



Office of Institutional Effectiveness

ASSESSMENT WORKBOOK
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2012

VISION

*We seek to become recognized for providing bright and curious students
a holistic learning experience that occurs both in and out of the classroom;
for being relentlessly focused on learning outcomes;
for embracing and solving today's greatest educational challenges;
and for bringing fresh and pragmatic thinking to the problems
facing communities, businesses, and governments in Indiana and beyond.*

OIE

Office of Institutional Effectiveness
August 2012
OIE No. WBK-M1-2012

2012 ASSESSMENT WORKBOOK

[Also available @ www.bsu.edu/effectiveness]

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Office of Institutional Effectiveness
Ball State University
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FOREWORD

Staff members in Ball State University's Office of Institutional Effectiveness work cooperatively with academic and student affairs departments and other campus units to facilitate numerous types of assessment projects. Among the services we provide are helping to create unit assessment plans; conducting assessment workshops, focus groups, and interviews; developing survey instruments; managing and analyzing data; providing institutional data; and providing extracts from university surveys.

Although our office conducts many university-wide assessment projects, this workbook is designed to facilitate the multiple assessment activities that are discipline-specific and carried out by individual departments, schools, and colleges. The workbook attempts to illustrate the uses and advantages of different assessment techniques and respond to frequently asked questions. It also includes lists of references that can be consulted for additional information on specific topics.

This latest edition of the Ball State University *Assessment Workbook* represents a substantial update of the 2008 and earlier editions, with additional topics and references provided. It represents current best practices across numerous institutions. Chapters 1 and 2 provide a general overview of assessment and list the basic steps in the assessment process. Chapter 3 discusses the development of program goals and objectives for learning, the basis of all assessment initiatives. The next nine chapters concentrate on specific assessment activities—choosing assessment tools; using surveys, tests, and performance-based measures; utilizing focus groups, available resources, and other assessment techniques; and reporting and using assessment results. The final two chapters discuss how to make the assessment process more manageable and how to motivate colleagues to participate in the assessment process. In keeping with the theme of a workbook, the narrative in each chapter is intended to be informative but succinct.

We hope this workbook is useful to faculty, professional staff, and administrators who are responsible for assessment activities. We welcome your comments and suggestions to increase its usefulness.

As a final point, the staff members in the Office of Institutional Effectiveness are always available to work with departments, schools, and colleges on their various assessment projects. Please call on us when you need assistance.

William E. Knight
Executive Director
Office of Institutional Effectiveness
August 2012

CHAPTER 1: BACKGROUND: TOWARD A CULTURE OF ASSESSMENT

By taking ownership of assessment and developing an internally driven core process, colleges and universities can profile their students' learning within institutional educational practices and intentions. Moreover, within this context, assessment becomes a means to examine its educational intentions on its own terms within the complex ways that humans learn and within the populations an institution serves.

(Maki, 2004, p.15)

Topics Presented in Chapter 1

- ◇ Internal and external purposes for assessment
- ◇ Good practices in assessment

Internal and External Rationales for Assessment

Ball State University's 2012-2017 strategic plan calls for the University to be "relentlessly focused on learning outcomes," and includes the goals of "provid[ing] distinctive, high-quality educational experiences," and "becom[ing] a recognized leader for educational and disciplinary innovation." With these principles in mind, Ball State's assessment program is designed to create a culture of continuous improvement. We acknowledge and embrace the following benefits of assessment, as articulated by the University of Delaware (n.d.):

- Increasing our confidence that we are putting our time and resources into activities that we value as an institution
- Increasing our confidence that we are allocating resources to areas that are producing the outcomes we value
- Gathering and using data that will enable us to make decisions that lead to improved instruction, stronger curricula, and effective and efficient policies
- Strengthening our ability to say that our graduates are well-prepared to succeed in their future endeavors
- Having ready access to data that will satisfy the requirements of accrediting agencies and funding agencies, and will inform various accountability driven conversations
- Gathering and using data that will strengthen arguments for increased funding and/or resource allocations to areas that are producing valued outcomes
- Increasing the effectiveness of our communications about the value of a Ball State education

The [U]niversity is committed to building and sustaining a campus-wide student learning outcomes assessment program in which academic units define clear, concise, and measurable student learning outcomes, identify opportunities within and outside the classroom and the curriculum for students to achieve those outcomes; apply measures to assess whether the desired outcomes are being achieved; and use the results of the assessment for decision-making that improves instruction, strengthens the curriculum, and forms the basis for policy development and resource allocations.

While we recognize assessment to be crucial to our mission and as one of our responsibilities as educators, we are also aware of increasing calls for accountability for various external audiences including federal and state government, accreditors, the media, students and their parents, and the public at large. While we believe strongly that assessment should be driven by the faculty and staff members who have responsibility for Ball State's educational programs, we also carry out assessment efforts in order to satisfy the United States Department of Education, the Indiana Commission on Higher Education, and the North Central Association Higher Learning Commission.

Good Practices in Assessment

The following principles of good practice, adapted from the Astin et al. (1992), Northern Arizona University (2006), and the University of Delaware (n.d.) provide important guidance for Ball State's assessment efforts:

- The assessment of student learning begins with educational values.
- Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.
- Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.
- Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.
- Assessment works best when it is ongoing, not episodic.
- Assessment fosters wider improvement when representatives from across the educational community are involved.
- Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.
- Assessment is more likely to lead to improvement when it is part of a larger set of conditions that promote change.
- Through assessment, educators meet responsibilities to students and to the public.
- Educational programs, in order to be successful, require full engagement of faculty and staff members in the conversations about, and the design and practice of, student learning outcomes assessment.

- Faculty and staff members determine the desired learning outcomes for students in their department/program.
- Faculty and staff members devise and implement the assessment methodologies that are most appropriate for their stated outcomes.
- Faculty and staff members maximize existing approaches: Assessments at the degree-program level should trend toward seamlessness, taking advantage of existing student projects, exams, and performances (i.e., *embedded assessments*). We caution ambitious programs to keep assessments manageable and informative.
- Academic, student affairs, and other units as appropriate are best suited to determine how to use the assessment results for internal programmatic improvements.
- The assessment process is iterative within units, is manageable within resource bases, is objective, and is meaningful to both faculty and staff members and students.
- Assessment is not an exercise, but a means of gathering and *using* information that faculty and staff members have determined to be important and integral to future decision-making about programmatic quality and capacities.

The University recognizes that units and faculty and staff members differ in their abilities to engage in student assessment, and that substantial assistance is required to fully involve them in meaningful assessment activities. The Office of Institutional Effectiveness offers a number of services designed to support and improve the efficacy of assessment throughout Ball State, including assisting units in formulating, collecting, and analyzing information about student learning; sharing assessment best practices from internal and external sources; providing leadership and support to the University Assessment Committee; and carrying out numerous institutional surveys.

CHAPTER 2: DEVELOPING AN EFFECTIVE PROGRAM ASSESSMENT PLAN

*Any undertaking benefits from some kind of plan. . . .
Assessment is no different; it will be more effective and successful if you plan your work.*
(Suskie, 2009, p.98)

Topics Presented in Chapter 2

- ◇ Basic steps of assessment

Basic Steps of Assessment

Following three decades of experience with assessment of student learning as described in Chapter 1, a consensus has emerged about best practices, including the basic steps of the assessment process. The most concise representation of this is Walvoord's (2010) "Three Basic Steps of Assessment":

- *Goals.* What do we want students to be able to do when they complete our program?
- *Information.* How well are students achieving these goals, and what factors influence their learning?
- *Action.* How can we use the information to improve student learning?

Goals are sometimes referred to as learning outcomes or learning objectives. They are the starting point of the assessment process. They must be developed by the faculty and staff members who have designed academic and co-curricular programs. As described in Chapter 3, goals may exist in a variety of areas and at a variety of levels; and there are best practices for framing them effectively. Information is the collection of data and an analysis process. There are many resources to assist faculty and staff members with this step, including Ball State's Office of Institutional Effectiveness. Several chapters of this workbook are designed to assist with this step. Action is sometimes referred to as "closing the loop." It is the most important step in the assessment process and involves making meaning of the assessment results and using them for improvement.

Maki (2004) suggests adding value to the assessment process with two additional steps beyond those suggested by Walvoord:

- *Curriculum.* Where do students have the opportunity for learning?
- *Expectations.* What is the expected level of performance?

Developing and using curriculum maps aids interpretation and use of assessment results by linking goals to courses or other educational experiences. Chapter 4 highlights the development and use of curriculum maps. Explicitly stating expectations up front as assessments are developed and comparing results with expectations also helps with interpretation and follow-up action. This step is increasingly required by accreditors, such as the North Central Association Higher Learning Commission. Chapter 11 provides faculty and staff members with strategies for deciding upon expectations.

CHAPTER 3: LEARNING GOALS

Understanding and clearly stating what your program is trying to accomplish serves as a foundation for a successful assessment plan.

(University of Central Florida, 2008, p.16)

Topics Presented in Chapter 3

- ◇ Creating learning goals
- ◇ Examples of good and not-so-good learning goals

Creating Learning Goals

Fresno State University (n.d.) provides the following overview of effective learning goals (also known as learning outcomes and learning objectives):

Learning objectives are brief, clear statements of learning outcomes of instruction that are related to and flow from the program goals. While goals express intended outcomes in broad, global language, *learning objectives use precise terms that focus on the students*, rather than the curriculum. Learning objectives should be written using active verbs, such as: *identify, explain, translate, construct, solve, illustrate, analyze, compose, compile, design*. Specific use of verbs such as *to know* or *understand* should be avoided, since they are too vague to provide needed clarity.

The University of Connecticut (n.d.) expands upon this discussion:

Outcomes

Learning outcomes are statements that describe significant and essential learning that learners have achieved, and can reliably demonstrate at the end of a course or program. Learning outcomes identify what the *learner will know and be able to do* by the end of a course or program – the essential and enduring knowledge, abilities (skills), and attitudes (values, dispositions) that constitute the integrated learning needed by a graduate of a course or program.

The learning outcomes approach to education means basing program and curriculum design, content, delivery, and assessment on an analysis of the integrated knowledge, skills, and values needed by both students and society. In this outcomes-based approach to education, the ability to demonstrate learning is the key point.

An effective set of learning outcomes statements informs and guides both the instructor and the students:

For teaching staff: It informs...

- The content of teaching.
- The teaching strategies you will use.
- The sorts of learning activities/tasks you set for your students.
- Appropriate assessment tasks.
- Course evaluation.

For students: The set of learning outcomes provides them with...

- A solid framework to guide their studies and assist them in preparing for their assessment.
- A point of articulation with graduate attributes at course and/or university (i.e., generic) level.

