
Defining, Assessing and Documenting Student Learning Outcomes at Senior Institutions

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Agenda

- Concept definitions
 - Defining student learning outcomes
 - Assessing student learning outcomes
 - Documenting student learning outcomes
 - Example of practice
 - Discussion
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Assessment Defined

- **Assessment:** "The systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development" (Ted Marchese).
 - **'Uniform' and 'unique' impacts:** uniform impact assessment explores what students learn in common; unique assessment impact explores what each student learns that is qualitatively different from each other student (Steve Ehrmann).
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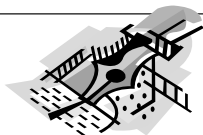
Faculty Expectations for Student Learning (Peggy Maki)

- The term used here for
 - “student learning outcomes” or
 - “student learning objectives” or
 - “expected student competencies.”
- Put simply: The really important things faculty think students should know, believe, or be able to do when they receive their degrees.

Teaching and Learning and the *Principles of Accreditation*

- Primacy of student learning as an institutional purpose infuses the *Principles of Accreditation*.
- Paradigm shift is implied: from a concentration on what faculty *teach* to what students *learn*.
- Describing what we expect students to learn in a course and program, how and where they will demonstrate learning, and how we will know what they have learned (both in common and unique to the student) is not usually a topic taught in the disciplines, and takes time to master.
- The scholarship of teaching and learning (cf. Ernest Boyer) is advancing in academia (e.g., *Journal of College Science Teaching*).

Section I: Defining Faculty Expectations for Student Learning (Student Learning Outcomes)



Why Describe Faculty Expectations for Student Learning?

- To focus on student learning as core to educational mission.
- To clarify and understand what we want to find out: if we don't know what we're looking for, odds are we won't find it.
- To emphasize collective ownership and intentionality in design and delivery of curriculum (cf. Jon Wergin's *Departments that Work*, 2003)
- To inform and motivate students.
- To involve program faculty in the process of institutional effectiveness and use evidence (not anecdotes) to improve student learning, and thus to build and sustain program excellence over time.
- To meet external standards for accountability.

Developing Program-Level Faculty Expectations for Student Learning

- Approach: Top-down or bottom-up: (Palomba and Palomba, 2001)
 - **Top Down:** As a group of scholars, decide what are the important faculty expectations for students in the program.
 - **Bottom Up:** Identify recurring course-level faculty expectations of core and capstone courses in the program, and use this list to develop overarching program-level expectations.
 - **Combo:** Combines both approaches by stating what is now and then figuring out what else is needed; useful for jump-starting the process.

Example: Course-Level vs. Program-Level Faculty Expectations for Student Learning

- **Course-Level Examples:**
 - Students will be able to analyze simple resistive circuits.
 - Students will be able to compute the transient response of first order circuits by inspection.
- **Program-Level Example:**
 - Graduates of the program will be prepared to demonstrate technical competence in analysis and design of electrical systems.

Differentiate Faculty Expectations from Operational Objectives

- Faculty Expectation:
 - Student work will demonstrate competent use of diagnostic problem-solving model.
- Program Operational Objective:
 - The program will admit 10% more students next year, with 5% higher overall SAT scores.
- Both are important; both describe different functions.

Faculty Expectations in a Tasteful Context...



Describing Expectations for Apple Pie...

- See Baker's Guide to Assessment Plan Development at: http://www.assessment.gatech.edu/eReports/apple_pie_assessment/apple.html
- What are our expectations for a great apple pie and what criteria would we use to ascertain if our expectations are met?
- What would be some good methods for us to check and see if our expectations are being met?
- What point(s) would be a good time to do so?
- What would we call success? What would it look like?

Describing Our Pie Expectations...

- What's one criterion for a good pie?
 - It's baked all the way through.
- How can you tell if it's baked?
 - Direct method: taste test
 - Indirect method: color of crust.
- When would we check this out?
 - End of baking cycle.
- What would success look like?
 - First bite melts in mouth (direct measurement).
 - Crust is golden brown color (indirect indicator).

