Introduction to Assessment of Learning

KSU’s Approach to Academic Assessment and Continuous Improvement

Updated 7-1-21
Assessment Team

- Anissa Vega, Interim Assistant Vice President for Curriculum and Academic Innovation and Professor of Instructional Technology
- Donna DeGrendel, Associate Director of Assessment
- Michelle Lee, Assessment Data Coordinator
- Juliana Peterson, Graduate Research Assistant
Workshop Outline

• Overview
• Continuous Improvement Cycle
• Resources
• Questions and Discussion
History and Purpose

• Launched in Fall 2016
• Purpose is simple: To improve KSU
• Emphasis on use of results for improvement
• Focus on areas with the most room for improvement
• Helps us better serve students, fulfill our mission and vision, and live our values
What is Assessment?

Assessment answers the question, “How well are we doing what we intend to do?”

• Deciding what we want students to learn and making sure they learn it
• Determining the effectiveness of our academic/student services
• Telling our story: What makes our college/program unique? How effective are we in meeting student, industry, and societal needs?

Source: Suskie (2018)
Why do Assessment?

Assessment has three fundamental purposes (Suskie, 2018):
1. Ensuring and improving educational quality
2. Stewardship
3. Accountability

Why are you doing assessment?
Extrinsic vs. Intrinsic Motivation
KSU’s Assessment Guiding Principles

- Supports KSU’s mission and strategic priorities
- Beyond mere compliance or reporting
- Focused on incremental improvement
- Meaningful and manageable
- Collaborative at all stages
- Use of embedded, direct assessments
- Continuous, flexible, systematic, and equitable
- Learning outcomes align with employer needs and/or industry standards
KSU’s Continuous Improvement Cycle
Determine Outcomes

• **Student Learning Outcomes**: Expected knowledge, skills, attitudes, or competencies that students are expected to acquire

• **Student Success Outcome**: A focus on incremental improvement in student retention or graduation rate

• Where is there the most room for improvement?
- **Specific, Strategic**
- **Measurable, Motivating, Meaningful**
- **Attainable, Action-Oriented, Aligned**
- **Relevant, Result-Oriented, Realistic**
- **Time-bound, Trackable**
Student Learning Outcomes (SLOs)

• Educational programs
• 2 SLOs per program (3rd SLO is optional)
• Knowledge/skill areas with a need for improvement
• Aligned with industry standards/needs
• Written in clear, succinct language
• Use of action verbs (Bloom’s Taxonomy)
Program/Course Design Triangle

Learning outcomes, instructional strategies, and assessments should align and support one another. Misalignment hinders student learning and motivation.

- **Learning Outcomes:** What do we want students to know or do when they complete this course/program?
- **Instruction:** What is the best way to teach the learning outcomes and prepare students for assessments?
- **Assessment:** What tasks or instruments will provide evidence of whether students have achieved the learning outcomes?
- Measure → Change → Measure

Source: [https://ctl.wiley.com/course-design-triangle/](https://ctl.wiley.com/course-design-triangle/)
Are learning outcomes observable and measurable?

Do learning outcomes align with the expected level of mastery for the course and for the degree program?
### Are the learning outcomes measurable?

<table>
<thead>
<tr>
<th>Not Measurable</th>
<th>Measurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will be familiar with...</td>
<td>Students will identify (or list) the...</td>
</tr>
<tr>
<td>Students will know the difference between...</td>
<td>Students will summarize the difference between...</td>
</tr>
<tr>
<td>Students will think critically about...</td>
<td>Students will evaluate the evidence... Students will compare and contrast... Students will construct an argument for...</td>
</tr>
<tr>
<td>Students will understand the principles of...</td>
<td>Students will apply the principles of...</td>
</tr>
<tr>
<td>Students will appreciate...</td>
<td>Students will articulate the importance of...</td>
</tr>
<tr>
<td>Students will learn how to...</td>
<td>Students will demonstrate...</td>
</tr>
</tbody>
</table>
SLO Examples

