

# MAPPING LEARNING OUTCOMES: WHAT YOU MAP IS WHAT YOU SEE

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# Overview

- NILOA – who we are and what we do
- Curriculum mapping overview – the process
- Institutional Examples
- Why do curriculum mapping?
- What else can be mapped?
- How can this improve student learning?
- Questions



**NILOA's mission is to discover and disseminate effective use of assessment data to strengthen undergraduate education and support institutions in their assessment efforts.**

- **SURVEYS ● WEB SCANS ● CASE STUDIES ● FOCUS GROUPS**
- **OCCASIONAL PAPERS ● WEBSITE ● RESOURCES ●**
- NEWSLETTER ● LISTSERV ● PRESENTATIONS ●**
- TRANSPARENCY FRAMEWORK ● FEATURED WEBSITES ●**
- ACCREDITATION RESOURCES ● ASSESSMENT EVENT**
- CALENDAR ● ASSESSMENT NEWS ● MEASURING QUALITY**
- INVENTORY ● POLICY ANALYSIS ● ENVIRONMENTAL SCAN**
- ***DEGREE QUALIFICATIONS PROFILE AND TUNING***

**[www.learningoutcomesassessment.org](http://www.learningoutcomesassessment.org)**



## Welcome to NILOA



Our April newsletter featuring NILOA updates, news, and upcoming conferences and programs is now available.

- Survey Report
- DQP Case Study
- NILOA Newsletter
- College Ratings
- Tuning USA Webinar

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# VIEW POINT

NILOA Calendar

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		



## Indiana University Southeast

Indiana University Southeast's Institutional Research & Assessment website is NILOA's Featured Website for its Centralized Assessment Repository.

[Featured Website Archive](#)

## In the News | [Archive](#)

### Educators Point to a 'Crisis of Mediocre Teaching'

Wed, Apr 23, 2014 - 08:00 am

Vimal Patel in The Chronicle of Higher Education

Educators met and discussed support structures, culture, and rewards for effective teaching. Participants outlined institutions that are developing programs focusing on improving graduate student teaching to better prepare them for teaching careers.

### New Issue of Assessment Update is Available Now

Tue, Apr 22, 2014 - 08:00 am

The latest issue of Assessment Update: Progress, Trends and Practice in Higher Education for March/April 2014 is now available. Articles in this issue include Stephanie Foote and Andy Dyer's "Assessing Deep Learning: Using a Portfolio to Evaluate Gains in Critical Inquiry among First-Year Students," Amy Thelk's "Building a Better Course-Evaluation Process," and Kevin Schoepp and Angela Skuba's "Effective Leadership Assessment: A 360-Degree Process."

### Registering Toward Completion

Mon, Apr 21, 2014 - 08:00 am

Allie Grasgreen in Inside Higher Ed

Cleveland State University introduced an initiative that will get more students to degree completion. Students are allowed to register for a year of courses before the fall semester begins in hopes of letting students plan for the whole year, set expectations, and see the end goal.

# Measuring Quality in Higher Education

[Introduction](#) | [Organization](#) | [Guidelines](#) | [Inventory](#) | [Additional Resources](#) | [About the Authors](#) | [Contact](#)

## Measuring Quality in Higher Education: An Inventory of Instruments, Tools and Resources

This web site provides an inventory of resources designed to assist higher education faculty and staff in the challenging task of assessing academic and support programs as well as institutional effectiveness, more broadly. The items in this inventory are divided into four categories: instruments (examinations, surveys, questionnaires, etc.); software tools and platforms; benchmarking systems and data resources; projects, initiatives and services. They can be searched using keywords or through a set of filters that include the unit of analysis, the targeted level of assessment, and the subject of measurement.

This inventory is an update to the monograph, "Measuring Quality: Surveys and Other Assessments of College Quality" (Borden & Owens, 2001), published jointly by the American Council on Education and the Association for Institutional Research. The original volume included information about 26 assessment instruments (mostly examinations and surveys). The current inventory, in which the National Institute for Learning Outcomes Assessment is also a partner, expands considerably the domain and range of assessment resources to include approximately 250 items. Whereas the earlier resource focused almost entirely on assessing student life and learning, this version also considers a broader range of quality issues for which there is public interest regarding institutional effectiveness, including the research/scholarship and outreach/service missions of institutions, as well as the alignment between higher education institutional activities and societal needs.