From Apple Pie to Students: Describing Faculty Expectations

- Think in terms of end results. What do faculty think is really important for students to learn?
- How can the faculty structure a curriculum to address those expectations for learning?
- Consider ways to evaluate expectations: how will faculty know if expectations are met?
- When would evidence be collected/analyzed?
- What level of performance do faculty think meets their standards?
- How will results be shared? With whom? For what purpose?
- How will results be used?

Faculty Expectation Example: Master's in Music Composition

- **Expectation:** Composition/Theory faculty are very interested in seeing that "master's composition graduates will successfully synthesize the musical language of 20th Century composers in their work.
- **Some possible sources of evidence:** student portfolios, course portfolios which include student work
- **Possible ways to measure:** 3 faculty raters use a simple rubric designed for this purpose to rate student work; panel of judges rates student compositions in live performances.
- **When to Measure:** end of 1st year; master's performance of their works at end of 2nd year.
- **Possible Standard for Success:** successful synthesis (defined in rubric) of harmonic, rhythmic, formal and scalar materials into student's compositional vocabulary. Evidence may include student work from selected courses, culminating experiences (e.g., exam/performance, composition portfolio).
- **Possible Uses of Results:** an instructor redesigns an assignment, the faculty restructures the sequencing of courses (adds a new course), the dean allocates resources for software (a new faculty line)

Your Turn!

Develop Faculty Expectation

- Get together in small groups.
 - With your group, develop a faculty expectation related to communication skills. Use the worksheet “Defining Faculty Expectations for Student Communication – 1”
 - Consider: What dimensions of communication are important for students to be able to demonstrate?
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Suggestions: Defining and Evaluating Expectations for Student Learning

- Structure the exercise to promote discussions
 - Make the curriculum a focus of discussion
 - Refine expectation throughout process (iterative process – not perfect)
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Common Faculty Expectations in Academic Degree Programs

Students will demonstrate **professional** and **attitudinal** skills, including:

- Oral, written, and graphic communication skills;
 - Knowledge of key concepts in the discipline;
 - Critical and reflective thinking skills;
 - Knowledge of the social, cultural, and economic contexts of the discipline;
 - Ability to apply theory to professional practice;
 - Ability to use appropriate technologies;
 - Ability to work with others, especially in teams;
 - Ability to articulate an individual vision for one’s work.
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Section II: Assessing Faculty Expectations for Student Learning

- Basic approach
- Selection criteria and methods to consider
- Further steps



How to Begin: Basic Approach

- Faculty define learning expectations
- Take inventory of what faculty already do
- Faculty define measurement selection process
 - One structured approach: develop selection criteria, develop selection matrices
- Procure and/or develop instrumentation and approaches
- Pilot test and refine
- Implement
- Reflect on results, reconsider approaches as necessary, and start the next cycle.

Inventory Current Activities

- What do units/departments do already?
- What is locally done? Institution-wide?
- What internal examples of best practices can be adapted and/or adopted?
- Centralize activities where feasible for economies of scale; use everybody's input.
- Examples of good assessment inventories:
 - Sharron Ronco, Florida Atlantic University (<http://iea.fau.edu/inst/air00.pdf>)
 - Barbara Walvoord: Assessment Clear and Simple (2004)

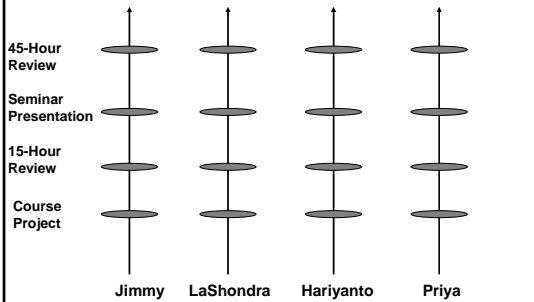
Possible Method Selection Criteria

- Relevant: Match to curriculum?
- Useful: program-level information obtained, appropriate to the degree level?
- Can it be used to provide feedback to students?
- Trustworthy data produced?
- Understandable information produced?
- Technical quality: valid and reliable?
- Development/preparation time involved?
- Costs versus benefits?
- Will students perceive it of value and cooperate?
- Fair procedure?
- Human subjects protection?