Learning outcome statements may be broken down into three main components:

- An **action** word that identifies the performance to be demonstrated
- A **learning statement** that specifies what learning will be demonstrated in the performance
- A broad statement of the **criterion** or standard for acceptable performance

For example:

ACTION WORD <i>(performance)</i>	LEARNING STATEMENT <i>(the learning)</i>	CRITERION <i>(the conditions of the performance demonstration)</i>
Produces	Documents	Using word processing equipment
Analyzes	Global and environmental factors	In terms of their effects on people

Examples of Goals, Objectives, and Outcomes		
Goal	Objective	How This Objective Might Be Reformulated as a Learning Outcome
(Geology) To develop knowledge, understanding, and skills related to the recognition and interpretation of igneous and metamorphic rocks.	To explain the different magma geochemistries derived from partial melting of the mantle in different tectonic regime.	Students should be able to demonstrate how magma geochemistry relates to partial melting of the mantle by contrasting the outcomes of this process in different tectonic regimes through the critical analysis of specific case studies.
(Biochemistry) To explain the biochemical basis of drug design and development.	To demonstrate the application of molecular graphics to drug design.	Students should be able to apply the principles underpinning the use of molecular graphics in the design of drugs to illustrate general and specific cases through a computer-based presentation.
(English) To introduce students to modes of satiric writing in the eighteenth century.	To familiarize students with a number of substantive 18 th century texts. Students will be trained in the close reading of language and its relation to literary form.	Students should be able to analyze the relationship between the language of satire to literary form by the close examination of a selected number of 18 th century texts in a written essay.
(Engineering) This course introduces senior engineering students to design of concrete components of structure and foundation and the integration of them into overall design structures.	The student is able to function in teams.	Functioning as a member of a team, the student will design and present a concrete structure which complies with engineering standards.

Examples of Goals, Objectives, and Outcomes (cont.)		
Goal	Objective	How This Objective Might Be Reformulated as a Learning Outcome
(Geology) Become acquainted with topographic maps and their usage.	Use topographic maps and employ these maps to interpret the physiography and history of an area.	<p>Students should be able to:</p> <ul style="list-style-type: none"> • Locate and identify features on topographic maps by latitude and longitude and township and range. • Contour a topographic map and construct a topographic profile. • Identify major landform features on topographic maps and relate them to basic geologic processes of stream, groundwater, glacial, or marine erosion and deposition. • Interpret geologic maps and geologic cross-sections.

Measurable student outcomes are specific, demonstrable characteristics – knowledge, skills, values, attitudes, interests – that will allow us to evaluate the extent to which course goals have been met.

Example Translating a Course Goal Into Measureable Student Outcomes	
Dental Health 101	
Course Goal	Measurable Student Outcomes
<p>The Student:</p> <ul style="list-style-type: none"> • Understands proper dental hygiene. 	<p>The Student can:</p> <ul style="list-style-type: none"> • <i>Identify</i> the active ingredient in toothpaste. • <i>Explain</i> why teeth should be cleaned at least twice per year. • <i>Describe</i> how poor dental hygiene can lead to poor overall health.

Example Showing a Link Between Objectives and Assessment

Refining a Goal Into Measurable Objectives

Goal: Students will be familiar with the major theories of the discipline.

Does this goal convey any information?

- Would a student know what was expected of his/her work?
- Would a colleague know the focus of your department's teaching?
- Would an employer know what your students could do?

Refining the goal into a measurable objective	Explanation of the process
Students will be familiar with <u>the major theories of the discipline.</u>	Objective = verb (active behaviors) + object (products, skills/performances, content/knowledge, attitudes/dispositions) Objective = (be familiar with) + (<u>major theories of the discipline</u>) Start with the object aspect of the objective. Suppose five major approaches (theories) to conflict resolution are: withdrawal, smoothing, forcing, compromising, and problem solving.
Students will be familiar with <i>withdrawal, smoothing, forcing, compromising, and problem solving.</i>	Specifying what the department views as <i>the major approaches (theories)</i> is an improvement in the wording of the objective.
Students will <u>be familiar with</u> withdrawal, smoothing, forcing, compromising, and problem solving.	Sharpening the verb will also make it better – what does “be familiar with” imply about a student's knowledge or skills? Objective = (<u>be familiar with</u>) + (withdrawal, smoothing, forcing, compromising, ...) <ul style="list-style-type: none"> • Avoid vague phrases: appreciate, understanding, have an awareness of, etc. • Use action verbs: generalize, produce, evaluate, etc. <p>Action oriented verbs make objectives more concrete.</p> <p>This objective might be revised into two objectives:</p> <ul style="list-style-type: none"> • Students will summarize ... • Students will choose and defend ...

Example Showing a Link Between Objectives and Assessment (cont.)

Objectives obtained through the revision of the original *Goal*:

- Students **will summarize** the five major approaches to conflict resolution: withdrawal, smoothing, forcing, compromising, and problem solving.
- Students **will choose and defend** a conflict resolution approach appropriate for a given situation.

Checklist to Review Program-Level Draft of Learning Outcome Statements*

	<i>Outcome #1</i>	<i>Outcome #2</i>	<i>Etc.</i>
Describes what students should represent, demonstrate, or produce?			
Relies on active verbs?			
Aligns with collective intentions translated into the curriculum and co-curriculum?			
Maps to curriculum, co-curriculum, and educational practices?			
Is collaboratively authored and collectively accepted?			
Incorporates or adapts professional organizations' outcome statements when they exist?			
Can be assessed quantitatively and/or qualitatively?			

*Based on *Assessing for Learning: Building a Sustainable Commitment Across the Institution* (Maki, 2004)

The University of Central Florida (2008) notes that learning outcomes should be **SMART**:

Specific

- Define learning outcomes that are *specific* to your program. Include in clear and definite terms *the expected abilities, knowledge, values, and attitudes* a student who graduates from your program is expected to have.
- Focus on *intended outcomes* that are *critical to your program*. When the data from the assessment process are known, these outcomes should create an *opportunity to make improvements* in the program that is being offered to your students.

Measurable

- The *intended outcome* should be one for which it is *feasible* to collect accurate and reliable data.
- Consider your *available resources* (e.g., staff, technology, assessment support, institutional level surveys, etc.) in determining whether the collection of data for each student learning outcome is a reasonable expectation.
- Include *more than one measurement method* that can be used to demonstrate that the students in a particular program have achieved the expected outcomes of that program.

Aggressive but Attainable

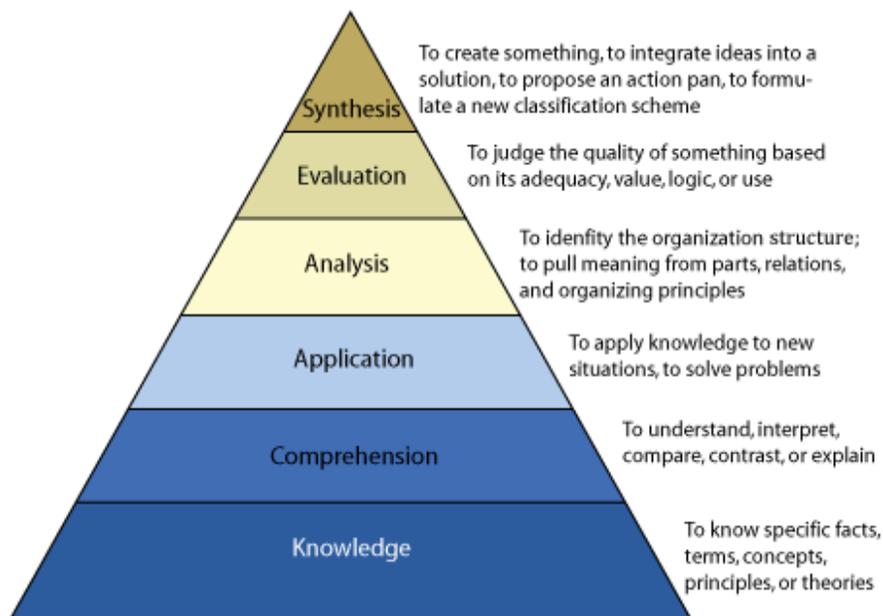
- “Don’t let the perfect divert you from what is possible.” When defining the learning outcomes and setting targets, use targets that will move you in the direction of your vision, but do not try to “become perfect” all at once.
- The following is a collection of *questions* that might help you to formulate and define aggressive but attainable outcomes for your program.
 - How have the students’ experiences in the *program contributed* to their abilities, knowledge, values, and attitudes? Ask:
 - Cognitive skills: What does the student know?
 - Performance skills: What does the student do?
 - Affective skills: What does the student care about?
 - What are the knowledge, abilities, values, and attitudes expected of graduates of the program?
 - What would the *perfect program* look like in terms of outcomes?
 - What would a *good program* look like in terms of outcomes?

Results-Oriented and Time-Bound

- When defining the outcomes, it is important to describe *where you would like to be* within a *specified time period* (e.g., 10% improvement in exam scores within 1 year, 90% satisfaction rating for next year, 10% improvement in student communication performance within 2 years). Also, determine what *standards are expected* from students in your program. For some learning outcomes, you may want 100% of graduates to achieve them. This expectation may be unrealistic for other outcomes. You may want to determine what *proportion of your students achieve a specific level* (e.g., 80% of graduates pass the written portion of the standardized test on the first attempt). If you have previously measured an outcome, it is helpful to use this as the baseline for setting a target for next year.

The University of Virginia (n.d.) provides details about levels of cognitive learning outcomes:

Learning outcomes can be classified using Bloom's Taxonomy (below), which categorizes student performance into six cognitive levels, organized from basic (*Knowledge*) to complex (*Synthesis*). You can match active verbs to each cognitive level as you write your student learning outcomes.



The University of Central Florida expands the illustration of levels of outcomes to also include affective and skill outcomes:

Affective:

Affective learning is concerned with attitudes, values, interests, appreciation and feelings toward people, ideas, places, and objects. Values refer to views and ideas that an individual believes in. Affective outcomes range from receiving (or willingness to participate in an activity) to adopting a value system that directs behavior.

Affective	Description
Accepting	Willingness to participate in an activity or to attend to a stimulus; getting and holding the attention of students
Responding	Actively participates; demonstrates interest in an object, activity, or phenomena; seeks or pursues this object, activity, or phenomena
Valuing	Value or worth attached to an object, activity, or phenomena; varies from simple acceptance to commitment
Organization	Compare and contrast and resolve conflict to build a consistent value system; emphasis on comparing and synthesizing values
Characterization by Value	Adopt a value system for a length of time that contributes to a particular “lifestyle” (i.e., directs behavior)

Skills:

The original researchers did not develop a classification method for the skills domain. Other researchers, including Harrow (1972) and Simpson (1972), provided two classification methods. The one proposed by Simpson is used in this workbook to describe the psychomotor (skills) domain. The skills domain is used to classify movement patterns and behaviors.

