. Most recently, these have led to hires with expertise in planting design, digital technologies, and urban design.

College of Engineering (COE)

All of the COE's undergraduate programs are accredited by ABET, which requires the use of a continuous improvement process for improvement in student outcomes and program educational objectives. Student outcomes are abilities that the students should be developing as they progress through the curriculum and are typically evaluated while the student is still in the program. [ABET has established a set of eleven \(a-k\) student outcomes](#) common to all programs. Some additional program-specific student outcomes are also identified by ABET through professional organization input. For example, there are two additional student outcomes (l & m) that are added to the original eleven for [industrial engineering programs](#) that reflect needs identified by the Institute of Industrial Engineers. Program educational objectives, on the other hand, are defined by the individual programs and are more holistic characterizations of achievements expected a few years after graduation.

As a part of the accreditation review process, each program reports student outcomes, maps student outcomes to program educational objectives, and describes the continuous improvement process including assessment strategies and methods to institute continuous improvement. Faculty identify which learning experiences are best suited to achieve a particular outcome, and then assess experiences to determine which have the most impact.

There are varied ways that student outcomes are assessed across COE programs. These methods include direct assessment in individual courses, demonstration of attainment of outcomes through performance in co-op/internship experiences (both student and supervisor provided called OPAL), and student performance on the Fundamental of Engineering (FE) professional exam. Course content directly addressing the student outcomes is presented in required courses for the program. This is consistent with the guidelines provided by ABET which specify that evidence of student outcomes "should be the product of faculty reviewing and/or observing student work related to the program requirements." In implementing the direct measurement of outcomes via the rubrics, the COE closely follows ABET's guidelines. Directly measuring graduates' achievement of the program educational objectives can be more challenging. Alumni are generally reluctant to ask their supervisors to rate their performance for examination by our programs. Therefore, the COE uses alumni surveys as the

primary assessment instrument for evaluating achievement of program educational objectives.

An example of how this continuous improvement process has been implemented can be found in the [agricultural engineering program](#). Faculty in this program followed their continuous improvement process by analyzing results of student work in their capstone design sequence and results from surveys (both student and employer) conducted after co-op experiences. Through this analysis they found that some students were struggling with open-ended engineering design problems. They noted that this could be seen when assessing ABET Student Outcomes (a), (b), (c), and (e). They found that some students were struggling with several key aspects of the design process, including: development of alternatives, development and utilization of constraints and criteria, and the integration of theory application with building and testing. Furthermore, OPAL supervisor assessments indicated relative student weakness in the area of innovation – a key competency for the design-oriented outcomes. Program faculty noted that there was a critical gap between the creative design experience of A E 170 (first year) and the structured design experiences of their 400-level courses. In order to reduce the ‘design gap’, the faculty instituted curricular changes to add a 200-level project management and engineering design course (A E 218). A E 218 engages students seriously in key areas of open-ended design, including a three-week exposure to project management (and project management software) and a multi-week open-ended design experience using technical content from A E 216.

College of Human Sciences (CHS)

CHS has established [core outcomes](#) to provide a unifying foundation critical to students' personal and professional success. The college assesses competence across the core outcomes of communication, self-assessment/self-reflection, critical thinking, and social justice. Assessment results are used to enhance student-learning experiences.

CHS has chosen a straight -forward approach to outcomes assessment, focusing specifically on [one outcome](#) each year. Instructors are asked to assess competence in that outcome that year; departments monitor competence at both the lower and upper division levels to observe growth. These efforts provide CHS with a [curriculum map](#) that shows where development of the outcome can be expected. Instructors identify achievement at one of three levels, and embed at least one significant educational activity in introductory, intermediate, and advanced levels. Concurrently, the judging of student output, artifacts, papers, etc. provides direct assessment of student abilities. Evidence of how this process is implemented is documented in a report of the [Apparel, Event and Hospitality Management Department](#). A number of [recommended rubrics](#) that connect directly with college level outcomes are provided to faculty. Summative evaluations provide evidence to make changes in courses or curriculum.

Examples of impact are provided in the [Curriculum Committee Report](#). In the Food Science & Human Nutrition curriculum, 85% of freshman in FSHN167 were judged as having met outcome expectations at the introductory level. However, only 61% of students in FSHN 203 were judged as having met the outcome defining critical thinking skills. As a result, instructors reevaluated the learning experiences in these courses, with a stronger focus on critical thinking skill development, and with attention to building skills beyond introductory expectations. New lessons in this class were implemented. Students in Human Development and Family Studies classes showed progressive development in critical thinking throughout the curriculum: 63% in the freshman class, 83% in the sophomore level HSFS 269 class, and 100% showing advanced level skills in the HDFS 449 class.