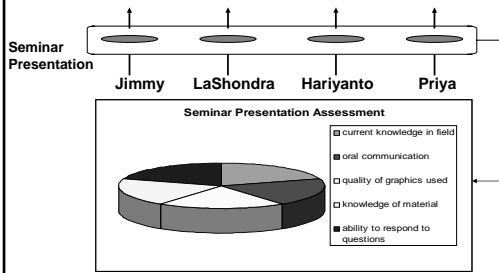
Direct Assessment Methods: Examples

- Written exams
- Oral exams
- Performance assessments
- Standardized tests
- Licensure exams
- Oral presentations
- Projects
- Demonstrations
- Case studies
- Simulations
- Portfolios
- Juried activities with outside panels

Using Student Works for Assessment



Using Student Works for Assessment



Indirect Assessment Methods: Examples

- Questionnaires
 - Mailed
 - Web
 - Telephone
 - In-class
- Interviews
- Focus groups
- Employer satisfaction studies
- Advisory board
- Job/grad school placement data

Assessment with Extant Data Sources: Examples

- Retention and transfer studies
- Length of time to degree
- Progression, graduation rates and transfer rates
- Transcript analysis: course taking patterns
 - See Clifford Adelman's work for NCES, such as [The Tool Box Revisited](#) (2006).

Matrix of Faculty Expectations to Possible Methods

Faculty Expectations	Methods		
	Term Paper	Questionnaire	Speech
Write at a scholarly level			
Adapt verbal messages to a specific audience			
Display lifelong learning skills			

Source: Palomba and Banta, 1999

Further Steps

Once we have developed or selected our instrumentation...

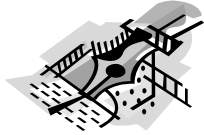
- Pilot test and refine
- Implement:
 - Define responsibility for implementation
 - Keep it simple!
 - Start now – it's iterative, not perfect!
- Reflect on results, reconsider approaches as necessary, and start the next cycle.

Your Turn! Assess Faculty Expectation on Communication

- Get together in small groups again.
- With your group, develop a list of the **assessment methods** you might use to assess the faculty expectation related to communication skills developed earlier. Use the worksheet "Defining Faculty Expectations for Student Communication – 2."
- Consider: how, where, and when to assess that faculty expectation, and how to take action on the findings.

Section III: Documenting Assessment of Faculty Expectations

- What do we document?
- At what programmatic level?
- At what depth do we document?
- Documenting assessment using a web-based system



What Do We Document and At What Level?

- For each degree program:
 - The expectations for student learning faculty consider most important, whether collective or individual
 - How these expectations are defined in practice
 - How these expectations are assessed
 - What results are gained (summary level)
 - Based on results gained, what **actions** are being taken

At What Depth Do We Document?

- Start simple and go for the low-hanging fruit.
- Keep it focused: Assess those faculty expectations that are central to the core courses in the curriculum.
- Explore higher order and unique outcomes as assessment experience is gained.
- Demonstrate that an ongoing, systematic, periodic process is in place.
- Document repeated cycles of assessment, analysis, reflection, and action.

Leveraging Information Technology for Assessment

- The sheer number of courses and programs frequently makes using IT solutions to assessment, institutional effectiveness and accreditation a necessity.
- Adopting online systems for assessment data management forces decisions and change: be aware of that and plan for it.
- Know the organizational culture and politics before introducing a systemic change – since we can never change just one thing in an organization without affecting other areas.
- Broad representation across campus is essential.
- End goal is sustainability: make it easy to use, responsive to specialized user needs, intuitive, etc.

Common Online Assessment Information Management Systems

- Developed in preparation for a regional or specialized accreditation study (OATS, WEAVE online, UAOPS, AIMS, PRISM/PEARL, Eidos).
- Developed by vendors who have responded to the need to prepare for specialized accreditation requirements, especially NCATE (TracDat 4.0, e-Lumen, LiveText, TaskStream, Tk20, etc.).
- Developed by LMS vendors response to the need to aggregate information across courses in online programs (Angel Learning Outcomes Management).

Exercise: Deciding on Most Important and Viable Features

- Work as a group of the whole
- Using worksheet as a springboard...
 - Identify decision criteria and features you'd like to see in an online assessment information management system
 - What is most important?
 - What is most viable given the decision criteria?