Skill	Description
Perception	Uses sense organs to obtain cues to guide action; ranges from awareness of stimulus to translating cue perception into action
Set	Readiness to take action; includes mental, physical and emotional set (or readiness to act)
Guided Response	Knowledge of the steps required to perform a task; includes imitation and trial-and-error
Mechanism	Perform tasks in a habitual manner, with a degree of confidence and proficiency
Complex Overt Response	Skillful performance of motor acts involving complex patterns of movement
Adaptation	Skillful performance of motor acts involving complex patterns of movement; modifies movement patterns to account for problematic or new situations
Origination	Creating new movement patterns to account for problematic or new situations; creates new tasks that incorporate learned ones

The University of Central Florida also provides the following lists of key words to use within each level of each type of learning outcomes:

Key Words: Cognitive	
Knowledge	Arrange, define, describe, duplicate, enumerate, identify, indicate, know, label, list, match, memorize, name, read, recall, recognize, record, relate, repeat, reproduce, select, state, view, underline
Comprehension	Classify, cite, convert, defend, describe, discuss, distinguish, estimate, explain, express, generalize, give examples, identify, indicate, infer, locate, paraphrase, predict, recognize, report, restate, review, rewrite, select, suggest, summarize, tell, trace, translate, understand
Application	Act, administer, apply, articulate, assess, change, chart, choose, collect, compute, construct, contribute, control, demonstrate, determine, develop, discover, dramatize, employ, establish, extend, give examples, illustrate, implement, include, inform, instruct, interpret, investigate, manipulate, operate, organize, participate, practice, predict, prepare, preserve, produce, project, provide, relate, report, schedule, shop, show, sketch, solve, teach, transfer, translate, use, utilize, write
Analysis	Analyze, appraise, break down, calculate, categorize, compare, contrast, correlate, criticize, debate, determine, diagram, differentiate, discriminate, distinguish, examine, experiment, focus, identify, illustrate, infer, inspect, inventory, limit, outline, point out, prioritize, question, recognize, relate, select, separate, subdivide, solve, test
Synthesis	Adapt, anticipate, arrange, assemble, categorize, collaborate, collect, combine, communicate, compile, compose, construct, create, design, devise, develop, explain, express, facilitate, formulate, generate, incorporate, individualize, initiate, integrate, intervene, manage, model, modify, negotiate, organize, perform, plan, prepare, produce, propose, rearrange, reconstruct, reinforce, relate, reorganize, revise, set up, structure, substitute, validate, write
Evaluation	Appraise, argue, assess, attach, choose, compare, conclude, contrast, criticize, critique, decide, defend, enumerate, estimate, evaluate, grade, interpret, judge, justify, measure, predict, rate, reframe, revise, score, select, support, value

Key Words: Affective	
Accepting	Ask, choose, describe, follow, give, hold, identify, locate, name, point to, reply, select, use
Responding	Answer, assist, compile, conform, discuss, greet, help, label, perform, practice, present, read, recite, report, select, tell, write
Valuing	Complete, describe, differentiate, explain, follow, form, initiate, invite, join, justify, propose, read report, select, share, study, work
Organization	Adhere, alter, arrange, combine, compare complete, defend, explain, generalize, identify, integrate, modify, order, organize, prepare, relate, synthesize
Characterization by Value	Act, discriminate, display, influence, listen, modify, perform, practice, propose, qualify, question, revise, serve, solve, use, verify
Key Words: Skills	
Perception	Choose, describe, detect, differentiate, distinguish, identify, isolate, relate, select, separate
Set	Begin, display, explain, move, proceed, react, respond, show, start, volunteer
Guided Response	Assemble, build, calibrate, construct, dismantle, display, dissect, fasten, fix, grind, heat, manipulate, measure, mend, mix, organize, sketch, work
Mechanism	Assemble, build, calibrate, construct, dismantle, display, dissect, fasten, fix, grind, heat, manipulate, measure, mend, mix, organize, sketch, work
Complex Overt Response	Assemble, build, calibrate, construct, dismantle, display, dissect, fasten, fix, grind, heat, manipulate, measure, mend, mix, organize, sketch, work
Adaptation	Adapt, alter, change, rearrange, reorganize, revise, vary
Origination	Arrange, combine, compose, construct, design, originate

Examples of Good and Not-So-Good Learning Goals

The University of Central Florida also provides the following examples of poor, better, and best outcome statements:

Example 1:

Poor: Students completing the undergraduate program in Hypothetical Engineering will have knowledge of engineering principles.

This is a weak statement because it does not specify which engineering principles a graduate from the program should know. Also, it does not define what is meant by “have knowledge.” Are they supposed to be able to simply define the principles, or be able to apply the principles, etc.?

Better: Graduates will be competent in the principles of engineering design, formulating requirements and constraints, following an open-ended decision process involving tradeoffs, and completing a design addressing a hypothetical engineering need.

This statement is better because it lists the specific areas in hypothetical engineering in which a student must be competent. However, it is still vague, as the level of competency is not stated. Are they expected to understand these concepts and how they will apply them?

Best: Graduates will be able to apply and demonstrate the principles of engineering design, formulating requirements and constraints, following an open-ended decision process involving tradeoffs, and completing a design addressing a hypothetical engineering need.

This is a much better learning outcome statement for two reasons. First, the specific requirements are listed; and second, the level of competency is also stated. A student must be able to apply and to demonstrate the listed engineering principles.

Example 2:

Poor: Ph.D. students of Hypothetical Engineering will be successful in their research.

This statement is very vague and provides no indication of what “successful” means. It does not specify what type or quality of research skills is expected from the student.

Better: Ph.D. students of Hypothetical Engineering will be successful in conducting high-quality research.

Although the quality of research expected from the doctoral students is identified, there is no indication of specific research capabilities that a student should possess. Therefore, even though it provides more detail than the previous statement, it is still lacking.

Best: Ph.D. graduates of Hypothetical Engineering will be able to conduct high-quality, doctoral research as evidenced by their results of experiments and projects, dissertations, publications, and technical presentations.

What is expected of a doctoral student in this program is clearly defined and stated, making this an effective learning outcome statement. The quality of research expected as well as the specific research requirements are articulated in the outcome statement.

Example 3:

Poor: Students should know the historically important systems of psychology.

This is poor because it says neither what systems nor what information about each system students should know. Are they supposed to know everything about them or just names? Should students be able to recognize the names, recite the central ideas, or criticize the assumptions?

Better: Students should understand the psychoanalytic, Gestalt, behaviorist, humanistic, and cognitive approaches to psychology.

This is better because it says what theories students should know, but it still does not detail exactly what they should know about each theory, or how deeply they should understand whatever it is they should understand.

Best: Students should be able to recognize and articulate the foundational assumptions, central ideas, and dominant criticisms of the psychoanalytic, Gestalt, behaviorist, humanistic, and cognitive approaches to psychology.

This is the clearest and most specific statement of the three examples. It provides even beginning students an understandable and very specific target to aim for. It provides faculty with a reasonable standard against which they can compare actual student performance.

Example 4:

Poor: Students should be able to independently design and carry out research.

The problem with this is that the statement does not specify the type or quality of research to be done.

Better: Students should be able to independently design and carry out experimental and correlational research.

This specifies the type of research, but not the quality students must achieve. If a student independently does any research that is experimental or correlational, it would be viewed as acceptable.

Best: Students should be able to independently design and carry out experimental and correlational research that yields valid results.

Here, the standard for students to aim for is clear and specific enough to help faculty agree about what students are expected to do. Therefore, they should be able to agree reasonably well about whether students have or have not achieved the objective. Even introductory students can understand the outcome statement, even if they don't know exactly what experimental and correlational research methods are.

Northern Arizona University (2006) provides the following examples of learning goals from its academic programs prefaced with, "Students will be able to..."

- Articulate the role of communication in a diverse and democratic society.
- Develop detailed lesson plans for teaching secondary or junior college levels.
- Demonstrate an introductory knowledge of works of art, history, music, philosophy, literature, and religion as expressions of the Humanities.
- Present physical and human geography content knowledge, description, analyses, and syntheses through the use of oral presentations.
- Develop the skills necessary to collect, analyze, interpret, and present data.
- Carry out important laboratory procedures in chemistry.
- Think critically and globally, being able to analyze problems and develop solutions with little direction from outside sources.
- Evaluate the quality of reported Justice research.
- Apply the scientific method to conduct and interpret research inquiries using a combination of qualitative and quantitative research methods.
- Apply the discussion to policy and real-world applications.
- Demonstrate the knowledge of mental structures and processes that underlie individual human experience and behavior.
- Organize and orally deliver content based on audience and purpose.
- Communicate effectively with employees and guests in hospitality industry settings.

Walvoord (2010, p. 14) provides examples of poor learning goals:

Goals must be in the "students will be able to..." format. Here are some goal statements that are *not acceptable* for this purpose (though they may be perfectly fine statements for other purposes):

- The curriculum emphasizes X,Y,Z.
- The institution values X,Y,Z.
- The institution prepares its students for X,Y,Z.
- Students are exposed to X, Y,Z.
- Students participate in X,Y,Z.

CHAPTER 4: CURRICULUM MAPS

*Curriculum mapping is a method to align instruction with desired goals and program outcomes.
It can also be used to explore what is taught and how.
The map or matrix Documents what is taught and when,
Reveals gaps in the curriculum, [and]
Helps design an assessment plan.
(University of Hawai'i, n.d., n.p.)*

Topics Presented in Chapter 4

- ◇ Curriculum maps

Curriculum Maps

Curriculum maps or curriculum matrices are very effective tools for relating learning goals to classes, co-curricular programs, and other educational opportunities. Three curriculum maps are shown below from the University of Hawai'i (n.d.). The first is a simple example for an undergraduate program. The second is a more complex example for an undergraduate program with multiple tracks. The third is for a doctoral program.

Excerpt From a Hypothetical Biology Program Curriculum Matrix				
Key				
I=Introduced				
R=Reinforced and opportunity to practice				
M=Mastery at the senior or exit level				
A=Assessment evidence collected				
Courses	Intended Student Learning Outcomes			
	Apply the scientific method	Develop laboratory techniques	Diagram and explain major cellular processes	Awareness of careers and job opportunities in biological sciences
BIOL 101	I	I		I
BIOL 202	R	R	I	
BIOL 303	R	M, A	R	
BIOL 404	M, A		M, A	R
Other: Exit Interview				A

Example From an Undergraduate Program With Multiple Tracks

Key
SLO=Student Learning Outcome
I=Introduced
R=Reinforced/Practiced
A=Assessed

Track 1	Track 2	Track 3	SLO 1	SLO 2	SLO 3	SLO 4	SLO 5
Core: CRS 255 (3 credits)			I	I	I	I	I
Core: Three theory courses (9 credits)				I	I		
Core: Writing (3 credits)			I			I	I
Core: Design (3 credits)				I		I	
CRS 310, 312, 350				R		R	
CRS 325			R	R			
CRS 355				R	R		
CRS 405						R	R
CRS 410					R		
CRS 450				R	R		
CRS 455			R				R
CRS 495			A	A	A	A	A
	CRS 215, 315				R	R	R
	CRS 316			R		R	
	CRS 318		R		R	R	
	CRS 320, 415			R		R	
	CRS 420				R	R	R
	CRS 495		A	A	A	A	A
		CRS 352	R				R
		CRS 360		R	R		
		CRS 382	R				
		CRS 385				R	R
		CRS 460	R				R
		CRS 480	R	R		R	
		CRS 485	R	R			
		CRS 495	A	A	A	A	A

Example From a Ph.D. Program

Key
SLO=Student Learning Outcome

Ph.D. Requirements	SLO 1	SLO 2	SLO 3	SLO 4
Course Requirements	X			
Qualifying Exam		X	X	
Comprehensive Exam	X	X		X
Dissertation	X	X	X	
Final Exam	X	X	X	
Seminar Requirements		X		X

CHAPTER 5: COLLECTING ASSESSMENT INFORMATION

There is no more critical juncture in implementing a successful assessment of the major than the moment of methods selection.

(Johnson, McCormick, Prus, & Rogers; 1993; p.153)

Topics Presented in Chapter 5

- ◇ Direct and indirect measures of student learning
- ◇ Description of direct assessment methods
- ◇ Description of indirect assessment methods
- ◇ Using existing student work
- ◇ Rubrics

Direct and Indirect Measures of Student Learning

It is important to distinguish between direct and indirect methods of collecting assessment information since units must use at least one direct measure. Suskie (2009) explains that direct methods provide demonstrations of what students know and can do that can be evaluated objectively.