College of Liberal Arts and Sciences (CLAS)

CLAS is the largest and most diverse college at ISU in terms of programs, with 42 majors ranging

from World Languages to Software Engineering and Earth Science. A succinct, comprehensive college-level evaluation of learning outcomes is daunting. Overall learning goals and assessment practices are therefore broadly defined and reach across the diverse curricula. They are divided into 3 domains: arts and humanities, mathematical sciences, and social sciences. The list of outcomes is presented in an [ISU Outcomes Summary Paper](#), along with a compilation of the status of learning outcomes reports by major. Most majors have communicated student learning outcomes on their web sites.

The most recent CLAS college-wide assessment of learning outcomes has been the implementation of the Course-Level Continuous Improvement Plan (CIP). In 2013-2014, [CLAS established CIP plans for 103 courses](#) (of the 166 total ISU courses required to be evaluated). Over 94% of CLAS instructors clearly state their learning outcomes via the syllabus, with 92% communicating them in other ways as well. Educational approaches used to achieve outcomes show a diverse range of pedagogy, from lectures, to cooperative learning exercises, to guided research projects. Assessment approaches to achieve these chosen outcomes show great diversity as well, ranging from exams to juried exhibits or performances to licensure or other standardized tests connected to course outcomes. When asked how the course is expected to change as a result of these assessments, sixty-three percent of faculty indicated they anticipated making changes to their courses based on the assessment results. The types of changes included changes in course activities and assignments, use of more detailed assessment strategies to gain greater insight into learning, changes in delivery and/or time allocation on a topic, and revisions/clarifications of course outcomes.

As the home college for many large enrollment courses that serve students from every college, CLAS also [reviews CIP courses for high enrollment general education courses](#) to monitor student achievement of outcomes in those areas.

Provided below are samples of recent assessment of student outcomes efforts in two high-enrollment course areas (communications and mathematics) and a sample of one CLAS department/major (Greenlee School of Journalism and Mass Communication).

ISUComm

ISUComm, the university's comprehensive communication program that integrates written, oral, verbal, and electronic communication, is administered by CLAS. The [Report on ISUComm Foundations Courses 2013-2014 Student Outcomes Assessment Continuous Improvement Plan](#) describes the university-level curriculum requirement in detail, as well as the very extensive recent assessment of the program. ISUComm Foundation Courses assign work that accumulates towards a portfolio. Therefore, ISUComm Foundations Courses (comprising Engl 150, 250, and 250H) sample student portfolios across these courses each term for assessment.

A recent assessment was conducted in Engl 150 and 250 to determine if students "display fundamental rhetorical consideration of audience in all communications." This outcome both reflects the strong rhetorical basis of the program, and also expects competent performance across all four communication skill modes: written, oral, visual, and electronic. ISUComm Foundation Courses have a program-specific detailed portfolio rubric that describes performance necessary to achieve each level (excellent, good, fair, needs work). These rubrics support consistency in grading across many sections and show students in advance the specific criteria against which they will be graded.

A total of 58 sections of Engl 150 and 250 were randomly selected in 2013-14 for evaluation. Data indicate high levels of student proficiency for both courses. Combined, in Engl 150 and 250 have a 70% or better proficiency level of 95.8% on the criterion of audience awareness; only 4.2% of

students scored as non-proficient (“needs work”). Along with individual scores, each instructor’s name, course (150 or 250), and section number were entered into the dataset. In total, nine indicators from the rubric were used for assessment: two for “context,” two for “substance,” one for “organization,” two for “style,” and two for “delivery.”

ISUComm Foundation Courses are able to report high levels of proficiency in the targeted outcome (94.6% in Engl 150 and 96.1% in Engl 250). Based on the data collected, it is clear that students are improving their writing from Engl 150 to Eng 250. With proficiency assessments above 96%, these results offer an optimistic projection for student transfer of learning to their upper-class communication work.

Mathematics

Recent [curricular changes](#) were made to mathematics courses based on assessment results. For example, the math department’s focus on course-level continuous improvement plans pre-dates the CIP legislation. Department faculty have been involved in a systematic course-level improvement plan of Math142-Trigonometry for the past several years. The department implemented a new placement system (ALEKS), increased the number of face-to-face sections of the courses, created a better help-room format, and implemented an online homework system. Results of these changes have been significant. The D/F/withdraw rate for Math 142 dropped from 58.6% in Fall 2011 to 34.5% in Fall 2012.