• Students will **demonstrate** effective oral communication skills.
• Program graduates will **define** and **interpret** methodological and statistical constructs.
• Students will **explain** how key values and social practices associated with American life have evolved in distinct historical periods.
Guiding Questions: Determine SLOs

• What do we want students to get out of this learning experience? What do we want them to be able to do long after the program or course is completed? Why are those things important?
• What do our students do after they graduate? What are the most important things they need for success in those pursuits?
• What do we value most about our discipline? According to the major authorities in our discipline, what are the most important things students should learn?
• How does this course relate to other courses in this program, to other disciplines that students may be studying, or to the general education curriculum?
• Does each SLO clearly articulate the knowledge, skill, and/or ability students will demonstrate?
• Is each SLO discrete and specific (focuses on only one main area of knowledge, skill, or ability)?
• Is each SLO observable and measurable (described using action verbs; see Bloom’s Taxonomy)?
• Does each SLO align with the expected level of learning for the course and degree (i.e., higher levels of thinking for upper-level courses and advanced degrees)?
• What specific learning activities will help students achieve the learning outcomes?
Student Success Outcome

• 1 student success outcome per academic program
• Choice of focus retention or graduation rate
• Where is the most room for improvement for our program?
• The outcome should be written using improvement language
  ❖ “Improve student retention”
  ❖ “Increase graduation rate”
  ❖ “Decrease time-to-completion”
  ❖ “Increase enrollment/recruitment”
Pitfalls: Determine Outcomes

• Failing to involve other faculty members
• Identifying too many outcomes for improvement
• Writing outcomes in vague terms
• Focusing on multiple knowledge/skill areas within one SLO
• Failing to define observable behaviors for SLOs
Provide Learning Opportunities
Measure Effectiveness

Specific method used to collect evidence of the outcome
At least two measures are required per outcome

Direct Measures:
• Tangible, visible, and compelling evidence of the outcome
• SLOs are assessed by instructor or individuals with content expertise/knowledge; or standardized tests

Indirect Measures:
• Signs or perceptions of the outcome
• Self-assessments or surveys

Quantitative or Qualitative
Student Learning Measures

MEASURE 1: At least one direct measure per outcome
Exam item • Assignment, project, or presentation rubric item • Licensure/professional exam item • Portfolio assessed with a rubric • Pre/post-test item • Thesis/dissertation defense rubric • Comprehensive exam item • Standardized test item • Internship supervisor evaluation • Employer rating of student skills

MEASURE 2: May be direct (see above) or indirect (such as a student self-assessment of skills using a rubric, or a student survey related to the student learning outcome
Why Not Use Grades?

Grades or holistic scores:

• Can point to potential areas of concern, but they should not be used as direct measures of student learning

• Lack granular information about what students have and have not learned

• Make it difficult to determine specific and targeted strategies for improvement

• May include factors other than student learning (i.e., participation, attendance, effort, etc.)

Assessment goes beyond grading by systematically examining patterns of student learning across courses and programs and using this information to improve educational practices (Suskie, 2018).
Student Success Measures

MEASURE 1 (direct measure): Retention or graduation rate

- Institutional Research will provide data to undergraduate programs.