Examples of Direct Measures of Student Learning

- Course-embedded assessments
- Ratings of student skills by their field experience supervisors
- Scores and pass rates on appropriate licensure or certification exams
- Capstone experiences, such as research projects, presentations, theses, dissertations, oral defenses, exhibitions, performances, scored using a rubric
- Other written work, performances, and presentations, scored using a rubric
- Portfolios of student work
- Scores on locally designed multiple-choice or essay tests such as final examinations in key courses, qualifying examinations, and comprehensive examinations
- Score gains (referred to as *value added*) between entry and exit on published or local tests or writing samples
- Observations of student behavior (such as presentations and group discussions), undertaken systematically and with notes recorded systematically
- Summaries and assessment of electronic class discussion threads
- Think-alouds, which ask students to think aloud as they work on a problem or assignment

- Classroom response systems (*clickers*) that allow students in their classroom seats to answer questions posed by the instructor instantly and provide an immediate picture of student understanding
- Feedback from computer-simulated tasks such as information on patterns of action, decisions, and branches
- Student reflections on their values, attitudes, and beliefs, if developing those are intended outcomes of the program

Indirect measures, on the other hand, are often used to collect information from students on what they believe they learned and how and why they learned it. (Suskie)

Examples of Indirect Measures of Student Learning

- Course grades and grade distributions
- Assignment grades, if not accompanied by a rubric or scoring criteria
- Retention and graduation rates
- Admission rates into graduate programs and graduation rates from those programs
- Scores on tests required for further study (such as the GRE) that evaluate skills learned over a lifetime
- Quality and reputation of graduate programs into which alumni are accepted
- Placement rates of graduates into appropriate career positions and starting salaries
- Alumni perceptions of their career responsibilities and satisfaction
- Student feedback of their knowledge and skills, and reflections on what they have learned over the course of their program
- Questions on end-of-course student evaluation forms that ask about the course rather than the instructor
- Student, alumni, and employer satisfaction with learning collected through surveys, exit interviews, or focus groups
- Student participation rates in faculty research, publications, and conference publications
- Honors, awards, and scholarships earned by students and alumni

The University of Virginia (n.d.) notes that:

Direct and indirect evidence can complement each other and when used in tandem can become more than the sum of the two. Indirect evidence may yield insights into students' experiences, ideas for assessment, or information that helps to interpret assessment results or guide application of results. Direct evidence can be brought to bear to test the validity of students' opinions or self-assessments. Student learning is sufficiently complex that multiple approaches may be needed.

The University of Central Florida (2008) provides the chart below that highlights use of both direct and indirect methods for assessment of several learning outcomes:

Use of Direct and Indirect Methods for Assessment of Learning Outcomes				
Outcomes	Graduating Senior Survey	Capstone Course	Portfolio	Focus Group
Satisfaction with advising	Direct			Indirect
Acquiring necessary skills and knowledge		Direct	Direct	Indirect
Proficiency in written communication skills		Direct	Direct	Indirect

Description of Direct Assessment Methods

The University of Central Florida also provides the following descriptions of assessment methods:

Capstone Course Assignments or Projects

Capstone course assignments or projects can be useful tools for program-level assessment. The assessment of important program learning outcomes can be integrated into a capstone course or project. Assessments structured into the capstone experience can include one or more of the following: exams, integrative papers or projects, research projects, reflective essays, oral reports, surveys, and focus groups. Capstone courses or projects are typically discipline-based and may be designated as a *senior seminar* or an *assessment course*. Graduates from a program demonstrate their competence in several areas and their ability to synthesize learning in the major with a product or performance. Projects are generally judged by a panel using pre-specified scoring rubrics for the purpose of identifying where to improve the program.

Example: A panel of faculty members acts as evaluators of performances by music students, theatre students, etc., using a rubric that focuses on the important performance criteria and the quality of each. This method of assessment provides the student a chance to demonstrate the ability of absorbing and integrating their experiences and knowledge.

Advantages

- When capstone courses or projects are required, they can provide an ideal data collection opportunity because seniors are accessible.
- Assessments can provide an opportunity to motivate students through the curriculum. Also they can provide quality data that permit meaningful reflection on the program.
- Seniors are well into the curriculum and can reflect on their learning experience and the curriculum.
- These assessment methods provide seniors with an opportunity to provide meaningful feedback when they believe that their opinions are respected and valued.

- Students get feedback on their accomplishments, and student responsibility is encouraged.
- They can be used for both student evaluation (assess seniors' overall ability and knowledge gained from the program) and program evaluation (annual, continuous evaluation of curriculum from student feedback).
- They support program coherence.
- They provide an opportunity to create local assessment instruments that can be used in conjunction with other methods, such as surveys and standardized tests.
- Many faculty members are engaged in planning the topics and the design of the capstone experience.
- This assessment allows flexible course content (i.e., adaptable to different courses).

Disadvantages

- Capstone surveys could yield invalid or misleading feedback, particularly when responses are not anonymous.
- Student performance may be impaired due to “high stakes” of the project.
- A faculty member may develop the idea that the capstone course or project should only involve him or her.
- Successfully completing the capstone course may be a requirement for graduation which may generate some anxiety for both faculty and students.

Considerations

- Ensure that the course assignments or projects accurately represent the major or program requirements.
- Use checkpoints to prevent difficulties, especially towards the end, which may affect a student's graduation.
- Maintain the curriculum and evaluation of assignments across all sections.
- Ensure that students understand and value the importance of the capstone experience and take it seriously.
- Secure administrative support before implementing a capstone experience since there are usually high costs associated with it because of the small class size required to maximize the faculty-student interaction.
- Design capstone course or project to assess curriculum goals and outcomes.

Case Studies, Simulations, and Hypothetical Situations

A case study is a focused, systematic examination of one instance of a phenomenon such as an event, program, process, or person. Typically, case studies involve collection of qualitative and quantitative data such as observations, surveys, and interviews for an in-depth study of the phenomenon. Students can conduct case studies and/or respond to hypothetical situations.

Advantages

- Can be used to assess student work of both a quantitative and qualitative nature
- Are useful when a student learning outcome is to comprehensively study and understand a phenomenon of particular interest to the field
- Provide an opportunity for students to apply learned skills in context

Disadvantages

- Tend to be expensive, labor-intensive, and time-consuming, which can be prohibitive within a course

Considerations

- Single or multiple cases (collective case study) may be investigated.
- Different approaches may be used such as a highly structured approach or an unstructured process.

Content and Embedded Assessment Approaches

Course-Embedded Questions and Assignments

Course-embedded questions are predetermined questions that measure student learning in specific areas and can be used to assess students' knowledge, skills, behavior, and attitudes within a scheduled test. The test is typically a locally developed test. Often instructors of a particular course use the same questions within their unique course tests at a particular point in the course (e.g., midterm or final). Growth in discipline-specific knowledge, skills, or attitudes may be gauged using the same set of embedded questions in tests for different courses throughout the curriculum.

Portfolio Assignments

A portfolio is a collection of samples of student work. The contents can vary widely, from a collection of photographs, to written assignments, to a collection of computer programs. Sometimes an electronic portfolio is used to facilitate storage and access of the samples of student work. A rubric may be used to evaluate a collection of students' work (e.g., writing, homework, etc.) over a period of time. This method of assessment can provide longitudinal data to gauge growth of particular skills or understandings, as well as an opportunity for student reflection. Typically, each assignment included in a portfolio has been reviewed and graded. A committee or a designated group of faculty members may review portfolios in a program for the purpose of identifying where improvements in the program are needed.

Assessment of Papers, Projects With Standard Scoring Rubrics

A rubric is an assessment tool that can be used to specify scoring criteria for a paper, project, performance, or other method of assessment. Usually all of the key elements of an assignment and their weighting on the total score are identified. A rubric is most effective when it is shared with students prior to the start of an assessment assignment. For more information on developing rubrics, see <http://rubistar.4teachers.org/index.php>.

Research Paper

This is an assessment method which can be used to evaluate students' abilities to analyze, synthesize, and/or evaluate information that has been taught. A scoring rubric makes evaluation criteria clear when assessing research papers. On the program assessment level it could be part of a capstone project or a tool used in the senior year to determine if students have achieved programmatic learning outcomes.

Essays

Essays may be designed to measure specific learning outcomes (e.g., writing skills, appreciation for art, appreciation of diversity, etc.). These essays are scored using rubrics established by a panel of faculty. The rubrics may be reviewed for the purpose of identifying elements needing more emphasis in the academic program.

Direct Observation by Instructor, Expert Evaluators

A panel of individuals or an expert (e.g., supervisor) can score student performance in practice (e.g., music, communications, clinical). The panel may include members of the faculty, advisory board members, experts in the field, etc. Scoring rubrics are often used to improve inter-rater reliability.

Direct Observation by Peer

In-class exercises can be assessed by peers or peer panels using scoring rubrics. This provides a first-hand familiarity of criteria on the actual rubrics that will be used to assess future work. Students can use rubrics to assess examples of work not produced by classmates (e.g., use of a rubric to assess a videotaped speech for specific elements of speech).

Examinations and Tests

Standardized Examinations and Tests

National Test

Exams available nationally with standardized scores and sub-scores can be used to determine where to improve the program

Examples: Educational Testing Service (ETS) Field Exams, Psychology Area Concentration Achievement Test (PACAT), The Chauncey Group DANTE (Statistics Exam)

State Test

Exams available within the State of Florida with standardized scores and sub-scores that can be used to determine where to improve the program

Examples: Florida Certification Exam in School Psychology, Florida Educational Leadership Exam, Florida Teacher Certification Exam

Local Examinations and Tests

Local Tests

Exams are designed by members of an academic program or administrative program to measure student achievement of specific learning outcomes. The assessment purpose of these tests may be to identify where improvement is needed within the academic or administrative program.

Pre-Post Test

These are a type of locally developed test administered before and after a specified learning experience to measure students' level of knowledge, skills, behaviors, and attitudes. (The learning experience can be a program, course, or unit.) Post-test scores are compared to pre-test scores to determine if the students have learned specific information or concepts.

Certification and Licensure Exam

Certain disciplines (especially in health related disciplines) require that students pass specified certifications and licensure exams. Students' performance on these exams and their sub-scores, when available, are a source of data that can be used to assess student learning.

Description of Indirect Assessment Methods

Surveys

Institutional Level

This category includes locally and nationally developed surveys that focus on evaluating satisfaction with academic programs and service experience, perceived learning outcomes, plans for further education and employment, further education and/or employment placement, and plans of undergraduate and graduating undergraduate and graduate students.

Advantages

- Surveys can be an important tool in understanding student's academic needs and their perception of their educational experience. Additionally, surveys can be used to determine students' satisfaction with the services offered at the university as well as program-specific services such as advising, etc.

Disadvantages

- Surveys are used to gather data regarding the perceptions of individuals about personal experiences. In most instances, this method does not provide direct evidence of knowledge, skills, and abilities. When this method of assessment is implemented, a direct measurement approach should be used as well.

Considerations

- Careful planning for developing and administering institutional level surveys is critical for success. All stakeholders should be included.
- Institutional level surveys have budget implications that should be carefully considered.

Other Indirect Assessment Methods

Focus Group

Individuals who are users of the program or who benefit from the academic preparation made possible as a result of completing the program (e.g., employers, alumni, faculty, parents, etc.) can provide important qualitative data that can be used to identify strengths and weaknesses within the program.