As a result of this course-level review, faculty improved the Math 142 curriculum by developing different courses for the two distinct populations of students who take the course: those using the course to prepare for calculus, and those taking Math 142 as a terminal course for their degree program. These new courses were offered for the first time in fall 2014. One of these new courses, Math 143 Pre-Calculus, includes the use of WebWork: a widely used open-source online homework system for mathematics. It provides conceptually based homework for MATH 143, written under the direction of education researchers at Arizona State University.

Faculty members have also led efforts to change the way Calculus (Math 165 and 166) is taught. They have secured grant support from the Howard Hughes Medical Institute (and two pending NSF proposals) to implement further changes and to assess retention of calculus skills and knowledge in downstream courses. For example, Calculus Concept Inventory, a pre-/post-test given to Calculus I students, is widely used to assess growth in calculus concept knowledge over the course of the semester. The inventory is used at many schools and will help ISU compare student growth and progress with other schools.

Greenlee School of Journalism and Mass Communication

CLAS' Greenlee School of Journalism and Mass Communication regularly assesses learning and uses results to improve curriculum and instruction. It draws its assessment goals and plans from the accrediting Council on Education in Journalism and Mass Communication (ACEJMC). The [Greenlee School of Journalism Outcomes Assessment Plan](#) defines learning goals as the ACEJMC Professional Values and Competencies, has a written assessment plan that uses multiple direct and indirect measures to assess student learning, reports data from its assessment activities, and applies the data to improve curriculum and instruction. In addition, the School maintains contact with its alumni to assess their experiences in the professions and gain feedback for improving curriculum and instruction, and includes members of journalism and mass communication professions in the assessment process.

A combination of internship supervisor data, judgments of student work (e.g. competitions, portfolio evaluations, and embedded measures in student classwork) are routinely used for assessment of outcomes and are reported in detail in the document [“Greenlee School Internships Employer and Student Mid and Final Evaluations of Communication Competencies for 2012-13.”](#) Faculty retreats are regularly held to discuss and improve the curriculum from the annual results.

Many changes have been made to course content and delivery, as the result of both direct and indirect measures, as listed in the [Annual Greenlee School Coded Assessment Data Report](#).

College of Veterinary Medicine (CVM)

CVM employs systematic processes to learn the relationship between the college's curricular practices and the knowledge and skills students gain. The college collects a wide variety of data regarding learning outcomes in the basic and clinical sciences; summative measures and continuous improvement of the veterinary curriculum is reported in the [CVM Outcomes Report](#).

The North American Veterinary Licensing Examination (NAVLE) provides comparative data regarding the clinical knowledge and capability of veterinary graduates across schools. Passing rates for ISU on the NAVLE exceeds the national rate for 4 of the past 5 years, and only 4 times since 2000 has the ISU pass rate been lower than the average national standard.

Each year since 2006, graduating seniors have been asked to estimate their abilities in a number of clinical skill and knowledge areas. These are summarized in [CVM Outcomes Report](#).

During 4th year rotations, CVM employs global rating rubrics, a clinical skills abilities checklist, and a variety of tests/capstone assignments. Global rating scores and checklist completion are recorded in the E-Value computer system, a commercial system used for tracking competencies and managing other tasks such as scheduling. The report contains a summary of all clinical competency assessment outcomes by clinical competency area for both indirect and direct measures, including the number of measures, mean score, and standard deviation for each clinical competency area. These data are used for two primary purposes. First, data is used to inform curricular decision-making. The curriculum committee tabulates data from direct and indirect measures for use; an abbreviated report is made available to them emphasizing areas potentially in need of improvement. Second, data is used from the fourth year core rotations to track each student's competence, and prompt remediation as needed.

Since 2007, CVM has surveyed graduates (1 and 5-year post) and employers regarding graduates' preparation to work as veterinarians. In all cases employer scores are higher than alumni scores, and are well above a score of competent (3) except in the cases of “Control expenses and maximize revenue” and “Manage other personnel who work in supporting roles,” where both are equivalent to “competent.” In responses to items regarding graduate preparation, employers rated all graduates as competent, well prepared, or very well prepared in both “overall veterinary knowledge” and “overall veterinary technical skills.”

