INTRODUCTION. As Yogi Berra, the assessment guru of baseball, once said, “If you don’t know where you are going, you might wind up someplace else.” By identifying course and program outcomes and outcomes assessments, we can inform the students, funders, and accrediting agencies that we not only know where we are going, we know that the destination is appropriate and when we get there. Through outcomes assessment, we have evidence that we

1. Prepare to teach with the end in mind;
2. Know that students are learning by demonstrating their knowledge of the identified outcomes;
3. Can analyze assessment results for data-driven curriculum decisions;
4. Take shared responsibility in student learning;
5. Ensure continuous quality improvements in student learning; and
6. Evaluate the effectiveness of our courses and programs.

PLACE OF ASSESSMENT IN THE LEARNING CYCLE. To ensure that assessment is successful and we use assessment to inform our practice, we have to clearly define our goals and objectives, measure the outcomes, and use the data to adjust the curriculum and/or instruction to improve student learning.

Outcomes, Assessment, Student Learning, and Reflection

Identifying goals, objectives

Outcomes

(Redefine)

Adjusting curriculum &

Instruction to improve learning

Assessing outcomes

Analyzing assessment data
**COMPONENTS OF OUTCOMES ASSESSMENT.** In implementing pedagogy based on outcomes and outcomes assessment, programs should develop a plan that includes

- Having a mission
- Developing learning objectives
- Checking for alignment between the curriculum and the objectives
- Relating the objectives to outcomes that are identifiable and measurable
- Developing an assessment plan
- Collecting assessment data
- Using results to improve the courses and program
- Re-examining the assessment process

\[\text{Mission/Conceptual Framework}\]

\[\text{Goals} \rightarrow \text{Objectives} \leftarrow \text{Outcomes for each objective}\]

\[\text{Program Improvements} \rightarrow \text{Analysis/Results} \downarrow \text{Assessment criteria and procedures for outcomes}\]

**HOW DOES EVERYTHING FIT TOGETHER?** The University of Connecticut designed the following outcomes pyramid to illustrate the relationship between outcomes, objectives, and goals and the relationship between the courses, programs, college, and university.

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The assessment literature is full of terminology such as “mission”, “goals”, “objectives”, “outcomes”, etc. but lacking in a consensus on a precise meaning of each of these terms. Part of the difficulty stems from changes in approaches to education – shifts from objective-based, to competency-based, to outcomes-based, etc. education have taken place over the years with various champions of each espousing the benefits of using a different point of view. The Outcomes Pyramid shown below presents a pictorial clarification of the hierarchical relationships among several different kinds of goals, objectives, and outcomes that appear in assessment literature.

![Outcomes Pyramid](image)

The ‘pyramid’ image is chosen to convey the fact that increasing complexity and level of specificity are encountered as one moves downward. The pyramid structure also reinforces the notion that learning flows from the mission of the institution down to the units of instruction.²

**CURRICULUM MAPPING.** At the course and program levels, we have to work in two directions simultaneously: design backward and deliver forward. Essentially, as faculty members delivering courses that align outcomes and assessments, we have to begin with the end in mind—knowing the intended outcome. We, then, deliver our instruction like a scaffold by presenting the intended outcomes of the

² For more information, review the University of Connecticut Assessment website: [www.assessment.uconn.edu](http://www.assessment.uconn.edu)
lessons that lead to the outcomes of the course and eventually the program. Through curriculum mapping, we can identify the courses that focus on specific program outcomes to ensure that we address all of the outcomes. Furthermore, through mapping, we determine where outcomes are introduced, reviewed, or mastered, and we can align outcomes to appropriate assessments.

Mapping can be done with a simple matrix on which courses are listed along with the outcomes as shown in the example below.