Advisory Committee

Individuals who are experts in the field can assess student preparedness and curriculum content. This method of assessment provides a current and relevant level of analysis which is beneficial to the development of the curriculum as well as the assessment of students' knowledge, skills, and attitudes.

Structured Interview

One-on-one structured interviews with students, faculty, employers, and alumni conducted by a trained interviewer can provide useful information. This information can be used to identify strengths and weaknesses within the program.

Student Activity and Study Log

A log that reflects the amount of time a student spends studying or involved in specific activities can provide important data that can be used to identify opportunities for improvement. This can be managed electronically in a spreadsheet by individuals and combined into a group for assessment purposes.

Institutional Data

Institutional level data such as retention rates, graduation rates, demographics, time-to-graduation, and enrollment in graduate level programs by former graduates can provide useful information regarding the strengths and weaknesses of a program.

Using Existing Student Work

Walvoord (2010) is a strong proponent of using samples of existing student work along with rubrics for assessment.

Advantages

- Information is already available.
- There are no student motivation problems, since students must complete the work for a grade.
- There is no direct cost.
- It reflects what faculty members actually teach, not what's included on standardized tests, so faculty members are more motivated.

Disadvantages

- Evidence is not comparable across institutions.
- Everyone evaluates differently, so common standards or rubrics and training are needed.
- Information is in multiple parts and multiple formats, so it needs to be collected in ways that permit easy access.
- There is quite a bit of work, especially at the beginning.

Rubrics

A rubric is a scoring tool that lays out the specific expectations for an assignment. Rubrics divide an assignment into its component parts and provide a detailed description of what constitutes acceptable or unacceptable levels of performance for each of those parts. Rubrics are composed of four basic parts (University of Connecticut, n.d.):

- A task description (the assignment)
- A scale of some sort (levels of achievement, possibly in the form of grades) (Scales typically range from 3 to 5 levels.)
- The dimensions of the assignment (a breakdown of the skills/knowledge involved in the assignment)
- Descriptions of what constitutes each level of performance (specific feedback)

The University of Connecticut lists the following benefits of using rubrics.

- Rubrics provide timely feedback – grading can be done more quickly.
Since students often make similar mistakes on assignments, incorporating predictable notes into the *descriptions of dimensions* portion of a rubric can simplify grading into circling or checking off all comments that apply to each specific student.
- Rubrics prepare students to use detailed feedback.
In the rubric, the highest level descriptions of the dimensions are the highest level of achievement possible; whereas the remaining levels, circled or checked off, are typed versions of the notes/comments an instructor regularly writes on student work explaining how and where the student failed to meet that highest level. Thus, in using a rubric the student obtains details on how and where the assignment did or did not achieve its goal, and even suggestions (in the form of the higher level descriptions) as to how it might have been done better.
- Rubrics encourage critical thinking.
Because of the rubric format, students may notice for themselves the patterns of recurring problems or ongoing improvement in their work.
- Rubrics facilitate communication with others.
TAs, counselors/tutors, colleagues, etc. can benefit from the information contained in the rubric (i.e., provides information to help all involved in a student's learning process).
- Rubrics help faculty refine their teaching skills.
Rubrics showing a student's continuing improvement or weaknesses over time, or rubrics showing student development over time, can provide a clearer view of teaching blind spots, omissions, and strengths.
- Rubrics help level the playing field.
To aid first-generation or non-native speakers of English, rubrics can act as a translation device to help students understand what teachers are talking about.

Sample of a Rubric for a Slide Presentation on Findings From Research Sources (Suskie)				
	(5) Well done	(4-3) Satisfactory	(2-1) Needs improvement	(0) Incomplete
Organization	Clearly, concisely written. Logical, intuitive progression of ideas and supporting information. Clear and direct cues to all information.	Logical progression of ideas and supporting information. Most cues to information are clear and direct.	Vague in conveying viewpoint and purpose. Some logical progression of ideas and supporting information but cues are confusing or flawed.	Lacks a clear point of view and logical sequence of information. Cues to information are not evident.
Introduction	Presents overall topic. Draws in audience with compelling questions or by relating audience's interests or goals.	Clear, coherent, and related to topic.	Some structure but does not create a sense of what follows. May be overly detailed or incomplete. Somewhat appealing.	Does not orient audience to what will follow.

The University of Virginia offers the following guidelines on developing rubrics:

- Clearly define the assignment including the topic, the process that students will work through, and the product they are expected to produce.
- Brainstorm a list of what you expect to see in the student work that demonstrates the particular learning outcome(s) you are assessing.
- Keep the list manageable (3-8 items) and focus on the most important abilities, knowledge, or attitudes expected.
- Edit the list so that each component is specific and concrete (for instance, what do you mean by coherence), use action verbs when possible and descriptive, meaningful adjectives (e.g., not *adequate* or *appropriate* but *correctly* or *carefully*).
- Establish clear and detailed standards for performance for each component. Avoid relying on comparative language when distinguishing among performance levels. For instance, do not define the highest level as *thorough* and the medium level as *less thorough*. Find descriptors that are unique to each level.
- Develop a scoring scale.
- Test the rubric with more than one rater by scoring a small sample of student work. Are your expectations too high or too low? Are some items difficult to rate and in need of revision?

And the University of Virginia offers the following advice on using rubrics:

- Evaluators should meet together for a training/norming session.
- A sample of student work should be examined and scored.
- More than one faculty member should score the student work. Check to see if raters are applying the standards consistently.
- If two faculty members disagree significantly (e.g., more than 1 point on a 4-point scale), a third person should score the work.
- If frequent disagreements arise about a particular item, the item may need to be refined or removed.

A number of rubric libraries are available on institutional web sites. Some of these include:

California State University Fresno <http://www.csufresno.edu/oie/assessment/rubric.shtm>

University of Delaware <http://assessment.udel.edu/resources/rubrics.html>

University of Virginia <http://www.web.virginia.edu/iaas/assess/tools/rubrics.shtm>

CHAPTER 6: USING SURVEYS

This chapter provides suggestions for designing and using surveys for assessment purposes. Included are guidelines for constructing effective surveys as well as suggestions for how different types of surveys can meet the various assessment needs of a department.

Topics Presented in Chapter 6

- ◇ Definitions (survey, response rate, and response bias)
- ◇ Appropriate use of surveys
- ◇ Advantages and disadvantages of surveys
- ◇ Types of surveys and survey questions
- ◇ Planning surveys
- ◇ Constructing survey items
- ◇ Analyzing surveys
- ◇ Frequently asked questions

Definitions (Survey, Response Rate, and Response Bias)

A **survey** is a list of pre-determined questions created to gather responses to specific questions from a range of people. Information is usually gathered from one person at a time, but the format can vary (e.g., telephone, paper, or web). Surveys can be used as a sole source of data or in conjunction with institutional data or other information. (Dillman, 2000; Suskie, 1992)

The **response rate** refers to the number of people who participated in the survey. The response rate can affect the reliability of the survey. **Response bias** occurs when respondents to a survey are different from those who did not respond. This can affect the validity of the survey.

Appropriate Use of Surveys

Surveys are used to:

- Explore attitudes, opinions, values, experiences, expectations, and needs.
- Gather information from and about large populations.
- Make comparisons among subgroups of the population.
- Compare results from year to year.
- Gather data for statistical projections.
- Gather statistically representative data.

Surveys should not be used:

- For audiences that are uncomfortable with numbers and statistics.
- For when there are small numbers of participants.
- Without a clear understanding of the issues.
- When investigating issues of a sensitive or intrusive nature.

Advantages and Disadvantages of Surveys

Advantages

- Surveys can gather information from a large number of people.
- The responses to a well-designed survey with a high response rate can be generalized to a larger population.
- Survey data usually allow for statistical analysis that examines relationships among variables or groups of variables.

Disadvantages

- Surveys can be expensive, especially paper surveys that require printing, postage, and processing.
- Important issues can be overlooked on surveys when the questions and responses are predetermined.
- The quality of survey data is strongly dependent on the survey design.
- Response rates and response bias are difficult to control.

Types of Surveys and Survey Questions

Types of Surveys

The *paper survey* is being used less frequently due to the prevalence of web-based surveys. Respondents usually mark their responses directly onto a printed paper or scan form. The assessment planning team must consider survey printing costs, how the survey will be distributed and collected, and how the data will be processed and analyzed.

The *web or on-line survey* is commonly used. Planning a web survey requires computer expertise to ensure that the form and collection work properly. An accurate list of email accounts is imperative, since participants are usually invited to complete this survey via email.

Types of Survey Questions

Open-ended questions contain a blank area where participants give their response. There are no pre-set categories or limit in choices, although the length of the answer may be controlled. **Closed questions** give a set of response choices, usually on a Likert type scale, such as 1-Strongly Agree, 2-Agree, 3-Undecided, 4-Disagree, and 5-Strongly Disagree. Responses can also be alternative choices such as when participants are asked to indicate their class level (freshman, sophomore, junior, senior, or graduate student).

General guidelines for writing survey questions are included below. However, assessment teams would be wise to consider securing help from experts, because writing good survey questions can be challenging.

Planning Surveys

The assessment team must decide if the survey will be **anonymous**. Anonymous surveys protect respondent privacy, thus encouraging more candid responses and higher response rates. However, anonymous surveys do not allow for matching survey responses to institutional data, making it necessary to request information such as sex, major, and class level. These surveys also do not allow for tracking of respondents for second mailings or longitudinal projects.

Who will be asked to participate in the survey? Depending on the size of the group and the purpose of the assessment, the team must choose a **sample**, based on the goals and objectives being assessed. The survey would target graduating seniors, for example, if an objective includes determining opinions of graduating seniors.

A final consideration during planning stages is whether to use **incentives**. Incentives can be small items such as bookmarks, coupons, or extra credit given to all participants. They can be larger prizes (cash, free books, or gift certificates) given to a randomly selected few through a drawing.

Constructing Survey Items

- Surveys should include wording that is simple, clear, non-ambiguous, direct, concrete, and uniformly understood.
- Survey items should:
 - Be stated in a neutral manner.
 - Generate a variety of responses.
 - Be simple sentences. (Compound sentences and multiple phrases can be ambiguous.)
 - Consist of only one question. (Beware of double-barreled questions.)
- Survey items should not:
 - Include universals (e.g., all, always, none, and never), limiters (e.g., only, just, merely), double negatives, abbreviations, or unconventional phrases.
 - Be too intrusive or personal.

Analyzing Surveys

Closed questions are usually analyzed with statistical procedures. Simple *frequencies* of responses are adequate for many assessment projects. (Frequencies show the number or percentage of respondents who indicated each response choice.) *Measures of central tendency and distribution* are useful for variables that have a continuous scale, such as grade point average. (Examples are maximum, mean, median, minimum, mode, standard deviation, variance, and skewness measures.)

Open-ended questions can be categorized, grouped, and summarized. Categories should be developed using actual responses that become variables to be used, similar to closed-ended items. Groups of responses can be made on any variable according to major, class level, etc. Summarizing comments is useful when the number of comments is large or when a particular audience is not likely to read the entire set of comments.

Frequently Asked Questions

What affects the survey response rate?