Note: Graduate & Certificate Programs

- Data is not available for graduate or certificate programs, so reporting of results is optional for AY 2021.
- For AY 2022, data may be provided, or internal tracking may possibly serve as the first measure.
<table>
<thead>
<tr>
<th>Cohort</th>
<th>Fall Headcount</th>
<th>Adjusted Cohort</th>
<th>Retention Rate After-</th>
<th>Graduated Retained</th>
<th>Graduated Retained</th>
<th>Graduated Retained</th>
<th>Attrition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 Year</td>
<td>2 Years</td>
<td>3 Years</td>
<td>After 4 Years</td>
<td>After 5 Years</td>
</tr>
<tr>
<td>2007</td>
<td>250</td>
<td>249</td>
<td>76.6</td>
<td>61.6</td>
<td>54.6</td>
<td>14.5</td>
<td>37.8</td>
</tr>
<tr>
<td>2008</td>
<td>244</td>
<td>243</td>
<td>74.8</td>
<td>60.5</td>
<td>53.5</td>
<td>15.4</td>
<td>36.6</td>
</tr>
<tr>
<td>2009</td>
<td>242</td>
<td>241</td>
<td>76.5</td>
<td>61.4</td>
<td>53.8</td>
<td>15.0</td>
<td>36.6</td>
</tr>
<tr>
<td>2010</td>
<td>240</td>
<td>238</td>
<td>77.2</td>
<td>61.4</td>
<td>53.6</td>
<td>13.4</td>
<td>37.6</td>
</tr>
<tr>
<td>2011</td>
<td>240</td>
<td>239</td>
<td>75.9</td>
<td>60.4</td>
<td>53.3</td>
<td>12.5</td>
<td>40.0</td>
</tr>
<tr>
<td>2012</td>
<td>238</td>
<td>237</td>
<td>75.3</td>
<td>62.0</td>
<td>55.9</td>
<td>13.9</td>
<td>39.8</td>
</tr>
<tr>
<td>2013</td>
<td>236</td>
<td>235</td>
<td>77.9</td>
<td>64.4</td>
<td>58.2</td>
<td>16.5</td>
<td>39.7</td>
</tr>
<tr>
<td>2014</td>
<td>239</td>
<td>238</td>
<td>78.2</td>
<td>65.8</td>
<td>59.2</td>
<td>17.7</td>
<td>38.9</td>
</tr>
<tr>
<td>2015</td>
<td>242</td>
<td>241</td>
<td>80.1</td>
<td>66.2</td>
<td>58.3</td>
<td>17.3</td>
<td>39.6</td>
</tr>
<tr>
<td>2016</td>
<td>245</td>
<td>244</td>
<td>78.3</td>
<td>62.3</td>
<td>56.2</td>
<td>18.8</td>
<td>35.8</td>
</tr>
<tr>
<td>2017</td>
<td>220</td>
<td>219</td>
<td>78.5</td>
<td>64.7</td>
<td>58.6</td>
<td>18.8</td>
<td>35.8</td>
</tr>
<tr>
<td>2018</td>
<td>229</td>
<td>228</td>
<td>80.3</td>
<td>68.4</td>
<td>58.6</td>
<td>18.8</td>
<td>35.8</td>
</tr>
<tr>
<td>2019</td>
<td>210</td>
<td>209</td>
<td>79.7</td>
<td>68.4</td>
<td>58.6</td>
<td>18.8</td>
<td>35.8</td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Student Success Measures

MEASURE 2 (indirect measure):
Optional for all programs for AY 2021; mandatory for AY 2022

- Surveys, focus groups, and/or interviews
- With current students, alumni, or former students (those who left the program or KSU)
- Helps answer why students are leaving the program or KSU; or why they are not graduating
Assessment Instruments

- Assessment instruments should clearly align with the outcome
- Individual items may be used as separate measures
- If possible, evaluate the validity and reliability of the instrument
- The same instrument may be used to assess different outcomes
  - Rubric items (direct)
  - Exam items (direct)
  - Internship supervisor evaluation items (direct)
  - Self-assessment (indirect)
  - Survey items (indirect)
  - Focus group questions (indirect)
  - Interview questions (indirect)
Guiding Questions: Measure Effectiveness