Examples of Decision Criteria

- Cost
- Likelihood of widespread and sustained use by faculty, staff and administrators
- Ease of use
- Tech support needs
- Development time needed prior to roll-out
- Proven success of system at similar institutions

Examples of Features to Consider

- Extent to which system supports regional and specialized accreditation
- Types and amount of data that can be included
- Annual roll-over and archiving of data
- Linkage to student database

Strategic questions to consider

- What decisions do we aim to effect, and what should we therefore measure?
- What level of assessment are we talking about? Institutional, program, course level, and/or individual student?
- Are we to integrate this application with others for reporting purposes?

More strategic questions: should the system...

- Map to institutional strategic plan and goals?
- Map to institutional budgeting and resource allocation processes?
- Map to specialized and regional accreditation criteria for assessment and educational effectiveness?
- Interact directly with an online compliance system for specialized and regional accreditation?

Tactical Questions: What do we want the system to do?

- Map assessment data to student learning outcomes? At what level – institutional, programmatic, course-level?
- Integrate with an online LMS/CMS such as Angel, and map to individual courses taught in the institution each term?
- Facilitate assessment data collection online? If so, what kinds of data? (DOING assessment online)
 - Enable faculty to conduct and record individual student assessments?
 - Facilitate recording of program-level assessment of student work by groups of faculty?
 - Online exams?
 - Electronic portfolio information?

Tactical Questions: What do we want the system to do?

- Act as an assessment data repository? What data? (TRACKING assessment data online)
 - Licensure test results?
 - Standardized tests?
 - Supervisor evaluations of co-op or internship experiences?
 - Course-level assignments and student work?
 - Midpoint and senior design project data from programs?
 - Student course evaluations?
- Track use of assessment information to spur changes in curricula over time?
- Permit aggregation and analysis of roll-up trend data over time for program review?
- Permit analysis of similar outcomes across various programs for general education?

Operational/Logistical Questions: How should the system work?

- Data entry and maintenance process
 - how will data be entered into the system?
 - how will data be organized within the system?
 - how may data and information be viewed from within the system?
 - who will maintain the data and the system?
- Annual or periodic data collection and update process
 - who will collect the data?
 - who will enter the data?
 - who will organize the data and analyze it?
 - who will report the results?
 - who will discuss the data and develop an action plan around the results?

Operational Questions: How should the system work?

- Software issues
 - From whence should the system be accessible?
- Database issues
 - Will the system be compatible with various operating systems on campus? (MAC OS, MS, Linux, etc.)
 - Will the system be compatible with various databases on campus?
- Security issues
 - Who should have access?
 - To what information should there be access?

Section IV: Defining, Assessing and Documenting Student Outcomes at SCAD

- Problem: Traditionally loosely organized curricula and judgment-based models of excellence have long been the rule in specialized educational environments such as art and design schools.
- Solution: The Savannah College of Art and Design approaches nurturing student skills and talents to the point of professional mastery through the *disaggregation, identification, and re-integration* of those elements of the curricular experience that serve to facilitate consistent student acquisition of mastery skills in their disciplines.

SCAD Curriculum Elements

- Elements of the curriculum include:
 - tightly structured templates for every course, in all curricula;
 - course, program and institutional consensus of curricular proposals and implementation, including explicit student learning outcomes;
 - reinforcement and reevaluation of global learning objectives through major specific topics; and
 - the application of consistent and ordered assessment strategies through collaborative efforts.

Direct Assessment at SCAD

- Curriculum matrices/maps in place for all programs (see example)
- Quarterly pre-post course-level assessment in general education and foundations courses
- Developmental rubrics used to assess student work at course and program level
- Assessment results collected each quarter
- Samples of student work assessed by faculty groups each year, by campus location
- Faculty evaluate results in fall; action plan put in place and documented; budget recommendations made accordingly in time for next cycle
- Cycle repeats each year

Documenting Student Learning at SCAD

- Assessment results entered into online system each quarter for each academic program, by location/method (Savannah, Atlanta, e-Learning).
- Annual assessment summary and action plan entered into online system each fall; used as basis to evaluate annual progress
- Assessment results are aggregated for trend analysis in SCAD program review system

Thank You!

- Questions and Further Discussion?
- Please complete the evaluation!
- Contact information:
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