The *length* of the survey is one of the most crucial factors. The longer or more complicated a survey, the less likely participants are to complete it. *Appearance* is important. The survey should be easy to complete, with clear and concise instructions. Survey completion can be encouraged with a *cover letter* that explains the purpose of the survey and assures confidentiality of respondent answers. Survey *timing* has an effect on response rate. For example, a survey administered during midterm exams will probably not have as great a response rate as one administered at a less hectic time in the semester. The *type of survey* and *collection method* can also have a bearing on survey response rates. Surveys that are distributed and collected in classes will have higher response rates than those sent through the mail or via the web. Response rates can also be influenced by situations that are not within the control of the assessment team (participant interest in the topic, other surveys being administered at the same time, and current events).

What kind of follow-up can or should be done?

Second mailings, reminder e-mails, and reminder telephone calls will generate additional survey responses and will also increase the cost and resources needed to conduct a survey.

CHAPTER 7: USING TESTS

This chapter provides guidelines for using locally and externally developed tests for assessment. Tips for planning and developing a test as well as for analyzing its quality are included.

Topics Presented in Chapter 7

- ◇ Definitions (test and standardized test)
- ◇ Appropriate use of tests
- ◇ Advantages and disadvantages of tests
- ◇ Planning tests
- ◇ Features of a good test
- ◇ Analyzing test data
- ◇ Frequently asked questions

Definitions (Test and Standardized Test)

Tests are commonly used in association with cognitive goals, to review student achievement with respect to a common body of knowledge associated with a discipline or practice.

A **standardized test** is one in which the initial construction, as well as conditions for administration and scoring, have a uniform procedure. This ensures that scores can be interpreted in a consistent manner from one administration to the next. Standardized tests are usually designed by test development specialists, either internally or externally.

Appropriate Use of Tests

Tests should be used when:

- A valid and reliable test is available.
- Student acquisition of knowledge or ability to process and use knowledge is to be demonstrated (i.e., the outcome of interest is *cognitive* in nature).
- Student knowledge about a wide range of content is to be evaluated (in survey and capstone courses).
- Multiple observations of content-related knowledge are needed (math and foreign languages).
- More resources are available for constructing the assessment instrument than for scoring and reporting results.
- A large group is being assessed.

Tests should not be used when:

- There is disagreement about the choice, design, or content of the test to be used.
- The scoring of the test is not reliable or valid.
- The content of the test does not match the goals of the department.
- The number of participants is small.

Advantages and Disadvantages of Tests

Advantages

- Well-constructed tests sample student knowledge with efficiency and reliability. The test given can determine what many students know in a brief period of time.
- The repeated use of a test will provide a means of comparison between different student groups or the same group over time. This type of testing practice provides reviewers with a rich context for evaluation, decision making, and making recommendations.

Disadvantages

- Tests lack flexibility. Because tests are usually designed by organizations and companies outside the department, the content of the test is predetermined and cannot be modified to match department goals or curriculum.
- Tests can be expensive. Costs associated with purchasing tests and processing results must be considered during assessment planning.

Planning Tests

One of the most important planning decisions is the *choice of test*. Tests can be *standardized* (purchased tests that are developed by a testing company) or *created locally* by a department or committee. The match between test and assessment purpose is critical.

Features of a Good Test

A good test:

- Has a well-defined purpose or intent.
- Has a foundation based on a set of written goals and objectives.
- Shows evidence that the test's purpose was achieved (reliability and validity information about test items, the test as a whole, and the relationship between test scores and other indices of academic performance).
- Contains detailed scoring procedures that allow for specific interpretations and feedback to those tested and to those making decisions.

Analyzing Test Data

Test data are scaled and then analyzed using a number of techniques including descriptive statistics and/or multivariate analysis (Palomba & Banta, 1999). Descriptive statistics techniques (*maximum, mean, median, minimum, and mode*) describe the characteristics of the data. Multivariate analysis requires using *regression methods* and *analyzing variances* within the data. Multivariate analysis typically uses preliminary testing and background characteristics of participants to attempt to predict test scores.

Frequently Asked Questions

What are some strategies for creating a department test for assessment purposes?

One common practice is to develop and adopt common pre-tests and post-tests in courses with multiple sections. Items for common tests can be culled from existing exams. Another practice is to determine a portion of each unit exam, a specific set of items, which will be scored for program assessment and for individual evaluation.

This practice is sometimes referred to as course-embedded testing (Palomba & Banta, 1999, p. 13). It is important to notify students how this testing will affect assignment of their grades.

What are the basic steps in developing a test?

Seven sequential steps are recommended:

1. Determine outcomes to be measured.
2. Develop test blueprint.
3. Write test items.
4. Review, critique, and edit items.
5. Pilot test items.
6. Obtain reliability and validity data.
7. Revise, reuse, and report.

How is using a test for assessment different from using a test in the classroom?

Generally, instructors develop their own classroom tests, making all decisions about when and how to construct, administer, and score the test and report results. The tests are constructed without formality or documentation for the purpose of assigning grades related to individual student learning. ***When tests are used for assessment, planning, implementing, and using results becomes a group effort, a shared set of decisions and responsibilities. Consensus is emphasized.*** Some additional planning time, communication, and record keeping will be needed. Test performance is generally used along with other information to describe group achievement and is independent of grading.

CHAPTER 8: USING PERFORMANCE-BASED MEASURES

While tests and surveys remain the most popular assessment instruments, many departments are beginning to recognize the value of assessment that is based on student activities. This chapter explores different types of performance-based assessment activities and discusses the means to maximize their effectiveness.

Topics Presented in Chapter 8

- ◇ Definition of performance-based assessment
- ◇ Appropriate use of performance-based assessment
- ◇ Advantages and disadvantages of performance-based assessment
- ◇ Types of performance-based assessment
- ◇ Planning performance-based measures
- ◇ Analyzing performance-based data
- ◇ Frequently asked questions

Definition of Performance-Based Assessment

Performance-based assessment is the process of ***using student activities***, rather than tests or surveys, to assess skills and knowledge. Class assignments, auditions, recitals, and projects, while intended to evaluate the individual student, can be reviewed as a whole (using all or a sample) to evaluate a course, program, or college. These activities are often used in conjunction with tests to provide a complete picture of student skills and abilities. Critics of testing point out that tests, particularly multiple-choice tests, do not provide sufficient opportunity for students to think through what they are doing or to want to do their best.

Appropriate Use of Performance-Based Assessment

Performance-based measures should be used:

- When activities can be linked directly to the curriculum.
- In academic programs that develop complex, integrated skills.
- When the focus of the academic program is on the creation of products or performances.

Performance-based measures should not be used:

- Where there are limitations of time and/or scope.
- When other assessment techniques such as surveys, focus groups, or tests can better serve the needs of the assessment.
- When statistical analysis is required.

- When there is not widespread faculty and/or administrative support for performance-based assessment.
- When there is not consensus among faculty regarding the objectives, goals, and criteria by which measures will be evaluated.

Advantages and Disadvantages of Performance-Based Assessment

Advantages

- Performance-based assessment builds on daily work (assignments, exams, projects) of students and faculty.
- Performance-based assessment enables faculty to determine student skills and abilities and for students to learn more about how to improve their own skills.
- Performance-based assessment can help faculty determine how to link their teaching to desired learning outcomes.

Disadvantages

- Performance-based measures are labor intensive. A significant amount of time and care must be set aside for planning and using performance assessment.
- It is not clear that performance-based measures can be generalized to the student population. This lowered level of generalization can affect the perceived validity of the measure.
- Assessment activities that are separate from the daily teaching routine of the department can be perceived as intrusions by students and faculty.

Types of Performance-Based Assessment

Portfolios - examples of student work collected over time

The use of student portfolios has a long history in disciplines such as art and architecture and is rapidly gaining popularity in other areas, particularly in the assessment of writing skills. Portfolios can be used to evaluate individual student progress while allowing a department to take a critical look at overall performance of students in the program. Typical portfolio contents are exams (multiple choice and essay), research papers, essays, projects, and audio/video tapes.

Assessment Center Method - simulation of real-life situations in which student performance is evaluated by expert judges

This assessment method attempts to create a professional situation in which students participate (performance, audition, recital, or exhibit). The activity evaluates individual student performance and provides feedback to the department on the effectiveness of its program.

Planning Performance-Based Measures

The following should be considered when planning performance-based assessment measures (Palomba & Banta, 1999, p. 118):

1. What skills are being examined?
2. What tasks can appropriately demonstrate the skills?
3. What are the criteria for evaluating performances or products?
4. What is a reliable process for rating the performances or products?
5. Who is most appropriate to conduct this assessment, and how can they be trained?
6. How will the results be evaluated?

Analyzing Performance-Based Data

The intended outcomes for the course or program are identified. Then faculty members set standards for evaluating portfolio materials or performance measures. Performance-based assessment is most effective when faculty members agree on the intended outcomes of the course or project, as well as the standards set for the evaluation.

Frequently Asked Questions

Should we use the students' best work or choose from a range of grades?

Either is useful, but the department must decide which selection will best suit the department's purpose. Since the students' best will vary, a great deal can be learned about the program from looking at those assignments which earned the highest grades. What differences exist in these work samples? Why are some students' best works better than others? On the other hand, selecting from a wide range of grades will say something as well. What is failing, average, or excellent work in certain courses or programs? Is there commonality among each of these ranges that gives some clue as to who is doing what kind of work and why?

Who decides which items or projects will be included in portfolios or used for performance assessments?

A decision is made *based on the type of assessment to be done*. In some cases, faculty members will ask their students to select for their portfolios what they (the students) consider to be their best work. At other times, the instructor will provide a list of class assignments or exams to be included. Departments may even choose to create the portfolios themselves. It may be important to advise students of the purpose of the portfolio review and to keep the focus on the program rather than the individual student.

CHAPTER 9: USING FOCUS GROUPS

Focus groups provide an excellent opportunity to listen to the voices of students, explore issues in depth, and obtain insights that might not occur without the discussion they provide.

(Palomba & Banta, 1999, p.196)

Topics Presented in Chapter 9

- ◇ Definition of focus group
- ◇ Appropriate use of focus groups
- ◇ Advantages and disadvantages of focus groups
- ◇ Planning and conducting focus groups
- ◇ Analyzing focus group data

Definition of Focus Group

Focus groups are discussions in which the moderator supplies the topics and monitors the discussion. The purpose is to gather information about a specific or focused topic in a group environment, allowing for discussion and interaction by the participants. Focus groups can be used as the sole source of data or as a complement to another research method such as a survey.

Appropriate Use of Focus Groups

Focus groups should be used to:

- Examine attitudes or opinions and why they are held.
- Identify strengths and weaknesses of programs.
- Interpret results from other assessment projects.
- Provide information for designing surveys.

Focus groups should not be used:

- For assessment that requires statistical projections or statistically representative data.
- For subjects that are emotionally charged.
- When participants are not comfortable with each other.

Advantages and Disadvantages of Focus Groups

Advantages

- Focus groups can be relatively low cost and provide quick results. The actual time and cost for planning, conducting, and analyzing data may be relatively small when compared to alternatives such as survey projects and individual interviews.
- Focus groups are a flexible assessment tool. Interactions between the moderator and participants allow the moderator to probe issues in depth, address new issues as they arise, and to ask participants to elaborate on their responses.
- Participants may be more comfortable talking in a group than in an individual interview. Interactions can generate more discussion and, therefore, more information.
- The data is in the respondents' own words. It is easily understood and will provide insights into how respondents think about the topic.