- How will we know if students have achieved the learning outcomes?
- What assessments will best provide evidence of outcome achievement?
- Do the measures align with the outcome (content validity)?
- Do we have at least one *direct* measure of student learning for each outcome?
- Are the measures sufficiently granular to collect specific evidence (i.e., exam, rubric, or survey items as opposed to overall grades or holistic scores)?
- Does the level of learning described by the action verb in the SLO align with the level of learning measured by the assessment instrument?
- Are rubrics well defined (with specific criteria, appropriate rating scale, and clear descriptors at each performance level)?
- What, if any, challenges might arise during data collection?
- Do we need a process for artifact sampling (i.e., for courses with high enrollment or across course sections)?
- How will the assessment data be analyzed?
Pitfalls: Measuring Effectiveness

• Failing to involve other faculty members
• Failing to use embedded or existing measures
• Using measures that are too holistic (i.e., course grades or final exam scores as measures of SLOs)
• Attempting to measure too many things
• Failing to collect the data, or creating unmanageable data collection processes
• Setting arbitrary targets (targets are optional)
Use Results for Improvement

Analyze and summarize the data
- Means and frequency distributions
- Tables or graphs to visualize results and illustrate trends over time

Identify trends and strategies for improvement related to the outcome

Measure → Change → Measure
Use Results for Improvement

Identify trends and strategies for improvement related to the outcome

- “Full Report Addendum” is required every 3 years per the Cohort Schedule
- Create an implementation plan for strategies

Discuss results and strategies for improvement with supervisor and faculty/staff
STUDENT RELATED:

- Identify and support struggling or at-risk students
- Encourage more engagement with course material
- Ask students for feedback about the course content
- Determine specific areas with which students are struggling and revisit them
- Match lower performers with higher performers for peer coaching
- Recommend the student consult with his/her advisor
- Share information about learning support or other services depending on the situation (i.e., counseling, tutoring, writing center, UITS technology assistance, etc.)
Student Learning: Example Strategies

CURRICULUM RELATED:

- Create additional course content or practice opportunities
- Identify potential curriculum changes
- Reevaluate sequencing/rigor of the course material
- Reevaluate prerequisites or course sequencing
- Create or revise the curriculum map
- Discuss with other faculty and share ideas
- Contact the Curriculum Support Office
- Contact DLI for assistance with D2L course design

Test novel or innovative solutions

If a change does not lead to improvement, it’s okay -- try something else
Student Learning: Example Strategies

ASSESSMENT RELATED:
- Clarify test items that may be confusing or worded poorly
- Adjust test items that are too easy or difficult
- Clarify rubric criteria and/or performance level descriptors
- Discuss with other faculty and share ideas
- Contact the Assessment Office
External Resources for Improving Teaching & Learning

MERLOT - Resource Collection

U of IL - Teaching & Learning Resources

Vanderbilt U - Center for Teaching Guides

NEA - Higher Education Best Practices - Teaching & Learning

U of Leicester - Effective Teaching Strategies

The Chronicle of Higher Ed - Here’s How to Make Your Teaching More Inclusive

Faculty Focus - Higher Ed Teaching Strategies
Student Success: Example Strategies

STUDENT RELATED:

- Identify and support at-risk students
- Refer students to tutoring and/or the writing center
- Share information about learning communities, service learning, undergraduate research, and study abroad opportunities
- Work with advising to ensure students follow the most efficient path to graduation
- Encourage enrollment in a Double Owl Pathway
Student Success: Example Strategies

PROGRAM RELATED:

- Address bottle necks in course scheduling
- Ensure there are enough seats for the students enrolled in the program
- Create online course options if not already available
- Create learning communities, service learning, undergraduate research, and study abroad opportunities
- Create a Double Owl Pathway and encourage enrollment in the program
- Create an industry advisory board and provide internship assistance

Changes in retention and graduation rates will take time. Multiple interventions should be pursued.
Guiding Questions: Use Results for Improvement

What are the big take-aways from the assessment results?