### Caveat Emptor

With the rapid expansion of available higher education assessment instruments, tools, resources, and services, we have opted to take an inclusive approach to this inventory. Criteria for inclusion were purported and reported use for program and institutional assessment. Inclusion in the inventory does not indicate endorsement by the authors nor by any of the sponsors of this publication and inventory. In the [guidance](#) section, we seek to define an effective context for evaluating, selecting, and using such tools and resources.

The online inventory will be maintained and periodically updated through this web site. We also intend to add to the web site provisions for collecting and reporting examples of effective use, as well as research and reviews regarding specific instruments, tools, and resources. We hope to



### Website Guide

- [Browse/Search the Inventory](#)
- [Learn More About the Four Categories of Instruments](#)
- [View Guidelines for Selecting and Using Assessment Instruments, Tools, and Services](#)
- [View Additional Resources Related to Higher Education Accountability and Improvement](#)

### Announcements

11.3.10 - [The National Institute for Learning Outcomes](#)

National Institute for Learning Outcomes Assessment (NILOA) regularly releases occasional papers that examine contemporary issues and inform the academic community of the current state-of-the-art of assessing learning outcomes in American higher education. To find out more and to read the papers, [click here](#).

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4.30.10 - [The Accountability/Improvement Paradox](#)

Moving beyond the tension between policy makers and professors over assessing student learning will require those on each side to approach their respective responsibilities, and each other, as professionals, Victor Borden writes. [Read the Full Article at Inside Higher Ed.](#)

## National Institute for Learning Outcomes Assessment

### The Role of Learning Outcomes Assessment in Making Learning More Effective

[About Us](#) | [NILOA](#)

### Searchable Inventory

Welcome to the NILOA website.

A variety of information is available on this site. Please use the search box to find the information you need. You will enjoy your time spent here.

Search By:

- SmartSearch
- Title
- Author Last Name
- Description
- Publication Date

- Accountability
- Accreditation
- Assessment history and trends
- Assessment journals
- Assessment plans
- Assessment resources
- Assessment Subcommittee
- Benchmarking
- Blogs
- Case studies
- Civic learning/engagement
- Classroom assessment
- Community college
- Costs and value of assessment
- Course-embedded assessments
- Culture of evidence
- Current assessment activities
- Curriculum Mapping
- Data and Technology
- Degree Qualifications Profile (DQP)
- Evaluation
- Evidence of student learning
- Faculty Engagement
- General education assessment
- Graduate Studies
- Library Assessment
- Listservs
- Measures of student learning
- Minority serving institutions
- Newsletter
- NILOA
- Policy
- Portfolio
- Professional Networks
- Program level assessment
- Rubrics
- Scholarship of teaching and learning
- Student affairs
- Student learning outcomes statements
- Study Abroad
- Transparency
- Using assessment for improvement
- Viewpoint
- Website

## National Institute for Learning Outcomes Assessment

### Making Assessment Work for Student Affairs Professionals

For some professionals in higher education, assessment is an already overloaded schedule. For others, it is a disguise for personnel evaluation trepidations at the prospect of assessment. This brief from the National Institute for Learning Outcomes Assessment discusses what assessment is intended to be, why it is important, and how it can be implemented by leveraging student affairs professionals' day practices.

This brief from the National Institute for Learning Outcomes Assessment discusses what assessment is intended to be, why it is important, and how it can be implemented by leveraging student affairs professionals' day practices.

### Defining Assessment

Assessment begins with simply wondering if you hope your efforts can accomplish what you intend. Often, however, before systematically implemented, they can be more, campus leaders, the state, accreditation agencies, and so on (2010). If we do not document what we do and that others can interpret, we cannot claim success.