Disadvantages

- Groups can be difficult to assemble.
- The group setting can influence the responses of individuals, which is problematic when a dominant member affects the outcomes.
- The small numbers in focus groups can limit the extent to which the results can and should be generalized.
- The quality and quantity of focus group data is dependent on the ability of the moderator, making it essential that the moderator is carefully trained and skillful.
- The qualitative nature of focus group data can make it more difficult to summarize and interpret than more quantitative types.

Planning and Conducting Focus Groups

Planning Focus Group Questions

Questions should be concrete, specific, focused, simple, and open-ended, going from the more general to the more specific. They can also be ordered by their importance to the research project. Many researchers suggest using questions such as *what prompted you*, *what influenced you*, or *what features* in place of *why*.

Exercises can be used in place of questions to ensure that all focus group members have an opportunity to participate. Group members can be asked to write a word or phrase on an index card and then share their responses, to create lists or brainstorm ideas, to rate aspects of a program and then explain what led them to give that particular rating. Sentence completion exercises are also used to generate participation (e.g., *What I liked best about this program was...*). The openness of the focus group format allows for a multitude of activities that can guide or encourage discussion.

Selecting a Good Focus Group Leader, someone who...

- Understands the group process
- Is...
 - Aware
 - Curious
 - Diplomatic
 - Empathetic
 - Flexible
 - Friendly with a sense of humor
 - Good communicator
 - Good listener
 - Interested in people
 - Open to new ideas
 - Quick learner
- Has...
 - An excellent memory
 - Control over personal reactions
 - Good time management

Other Planning Issues

Researchers differ on the ideal *size of a focus group*, but most consist of 8 to 15 participants. Although the project objective will determine who is included in the focus group, the focus group participants should be comfortable talking to each other. A relatively homogenous group is useful, not only for the openness of participants, but also to allow for an easier interpretation of the outcomes.

Researchers must decide if *incentives and rewards* will be used in recruiting participants. Incentives can be anything that draws or encourages participation. (Extra-credit, free food, or monetary rewards will probably appeal to students.) Researchers must ensure that they find participants who will get involved in the discussion, whether these or other means are used to encourage involvement.

Selecting an appropriate *location* where the focus group can meet is a very important planning decision. The room and seating arrangements should be comfortable for everyone involved and free from distractions such as noise or interruptions.

Recording or note taking decisions should be made in advance. Audio or video recordings can be used to document the group process, but they have the potential for stifling openness. Note taking might be the only form of record keeping appropriate in these circumstances. Written notes are also useful as a backup for equipment failure.

Conducting a Focus Group

Introduction

The moderator begins the focus group with a *short introduction*, which includes:

- A brief welcome.
- An overview of the topic.
- Guidelines or ground rules.
- An opening question.

The *welcome* includes a thank you for participating and an introduction of the moderator(s). The *overview* is usually short and simple, explaining what the topic is and why the participants were chosen. *Guidelines* are used to lay ground rules such as speaking one at a time or using first names only. They also function to explain recording devices, confidentiality, and the role of the moderator. The *opening question* should serve as an ice-breaker that will give each participant an opportunity to speak.

Moderating

Listening is important to moderating a focus group. The moderator should make a conscious effort to actively listen, focus on listening rather than talking, make eye contact with each participant as they speak, and be familiar with the questions and objectives of the project. Good *time management* is crucial. The moderator must weigh the length of discussion needed for each question with the time limits of the focus group. Finally, the moderator must *probe for further information* by observing nonverbal clues, drawing out information, and following up on ambiguous statements.

Facility Concerns

Facility problems usually involve *distractions or recording equipment failure* which can be prevented with a little planning. Examining a room ahead of time will alert a moderator to potential problems. Precautions such as closing doors or windows may be all that is needed to eliminate noise and other distractions. Sometimes it is necessary to select a different location, which is easier to do in advance than at the time of the focus group meeting. A moderator should always have a back-up plan for equipment failure, whether it is the use of a back-up tape recorder or skilled note taker.

Participant Concerns

The tone of the focus group can be overly influenced by a *dominant group member*. This might be an expert or just someone who likes to talk. A skillful moderator will be able to draw out less vocal members by asking if they agree or disagree and soliciting their opinions. *Quiet or shy group members* can be encouraged by using eye contact, calling on them by name, and asking follow-up questions to generate useful responses from them.

Analyzing Focus Group Data

Focus group data require qualitative analysis techniques. Therefore, the most important part of analyzing focus group data is to have a good understanding of the notes taken. First, summarize key ideas in the notes. Find the big ideas by examining the participants' choice of words, considering group context, and looking for consistency among groups and group members. Categories and themes should develop from the language of the notes.

CHAPTER 10: RELATING TO OTHER CAMPUS ASSESSMENT EFFORTS AND USING AVAILABLE RESOURCES

This chapter discusses using institutional data and other assessment techniques for assessment, assistance available from the Office of Institutional Effectiveness, and external assessment resources.

Topics Presented in Chapter 10

- ◇ Using review of institutional data, transcript analysis, curriculum review, anecdotal records
- ◇ Using interviews and unobtrusive measures
- ◇ Office of Institutional Effectiveness as an internal assessment resource
- ◇ Office of Institutional Effectiveness surveys that can be mined for assessment
- ◇ External assessment resources

Using Review of Institutional Data, Transcript Analysis, Curriculum Review, Anecdotal Records

Review of Institutional Data - information that the university collects including data about students, courses, faculty, and programs

Use institutional data to:

- Explore demographics, enrollment patterns, and degree statistics.
- Examine longitudinal patterns related to the available data.
- Supply additional information about participants of other types of assessment activities.
- Gather information at the department or college level.

Institutional data are all-inclusive, meaning that the data has been gathered for all courses, all students, etc. The amount of data is large and extends over time. Institutional data can be linked with other assessment tools such as surveys to provide additional demographic information about respondents. It can also supply an assessment team with information about the extent to which survey respondents differ from all students. Institutional data is collected consistently over time allowing for longitudinal information that can be used to track issues such as enrollment trends over time.

Institutional data is most often available through a mainframe computer system or numerous databases and is limited in the topics it covers. Accessing and selecting the correct information may require computer programming experience, access to the computer systems or databases, and familiarity with the computer system and the data.

Transcript Analysis - using the student database to examine course-taking or grade patterns

Use transcript analysis to:

- Obtain a snapshot of a group of students at a particular point in time.
- Explore what classes students took and in what order.
- Examine patterns in student grades.

Transcript analysis allows a department to obtain a more complete picture of its students. Are majors who follow a particular course-taking path more likely to succeed? Do department introductory courses attract students to the major program? What path through general education courses seems to be most effective for the department majors?

Review of Current Curriculum Materials - systematic review of course syllabi, textbooks, exams, and other materials

Use curriculum review to:

- Clarify learning objectives.
- Explore differences and similarities between sections of a course.
- Assess the effectiveness of instructional materials.

A review of materials basic to classroom instruction provides information invaluable to enhancing any assessment effort.

Anecdotal Records, Logs, and Journals - maintaining records of classroom activities, student responses, or faculty impressions

Use anecdotal records to:

- Examine how students and faculty react to specified instructional methods.
- Pilot new textbooks or other materials.
- Explore student perceptions of certain aspects of the course.

Assessment usually relies on a systematic collection of information, but more informal observations can often be just as useful. (What is going on in the classroom? What works and what does not?)

Using Interviews and Unobtrusive Measures

Interviews - gathering information in a focused, one-on-one conversation

Use interviews to:

- Obtain information on a deeper level than a survey would allow.
- Explore issues of concern to the department.
- Secure information to use in designing a survey.
- Facilitate more personal contact with long-distance subjects than a survey would permit.

Types of Interviews

- Standardized interview with closed responses: A set of standardized questions is prepared and asked of each participant. The role of the interviewer is simply to ask the questions and record the responses. The only information that is gathered is that which is specifically requested, making the standardized interview simply a verbal version of the paper, web, or on-line survey.
- Standardized interview with open responses: The interviewer uses a set of standardized questions to elicit open-ended responses. Participants are encouraged to talk at length on these items.
- Non-standardized interview: This is essentially a conversation between the interviewer and the participant in which they agree to discuss the participant's views of the subject matter. No set of questions is asked. The interviewer merely probes the participant on his/her opinions or perceptions on a particular topic.

Unobtrusive Measures - observation or record keeping of student use of facilities and services (This form of assessment provides data that can be correlated with test scores and/or course grades.)

Use unobtrusive measures to:

- Record observable behaviors.

While test scores and survey results can indicate how much students are learning and how they feel about the process, observing student behavior can tell a great deal about *how* they learn. What do students do outside the classroom? Which out-of-class behaviors and activities seem to lead to better in-class performance?

Office of Institutional Effectiveness as An Internal Assessment Resource

The Office of Institutional Effectiveness can lend assistance in...

- Developing effective learning goals.
- Developing measures.
- Providing data such as samples of enrolled student or alumni demographic data.
- Analyzing quantitative and qualitative results.
- Interpreting and reporting results.
- Identifying examples from other departments (at Ball State and beyond).

Office of Institutional Effectiveness Surveys That Can Be Mined for Assessment

- Orientation Survey (demographics, high school experiences, expectations, recruitment-related)
- *MAP-Works*
- National Survey of Student Engagement
- Senior Survey (experiences in college, satisfaction, self-reported academic and personal gains, future educational and employment plans)
- Alumni Survey (employment and further education experiences, experiences in college, satisfaction, self-reported academic and personal gains)

External Assessment Resources

Conferences

- IUPUI Assessment Institute <http://planning.iupui.edu/conferences/national/nationalconf.html>
- AAC&U Conference <http://www.aacu.org/meetings/index.cfm>
- AIR Forum <http://forum.airweb.org/2012>

National Institute for Learning Outcomes Assessment <http://www.learningoutcomeassessment.org>

CHAPTER 11: DECIDING ON REASONABLE EXPECTATIONS

*Imagine that Michael, one of your students, scored a 55 on a particular test.
Did he do well or not?
Or imagine that all students in your college averaged 55 on a published test.
Did they do well or not in terms of this performance standard?
Answering these questions is crucial to figuring out how to use the results.
If we decide our students did well, we can celebrate;
but if we decide they didn't do well, we have some work to do.*

(Suskie, 2009, p. 233)

Topics Presented in Chapter 11

- ◇ Deciding on benchmarks or standards for interpreting assessment results

Deciding on Benchmarks or Standards for Interpreting Assessment Results

Suskie (2009) identifies the following types of benchmarks or standards for framing expectations:

Types of Benchmarks or Standards	
Local Standards	Are students meeting our own standards?
External Standards	Are students meeting standards set by someone else?
Internal Peer Benchmark	How do our students compare to others within Ball State?
External Peer Benchmark	How do our students compare with those of other universities that are similar to Ball State?
Best Practices Benchmark	How do our students compare to the best of their peers?
Value-Added Benchmark	Are our students improving?
Historical Trends Benchmark	Is our program improving?
Strengths and Weaknesses Perspective	What are our students' areas of strengths and weaknesses?
Capability Benchmark	Are our students doing as well as they can?
Productivity Benchmark	Are we getting the most for our investment?

Which standard or benchmark we should use depends on the purpose of the assessment. For example, in examining the performance of a group of students on a certification exam, you might compare against national norms, against the performance of students in the best programs in the country, or against students at peer institutions if the assessment is being conducted for purposes of accountability or accreditation; but you might compare against your own students at another point in time or within groups of students if your purpose is self-analysis and improvement.