- What does the data tell us?
- What trends and relationships do we see in the data?
- In what areas are students consistently demonstrating high performance in relation to the learning outcomes?
- In what areas are students consistently struggling or on the verge of not meeting performance expectations based on the learning outcomes?
- How are some students performing compared to others? Are there any patterns that need to be addressed?
- What questions should we explore further across this set of data? Are there other sources of data we should explore?
Guiding Questions: Use Results for Improvement

What factors may be contributing to these results?

- Perform a root cause analysis (the “5 Whys” ; fishbone diagram)
- Examine each of the following factors and determine how they may contribute to the assessment results:
  - Course content and materials
  - Learning process and environment
  - Teaching practices and style
  - Student-related factors
  - External factors
Guiding Questions: Use Results for Improvement

What strategies for improvement can we implement to address these issues?

- How will we support the struggling students in the class or program?
- How do the assessment results inform potential changes in teaching strategies and/or curriculum?
- What are the specific action steps needed to implement the strategies?
- What are the timeframes for each action step?
- Who else needs to be involved?
- What resources do we need?
Guiding Questions: Use Results for Improvement

After implemented, did the strategy and action steps have the desired impact?

- Was there a change in student learning?
- Are we seeing increased engagement with the course material?
- Is there incremental improvement in student retention or graduation rates? (This will take time, so persistence is key.)
- Do we need to modify our strategies for improvement?

Remember, if a change does not lead to improvement, it’s okay -- try something else.
Pitfalls: Use Results for Improvement

- Over-complicating the analyses or written report
- Failing to involve other faculty members
- Failing to implement identified strategies for improvement
- Implementing too many strategies
- Failing to improve upon an ineffective assessment process
Guiding Questions: Review the Assessment Plan

Should the assessment plan or process be modified?
- Are the SLOs still relevant and aligned with industry needs?
- Based on the data, are the outcomes still a priority for improvement?
- Are measures sufficiently granular to assess only the learning outcome of interest?
- Are test items and rubrics clearly worded and aligned with the learning outcomes?
- Are rubrics well defined (with specific criteria, appropriate rating scale, and clear descriptors at each performance level)?
- Do the assessment instruments demonstrate acceptable reliability and validity?
- How can we improve our data collection and/or data analysis process?
Assessment of Learning Report

• Results are reported annually using the MS Word template found on the Assessment of Learning website.

• A simple report submission form will be emailed to program coordinators in August.
Cohort Schedule and List

- Report results annually.
- Identify trends over time and strategies for improvement every 3 years (per the Consult the **Cohort Schedule and List**).

For each outcome, complete the “Full Report Addendum” within the MS Word template.
Example Timeline

August 2020
Create/revise Assessment Plan (if needed)

August 2020 – July 2021
Collect data

August – October 14, 2021
Analyze data and write report

October 15, 2021
Submit Assessment Report

Kennesaw State University
This process map is available to download on the Assessment of Learning Website.
Other Uses of Assessment Data

• University SACSCOC accreditation
• Program specialized accreditation
• General Education assessment
• Academic Program Review
• Quality Enhancement Plan (QEP) – “It’s About Engagement”
Culture of Continuous Improvement

• Begin with a core set of institutional values
• Communicate expectations and model the process
• Involve all facets of the university
• Utilize and build on existing tools and programs
• Identify and communicate common ties among initiatives
• Communicate how assessment results have been used for improvement
• Keep continuous improvement “top of mind” and part of the institutional lexicon
• Enhance data/information literacy skills among faculty and staff
• Encourage academic innovation -- test novel or innovative solutions
• Integrate with HR systems: job descriptions, performance reviews, recognition and reward systems
KSU Resources

Curriculum, Instruction, and Assessment
Assessment of Learning Website
Digital Learning Innovations
Office of Student Success
Writing Center
Center for Excellence in Teaching and Learning (CETL)
Additional Resources

A Simple Model for Learning Improvement: Weigh Pig, Feed Pig, Weigh Pig


Association of American Colleges & Universities (AAC&U) VALUE Rubrics http://www.aacu.org/value-rubrics