Assessment, in essence, takes our natural tendency to evaluate and make it systematic framework, where we explore how program will take away from the experience of learning outcomes, we design the program, mapping, outcomes delivery mapping, these outcomes. Once we have in place, how best to capture—with carefully selected data analysis and interpretation—ideas. Next, drawing on the findings, we map





# Curriculum Mapping: The Process

- Focused on curriculum and program learning outcomes
- Two-dimensional matrix representing courses on one axis and outcomes on the other
- Faculty identify which courses address which learning outcomes
  
- Is it an individual process or one of consensus building?
- If two faculty members individually mapped the curriculum would they end up with the same map?

# Examples

Metro State College of Denver  
Curriculum Mapping Template  
2008-09

Each required course should be linked with at least one Learning Objective and one level\* by entering the appropriate letter(s) in the relevant cell. Programs are free to include other courses as appropriate.

	Learning Objective 1	Learning Objective 2	Learning Objective 3	Learning Objective 4
XXX1234				
XXX2345				
XXX3456				
XXX4567				
XXX5678				
XXX6789				
XXX7890				

Levels - These are stated from the student's perspective and tied to Bloom's Taxonomy as much as possible.

V = discover (gain knowledge, comprehend information)

P = practice (apply knowledge gained to real situations, analyze issues and questions)

D = demonstrate (prepare a work product - exam, paper, presentation, etc. - that represents knowledge gained, application of said knowledge and synthesis or evaluation of knowledge and ideas)

\* a course might be identified as offering students the opportunity to do more than one level



	Introductory Course	Research Methods	Advanced Content Course A	Laboratory / Practicum Course	Advanced Content Course B	Advanced Content Course C	Advanced Content Course D	Capstone Course
<b>Content</b>								
SLO 1: Disciplinary knowledge base (models and theories)	Introduced		Reinforced		Reinforced	Reinforced	Reinforced	Mastery / Assessed
SLO 2: Disciplinary methods		Introduced		Reinforced		Reinforced		Mastery / Assessed
SLO 3: Disciplinary applications	Introduced		Reinforced		Reinforced		Reinforced	Mastery / Assessed
<b>Critical Thinking</b>								
SLO 4: Analysis and use of evidence		Introduced		Reinforced	Reinforced		Reinforced	Mastery / Assessed
SLO 5: Evaluation, selection, and use of sources of information	Introduced	Reinforced		Reinforced		Reinforced		Mastery / Assessed
<b>Communication</b>								
SLO 6: Written communication skills	Introduced	Reinforced		Reinforced		Reinforced		Mastery / Assessed
SLO 7: Oral communication skills		Introduced	Reinforced		Reinforced	Mastery / Assessed		
<b>Integrity / Values</b>								
SLO 8: Disciplinary ethical standards		Introduced		Reinforced	Reinforced			Mastery / Assessed
SLO 9: Academic integrity	Introduced	Reinforced	Reinforced	Reinforced		Reinforced		Mastery / Assessed
<b>Project Management</b>								
SLO 10: Interpersonal and team skills			Introduced		Reinforced		Reinforced	Mastery / Assessed
SLO 11: Self-regulation and metacognitive skills	Introduced			Reinforced	Reinforced	Reinforced		Mastery / Assessed

Center for University Teaching, Learning, and Assessment  
<http://uwf.edu/cutla/>

Sample Curriculum Map (Level of Skill)

# Time to Share

- Have you done curriculum mapping?
- What was the process?
- What have you done with the map since?

# Implications

- While seemingly a very straightforward process – identify learning outcomes and where addressed – there are many assumptions behind this potentially “simplistic task”
- Do our assumptions about alignment actually hold between the levels?
- If map to broad outcomes is consistency an issue or agreement on what the outcomes mean?
- What is standard of alignment – if one paper in one class enough within a program to say the outcome is addressed and met? How much is enough? What does it mean to introduce, reinforce, or meet mastery?