Sample Alignment Matrix

<table>
<thead>
<tr>
<th>COURSE</th>
<th>Outcome 1</th>
<th>Outcome 2</th>
<th>...and so on</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>201</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>301</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

DEPARTMENTAL PROGRESS CHECK:

Does the department have

1. A mission statement or conceptual framework
2. Goals
3. Objectives
4. Outcomes
5. A curriculum map
6. Assessments
7. A plan for analyzing data and redesigning the curriculum?
SUGGESTED RESOURCES:

- “Assessment Notes” by Eric Soulsby (143 page)
- “Principles of Good Practice for Assessing Student Learning” by American Association for Higher Education (AAHE) (3 page)
- “A Self-Directed Guide to Designing Courses for Significant Learning” by L. Dee Fink (36 page)
- “Beyond Confusion: An Assessment Glossary” by Andrea Leskes (3 page)
- “Designing Student Assessment to Strengthen Institutional Performance in Doctoral and Research Institutions” by Marvin Peterson et al (118 page)
- “Why Aren’t Grades Enough?” -- a collection of thoughts (4 page)
- “Measuring Quality: Choosing Among Surveys and Other Assessments of College Quality” by Victor M.H. Borden and Jody L. Zak Owens (44 page)

Articles and Reports

- “From Teaching to Learning – A New Paradigm for Undergraduate Education” by Robert Barr and John Tagg (14 page) (NetID login required for this article)
- “Doing Assessment As if Learning Matters Most” by Thomas Angelo (4 page)
- “Are colleges failing? Higher Ed Needs New Lesson Plans” by Derek Bok (2 page)
- “Looking Where the Light is Better: A Review of the Literature on Assessing Higher Education Quality” by Marc Chun (10 page)
- “What Does College Teach?” by Richard Hersh (5 page)
- “How Can Assessment Work for Us?” by Sherry Lee Linkon (5 page)
- “Auditing Higher Education to Improve Quality” by William Massy (4 page)
- “Academic Audit Questions for Faculty Discussion” by William Massy, et al (2 page)
- “The Case for Authentic Assessment” by Grant Wiggins (4 page)
- “Toward Assessment Worthy of the Liberal Arts” by Grant Wiggins (10 page)
- “Measuring Higher Education: A Compendium of Assessment Instruments for Colleges and Universities” by Public Impact (Lucy M. Steiner, Bryan C. Hassel, and Steven J. Tepper) prepared for the Teagle Foundation November 2004 (21 page)
- “Accountability for Better Results: A National Imperative for Higher Education” by National Commission on Accountability in Higher Education 10 March 2005 (42 page)
- “Improving Student Learning in Higher Education Through Better Accountability and Assessment” by NASULGC April 2006 (25 page)
- “Elements of Accountability for Public Universities and Colleges” by NASULGC 6 July 2006 Draft (13 page)
- “A Culture of Evidence: Postsecondary Assessment and Learning Outcomes” by ETS June 2006 (40 page)
- “NASULGC and AASCU’s Voluntary System of Accountability” by David Shulenburger May 2007 (9 page)
- “U-CAN: The NAICU Consumer Information Template” by NAICU 25 June 2007 (4 page)

3 University of Connecticut: www.assessment.uconn.edu/resources.htm
News

- "Consensus Grows on Basic Skills That Colleges Should Teach, but Gauges of Those Abilities Are Poor, Report Says" by Burton Bollag 7 November 2005 (1 page)
- "Federal Panel Considers Giving Colleges a 'Gentle Shove' Toward Accountability Testing" by Kelly Field 31 March 2006 (8 page)
- "Higher-Education Leaders Debate Debate a Testing Service’s Proposal for Accountability Testing" by Kelly Field 8 August 2006 (2 page)
- "Federal Panel Approves Final Draft Report on Higher Education, With One Member Dissenting" by Kelly Field 11 August 2006 (3 page)
- "Assessing Learning Outcomes" by Elia Powers 21 September 2006 (1 page)
- "Making an Art Form of Assessment" by Burton Bollag 27 October 2006 (5 page)
- "A Warning on Measuring Learning Outcomes" by Trudy W. Banta 26 January 2007 (3 page)
- "Campus Accountability Proposals Evolve" by Doug Lederman 26 June 2007 (4 page)