CVM regularly uses the survey results to review the curriculum. A number of changes have been made in recent years based on outcomes assessment data. For example, a biochemistry course was replaced with a nutritional biochemistry and molecular biology course to reduce redundancy with prerequisites. CVM incorporated a client communication experience utilizing standardized clients into the 3rd year of the curriculum. Students practice a medical interview and deliver bad news with trained/standardized clients. This was incorporated based on outcomes data suggesting the importance of client communication, and the fact that our graduates were not adequately prepared in that area.

4.B.2 and 4.B.3. Co-Curricular. Assessment strategies within many ISU co-curricular programs have focused on participation levels, participant satisfaction, and impact on student success from a retention and GPA perspective. Over the past several years there has been an increased emphasis within co-curricular programs to incorporate student learning outcomes as a part of their assessment plans. Below are examples of some existing assessments, and some under development, that demonstrate the impact of co-curricular programs on achieving student learning outcomes.

Student Survey

The HLC Quality Initiative survey piloted in December 2014 had students self-report the impact co-curricular activities had on their achievement of the six common outcomes. Results from 778 students who completed the survey showed that students felt their co-curricular experiences positively impacted their ability in the outcome areas.

My co-curricular experiences have changed my ability to:	Average score (out of 5)
Communicate	4.37
Think critically	4.18
Locate, evaluate, and use information	4.20
Evaluate ethical, moral, social justice issues	4.02
Assess impacts of US cultural diversity	3.84
Assess how world cultures evolve	3.76

Learning Communities

Most assessment of co-curricular program impact is done at the program level. As previously mentioned, learning communities are a significant part of the extended learning experience for ISU students. How one learning community approaches assessing student outcomes learning impact is shared as an example.

The Program for Women in Science and Engineering (PWSE) offers multiple learning communities for first- and second-year students pursuing degrees in the STEM fields. These communities use peer mentors, clustered courses, and a variety of out-of-class activities to engage and support the students. In the annual planning process with staff, PWSE reviews and updates its intended outcomes for the coming year: Six primary Outcomes for Women in Leadership in STEM (OWLS). were established In 2014-2015. All programs offered throughout the year connected with one or more of the OWLS. An [executive summary](#) gives examples of two programs, the outcomes addressed by those programs, and assessment data showing impact. The assessment of the Fall StrengthsQuest retreat showed that

(using a Likert scale of strongly disagree 1, to strongly agree 4), students averaged 3.25 on "Knowing my top 5 strengths helps me have a better understanding of myself" and 3.17 on "Knowing my strengths helps me understand how I work in groups", providing evidence that the retreat supported program outcome #4: "WiSE women will identify a sense of identity, integrity, and self-esteem."

Recreation Services/Intramurals

ISU Recreation Services participates in a consortium survey that allows for benchmarking with other institutions. Several questions within the [survey address learning outcomes](#) (e.g. wellness, learning lifelong skills/abilities). Over 68% agree or strongly agree that "Participating in [REC] activities and programs has expanded my interest in staying fit and healthy," compared to a 65.5% national average. Over 60% claim participation in recreational services has provided them with skills/abilities that they will use after college.

Student Activities Center

The Student Activities Center provides a wide range of programming, and the development of leadership skills is a primary outcome of many programs. Through participation in the annual [Iowa State Leadership Experience](#) conference, 99% of respondents agreed or strongly agreed with the statement "I gained leadership skills that will benefit me personally," and 92% agreed or strongly agreed they were 'more likely to get involved with a leadership position' after attending the conference. Similar results (96% gained leadership skills and 93% more likely to take on leadership position) were reported by attendees of the [Women's Leadership Retreat](#).

Dean of Students

The Dean of Students Office (DSO) developed [Student Learning Outcomes](#) in 2014-2015, identifying and defining "Purposeful Learning Domains" to contextualize their outcomes. The seven domains are based on the *Frameworks for Assessing Learning and Development Outcomes* published by the Council for the Advancement of Standards in 2006. Students who engage in DSO programs and services will advance their knowledge in these domains:

1. Responsibility
2. Self-understanding
3. Community
4. Leadership
5. Civic engagement
6. Well-being
7. Life-long learning

Each of the 14 DSO units has identified the outcome they will measure in FY16, and has a plan in place along with a corresponding assessment framework.