# Why do curriculum mapping?

- What are we hoping to achieve through mapping the curriculum?
  - Alignment (within a program, between general education and institutional goals, etc.)
  - Identifying where and how particular outcomes are expected, explicitly taught for, and assessed (Ewell, 2013)
  - Backwards design the curriculum
  - Understand the nature and role of course pre-requisites
- **Mapping as a lens – it is a way of seeing organizational structure**

# Questions CM can answer

- In the key courses, are all outcomes addressed, in a logical order?
- Do all the key courses address at least one outcome?
- Do multiple offerings of the same course address the same outcomes, at the same levels?
- Do some outcomes get more coverage than others?
- Are all outcomes first introduced and then reinforced?
- Are students expected to show high levels of learning too early?
- Do students get practice on all the outcomes before being assessed, e.g., in the capstone?
- Do all students, regardless of which electives they choose, experience a coherent progression and coverage of all outcomes?
- What do your electives, individually and collectively, contribute to the achievement of your student learning outcomes?



# Uses of Curriculum Maps

- Provide an overview of the structure of the curriculum and the contribution of individual courses to the goals of the program
- Identify program strengths - student learning outcomes that are thoroughly addressed
- Help departments identify gaps (learning outcomes that are addressed by only a few courses)
- Suggest whether students take courses in an optimal sequence
- Advising tools that provide students with an overview of the role of each course in the curriculum and why some courses should be taken in a particular order.

# What else can be mapped?

- Spatial elements: GIS Communication
  - Content
  - Structure
  - Course-taking patterns
  - Assignment timing
- 
- **Where does learning happen? Does a curriculum map inherently assume academic affairs at the expense of student affairs or other institutional elements?**

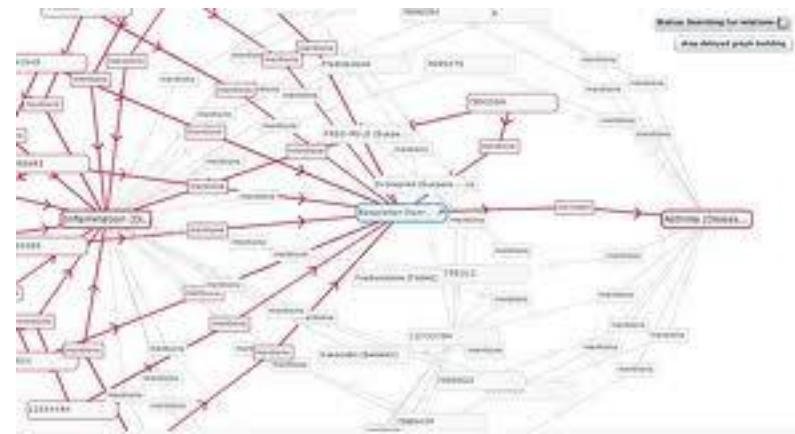
	Introductory Course	Research Methods	Advanced Content Course A	Laboratory / Practicum Course	Advanced Content Course B	Advanced Content Course C	Advanced Content Course D	Capstone Course
<b>Content</b>								
SLO 1: Disciplinary knowledge base (models and theories)	Exam Questions		Exam Questions		Exam Questions	Exam Questions	Exam Questions	Capstone Portfolio
SLO 2: Disciplinary methods		Exam Questions		Exam Questions		Exam Questions		Capstone Portfolio
SLO 3: Disciplinary applications	Exam Questions		Exam Questions		Class Project		Term Paper	Capstone Portfolio
<b>Critical Thinking</b>								
SLO 4: Analysis and use of evidence		Term Paper		Lab Paper	Class Presentation		Term Paper	Capstone Portfolio
SLO 5: Evaluation, selection, and use of sources of information	Annotated Bibliography	Term Paper		Lab Paper		Term Paper		Capstone Portfolio
<b>Communication</b>								
SLO 6: Written communication skills	Reflection Essays			Lab Paper		Term Paper	Term Paper	Capstone Portfolio
SLO 7: Oral communication skills			Class Presentation	Poster Session	Class Presentation	Class Presentation		
<b>Integrity / Values</b>								
SLO 8: Disciplinary ethical standards		Reflective Paper		IRB/ACUC Proposal	Reflective Paper			Capstone Portfolio
SLO 9: Academic integrity	Class Assignments & Exams	Exams & Term Paper	Class Exams	Class Assignments & Exams	Class Assignments & Exams	Exams & Term Paper	Exams & Term Paper	Capstone Portfolio
<b>Project Management</b>								
SLO 10: Interpersonal and team skills			Peer Review of Team Skills		Project Client Feedback		Peer Review of Team Skills	Capstone Portfolio
SLO 11: Self-regulation and metacognitive skills	Class Assignments & Exams			Class Assignments & Exams	Class Assignments & Exams	Exams & Term Paper		Capstone Portfolio

# How can this improve student learning?

- By examining our assumptions:
  - How do we think about our students?
  - Where do we think learning occurs?
  - What is our theory of change?