Co-curricular Transcript

A challenge of assessing the impact of co-curricular activities is that the University hasn't systematically collected information on student engagement in co-curricular activities at an institutional level. To be able to further document the impact of co-curricular experiences, ISU is in the beginning phases of developing a co-curricular transcript. The Co-Curricular Transcript (CCT) will use a combination of university verified and self-reported information to provide a

comprehensive record of awards, organizations and activities students have participated in while enrolled at ISU. The CCT is intended to be a complimentary piece to the student's academic transcript and resume, used to demonstrate the development of knowledge and leadership outside of the traditional classroom, as well as showcase skills sought by employers and graduate degree programs. Examples of information that may appear on the CCT are:

- Honors and awards
- Student government, clubs and organizations
- Athletics and intramurals
- Educational workshops and conferences
- Presentations
- Community and campus service

4.B.4. Faculty members have the primary responsibility for determining and [assessing student learning outcomes](#). The Provost Office collects and monitors summary data at both the program level (since 2010) and the course level (since 2014) from faculty on the types of assessment strategies being used. In addition, ISU has provided workshops and online resources to assist faculty improve their assessment strategies, providing faculty with guidance on how to incorporate a wide variety of assessment strategies (formative, summative, direct, and indirect measures). These widespread efforts have engaged faculty across the campus in the assessment of student learning outcomes.

Assessment Strategies Used in Program and Course-level Outcomes Assessment Plans

Program level: In the annual survey of departments on their program level outcomes assessment plans, the Provost's Office collects information on the types of assessment strategies being used. A [summary of recent annual survey](#) shows departments are using a broad range of direct and indirect measures to assess student achievement of program level outcomes. Examples of strategies used include student surveys, rubrics to assess student works, portfolios, capstone projects, standard exams (e.g. Praxis), etc.

Course-level: As a part of the survey completed on courses falling under the CIP mandate, faculty members provide [information on the assessment strategies they are using](#). Courses reported using both formative and summative assessment strategies in their CIPs. Of the summative assessments strategies used, the most common was done by analysis of student exam/quiz questions, with 80% of the courses using them as an assessment strategies. The next most common assessment strategies used were faculty review of D/F/Withdraw rates (40%), review of student projects/presentations (31%), student feedback from surveys (26%), and review of term papers (18%).

Outcomes Assessment Training

The Center for Excellence in Learning and Teaching (CELT) offered numerous workshops specifically focused on outcomes assessment between 2006 and 2014. A total of 78 faculty members attended these workshops. CELT sponsors a series of workshops on peer-evaluation of teaching. Materials outlining best practices for peer evaluation are posted to the CELT website, to supplement the existing material, including an exhaustive review of the literature in this area. CELT also provides professional development opportunities and resources to support the development, implementation and refinement of CIPs.

CELT collaborated with the Provost Office and Colleges to offer college-based workshops for faculty who teach courses required to have course-level CIPs. Since 2013, over 140 faculty members from across campus have participated in workshops to develop their course continuous improvement plans.

Sources

- A Summary of Student Learning Outcomes at ISU
- AACSB Assessment of Learning Report Section
- ABET Outcomes Criteria
- AESHM Outcomes
- Ag Engineering Self-Study
- CALS Assessment Plan Calendar Web Page
- CALS Learner Outcomes Web Page
- CALS problem-solving-procedure
- CALS Problem-Solving-Recommendations Report
- CHS Annual Committee Report 2013
- CHS Core Outcomes
- CHS Outcomes Grid 2010 AMDP
- Co-Curricular Outcomes Examples
- COD - Report on Student Learning Outcomes December 2014
- College of Business - Strategic Plan - 2011-2015
- Course-level Continuous Improvement Plan Survey
- CVM Outcomes Summary Report 2014
- Dean of Students Student Learning Outcomes
- Faculty Handbook - Chapter 10.7.2 - Student Outcomes
- Greenlee Internships Assessment 2012-2013
- Greenlee JLMC Assessment Data Report 2013
- Greenlee Outcomes Assessment Plan 11-2014
- High Enrollment CIP Report Outcomes by Gen Ed Area Final
- Industrial Engineering Self-Study
- ISU Comm Foundation Outcomes Assessment
- ISU Continuous Improvement Plan Annual Report 2015
- LAS College CIP Report for dean's cabinet
- MATH Innovations in Instruction
- NREM Outcomes 2014 Report
- NSSE 2013 Academic Challenge First-Year
- NSSE 2013 Academic Challenge Seniors
- NSSE 2013 Learning with Peers First-Year
- NSSE 2013 Learning with Peers Seniors
- Program Level Assessment Strategies
- Program Outcomes Assessment Dashboard 2015
- Recreation Svcs Consortium Survey-2013-2014
- WiSE Executive Summary OWLs