# Causal Statements

- The ability to make causal claims about our impact on students and their learning
- Institutional structures and support + student = enhanced learning
- Changes do not necessarily equal improvement





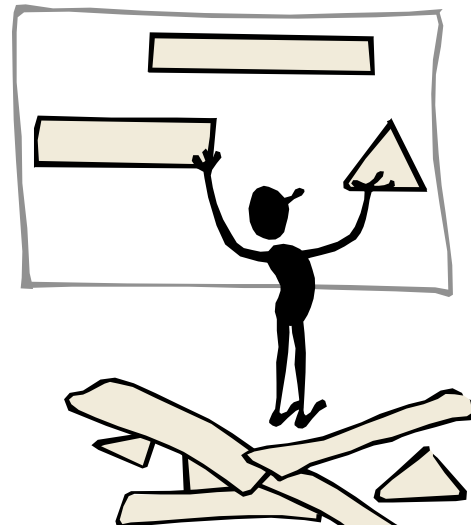
# Difficulty of Causal Statements

- Mobility of students
- Untracked changes
- Changes in courses add up to program level change
- Levels at which use occurs
- Longer than a year cycle
- Loosely coupled relationships
- Life



# Theories of Change

- Why do we think the changes we make will lead to better outcomes?
- What is assumed in the changes we select as it relates to how students understand and navigate higher education?



# For instance...

- Coverage and content
- Opportunities and support
- Intentional, coherent, aligned pathways
  
- Within each of these is the belief about a **root cause** – why students were not learning or not meeting the outcome and the mechanism by which the institution can help them succeed

# The Brian Barton Story

A faculty chair in business examined the results of program outcomes for learners who completed the program capstone course and found that on one of the outcomes, learners were performing below what he regarded as the minimum threshold. Through the curriculum maps and alignments linking learning activities in individual courses to program outcomes in the capstone, he was able to identify across the entire program which courses had the strongest alignment to the outcome in question. From there, he was able to delve deeper into individual learning activities, to combine that information with additional data including course evaluations, and from the combined data to make detailed changes in specific courses and specific learning activities or assignments within courses. By the time participants in the revised courses and learning activities completed the capstone course, there was a measurable improvement in the particular outcome in question. The faculty chair involved in the process stated, “The concept of having an outcomes-based approach and having a strong theory of alignment all the way down to individual learning activities helps facilitate the use of assessment data.”

# Reflective Questions to Guide Practice

- What are you trying to map and why?
- Who should be involved in the consensus process?
- Where does learning happen and are we capturing it?
- Are we mapping for reporting purposes or program improvement?
- What are we not seeing by applying this lens? How might we be able to capture alternate educational systems views?



# Additional Resources

- Kelley, K. A., McAuley, J. W., Wallace, L. J., & Frank, S. G. (2008). Curricular mapping: Process and product. *American Journal of Pharmaceutical Education*, 72(5), 1-7
- Plaza, C.M., Draugalsi, J.R., Slack, M.K., Skrepnek, G.H., & Sauer, K.A. (2007). [Curriculum mapping in program assessment and evaluation](#). *American Journal of Pharmaceutical Education*, 71(2), 20.
- Uchiyama, K.P., & Radin, J.L. (2009). [Curriculum mapping in higher education: A vehicle for collaboration](#). *Innovative Higher Education*, 33(4), 271-280.
- Udelhofen, S. (2005). *Keys to curriculum mapping: Strategies and tools to make it work*. Thousand Oaks, CA: Sage Publications, Inc.

# Thank You!

- Questions?
- Comments?
- Complaints?

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