Suskie offers the following suggestions for setting specific, appropriate standards:

- Do some research, perhaps with peer institutions or professional associations.
- Involve others in the discussion such as students, employers, and faculty members teaching in other programs.
- Use samples of student work to inform the discussion of setting expectations.

Suskie also offers the following tips for setting targets for collective performance:

- Express targets as percentages rather than means to improve understanding.
- Vary targets depending on the circumstances.
- Consider multiple targets (e.g., at least 90% of students score above the adequate level, and at least 30% score above the exemplary level).

CHAPTER 12: ANALYZING, INTERPRETING, COMMUNICATING, AND ACTING ON ASSESSMENT RESULTS

*The goal of assessment is information-based decision making.
To put it another way, the end of assessment is action.
Assessment helps the organization determine how well it is achieving its goals
and suggests effective steps for improvement.*
(Walvoord, 2010, p. 4)

Topics Presented in Chapter 12

- ◇ Reporting assessment results
- ◇ Ensuring the quality of your data and the utility of your analyses
- ◇ Sharing assessment results
- ◇ Honest, balanced, fair, and useful reporting of assessment results
- ◇ Venues for sharing assessment results
- ◇ When people feel threatened by assessment results
- ◇ Ways to make your results have the most impact
- ◇ Assessment reports
- ◇ Using assessment results effectively and appropriately
- ◇ When assessment results are good
- ◇ When assessment results are bad
- ◇ How we can make better meaning of our assessment results
- ◇ Moving from assessment results to action
- ◇ Case studies of departmental use of assessment activities
- ◇ Frequently asked questions

Reporting Assessment Results

Suskie (2009) lists five basic ways to summarize assessment results:

- Tallies
- Percentages
- Averaging results into an overall score
- Averaging results into sub-scores
- Qualitative summaries (grouped listings, themes, examples)

Look at differences

- Between groups.
- Over time.
- With peers.

Ensuring the Quality of Your Data and the Utility of Your Analyses

Quantitative Analyses

- Reliability
- Validity
- Comparing participants/sample/population
- Sampling error

Sample Size	Sampling Error
196	7%
264	6%
384	5%
600	4%
1067	3%
2401	2%
9604	1%

- Item difficulty, item discrimination

Qualitative Analyses

- Triangulation
- Peer debriefing
- Member check
- Bracketing

Sharing Assessment Results

Suskie suggests the following guidelines for sharing your assessment results:

- Use good teaching practices to share assessment results.
- The briefer the assessment report is, the more likely it will be used.
- Three kinds of information are most important to share:
 - How you and your colleagues define a successful student
 - Whether you are satisfied with your evidence of student success
 - What you are doing about unsatisfactory results
- Tables, charts, and other visuals may be more effective than traditional written reports.

Honest, Balanced, Fair, and Useful Reporting of Assessment Results

Suskie recommends doing the following to ensure appropriate reporting:

- Share only aggregated results.
- Present results completely, fairly, and objectively.
- Provide appropriate attribution.

- Document the author, office, and date of assessment reports.
- Offer to make additional information available.

What will audiences for assessment results care most about?

- Matters they can do something about
- Interesting and unanticipated findings
- Meaningful differences

Venues for Sharing Assessment Results

Suskie gives the following examples of where to share your assessment results:

- Web sites
- Emails
- Newsletters
- Alumni magazines
- Departmental memos
- Press releases
- Brochures
- Presentations
- Posters or banners

When People Feel Threatened by Assessment Results

If you find someone feels threatened by your assessment results, Suskie suggests that you:

- Consult with those who may feel threatened.
- Balance negatives with positives.
- Be gentle and sensitive.
- Provide corroborating information.
- Document the quality of your assessment methods.
- Acknowledge possible limitations in your assessment methods.
- Help identify possible solutions.

Ways to Make Your Results Have the Most Impact

Suskie suggests that you do the following to ensure that your assessment results have the desired impact:

- Make sure everything you include tells an important, interesting part of your story.
- Use an engaging, meaningful title and headings.
- Open with something intriguing.
- Cascade from major points to details.
- Provide a context for results.
- Offer informed commentary.
- Keep it short.

Assessment Reports

Assessment Report Format

The choice of report format should be based on the material in the report and its audience. *Full reports* are useful to audiences interested in the details of an assessment. They can also serve as complete records of assessment activities. *Assessment summaries* are used to highlight particular findings, to focus on specific issues, and to summarize assessment activities for audiences not inclined to read a full report. Results can also be used in assessment notes, brochures, or flyers to publicize an assessment project or finding or highlight a particular program. *Web reporting* provides easy access to a wide range of audiences, makes specific data available and interactive, and enables audiences to answer customized questions.

Assessment Report Components

- Description of activities
 - What did we do?
 - Why did we do it?
 - How did we do it?
 - Who did we assess?
- Description of results
 - What did we find?
- Interpretation
 - What do our findings mean?
- Suggestions/Implications
 - What should or could be done based upon results of the assessment?

Confidentiality

Confidentiality is extremely important in assessment result reporting. Who will have access to the results? Open reporting will probably be appropriate if an assessment is focused on a university-wide program and results are aggregated at the university level. Reporting to program directors only may be most appropriate if assessment is focused on improving a particular program. The assessment team must be concerned with participant confidentiality, also. Data should be aggregated to protect individuals and comments and open-ended survey responses revised to remove individual identifiers.

Using Assessment Results Effectively and Appropriately

You will want to use your assessment results effectively and appropriately. In order to do so, Suskie suggests that you:

- Focus on important learning goals.
- Assess processes as well as outcomes.

- Involve those with a stake in the results in designing, carrying out, and discussing assessments.
- Communicate findings widely and openly.
- Discourage others from making inappropriate interpretations.
- Don't hold people accountable for things they cannot control.
- Don't let assessment results alone dictate decisions.
- Use multiple sources of information when making decisions.
- Keep people informed on how assessment results have affected decisions.

When Assessment Results Are Good

For those times when your assessment results are good, Suskie highly recommends that you:

- Celebrate!
- Reward!
- Share!
- Keep going!

When Assessment Results Are Bad

Suskie suggests that you look at everything carefully.

- Do you have the right learning goals?
- Do you have too many learning goals?
- Take a hard look at your courses:
 - Content and requirements
 - Sequencing and prerequisites
 - Admissions criteria
 - Placement criteria
 - Advising
 - Tutoring
 - Teaching methods
 - Co-curricular activities
- Do you need to improve your assessment methods?
- Sometimes it really *is* the students' fault.
- Keep going.

How We Can Make Better Meaning of Our Assessment Results

Frame student learning within Astin's (1992) Inputs-Environments-Outcomes assessment model that:

- Is predicated on the assumption that the principal means by which assessment can be used to improve educational practice is by enlightening the educator about the comparable effectiveness of different educational policies and practices.
- Highlights the role of student backgrounds (inputs, e.g., demographics, high school grades, test scores, values, attitudes, behaviors) and student experiences (environments, e.g., courses taken, teaching methods, employment, interactions with other students, interactions with faculty members, use of programs and services, participation in various activities) on student learning (outcomes).

Moving From Assessment Results to Action

You have completed your assessment. To ensure that you appropriately use your findings, Maki (2004) and Walvoord (2010) suggest that you:

- Determine what is most important in the results. In addition to discussion among themselves, faculty members can consult program accreditation bodies, alumni, employers, faculty members at other institutions, librarians, writing specialists, and student affairs staff members.
- Focus on the areas that show the greatest weaknesses.
- Determine what is feasible now and what might be addressed in the future. Consider what changes can be made within the department and what changes involve others. Investigate resources and available assistance.
- Keep good notes, both for your own follow-up and for reports that you might have to submit.

Case Studies of Departmental Use of Assessment Activities

The following are based upon Walvoord and the experiences of staff members in the Office of Institutional Effectiveness.

1. A two-hour, annual faculty meeting is held in a department of political science where each faculty member who teaches seniors described strengths and weaknesses in research papers. Notes were kept. A vote was taken on one follow-up action to mitigate a weakness. The area identified was students' lack of ability to construct coherent research questions. Members of the department curriculum committee followed up to investigate in which earlier courses this skill was covered. They also administered a short survey to seniors that asked which courses helped them to construct research questions and what the faculty could do to help students to improve this skill. It was decided that two junior-level courses would cover constructing research questions in greater depth. A year later a similar meeting was held, and it was determined that students' ability to construct

research questions had improved substantially. The faculty members then decided to follow up on another identified weakness.

2. The faculty member who teaches the senior capstone biological research course for biology majors developed a simple scoring system or rubric to evaluate students' research papers. He shared the results at a department meeting. The results showed that designing experiments and controlling variables were the areas of greatest weakness. A small committee examined the curriculum and held a student focus group. They decided to institute a tutoring program that reinforces these areas.
3. Faculty members in health sciences noticed that several students were providing incorrect answers to questions in the final exam of a first-year survey course that required interpretation of written material. They began to suspect that there was a relationship between reading skills and performance in the exam. A student survey and discussions with academic advisors confirmed this relationship. As a result the faculty emphasized the importance of reading skills in their first-year survey course, they strengthened a requirement that students who scored below a certain cutoff in a diagnostic reading test enroll in the institution's reading and study skills course, they asked experienced students to discuss with first-year students the importance of study time and effective study methods, and they provided professional development for faculty members in the department to recognize student reading problems early in their courses and to refer the students with such problems to the campus study skills center.
4. Music faculty members reviewed student portfolios and determined that there was wide variation in entering students' knowledge of music theory. They developed a music theory diagnostic test that students took as part of their application process and created a first-semester basic music theory course for students who scored poorly on the test.
5. Faculty members offering online MBA courses noticed that some students were not turning in assignments or using the online discussion board. They emailed students a link to a short survey and also asked the institution's IT staff to collect some statistics about students' use of tutorials that were provided to explain how to use the features of Blackboard. It turns out that some students did not understand the basics of how to navigate Blackboard, and they did not complete the tutorials. A new policy was instituted that students would be de-registered from their courses unless a usage report confirmed that they had completed the tutorials and scored at least 80% on a proficiency exam.

While the level of maturity of the assessment efforts outlined in these case studies varied, the commonality is that all of the departments took some action. They did not wait years until enormous amounts of data were collected. They were better off concentrating on a few simple concerns that matter than were departments that had large amounts of information collected but did not discuss the implications and did not make any changes.

Frequently Asked Questions

How can we ensure that results of assessment activities are used?

Faculty members, staff, and administrators who are involved in assessment planning will be more likely to use the results. Findings should be shared with department faculty members in a written report that could be used to generate discussions at faculty meetings or annual retreats. (What does the report tell you about your course or program? What possible changes are indicated? How could our department use these results to best advantage?) Additional reports or presentations can be prepared for different audiences, depending on their assessment needs.

In reporting results, do we report actual data or interpretation of the data?

This depends on the audience. Some constituents may request that the department report actual findings while others will prefer a summary that includes implications of assessment results.

Do we report everything?

The department will usually decide. It may find both expected and unexpected results to be useful. For example, an alumni survey may reveal that not only are graduates getting jobs, but the majority of graduates are securing jobs in one particular type of firm or company. This finding could be used to determine what job skills department graduates have that are making them so marketable with these companies. This information, while useful to the department, will probably not be of interest to accreditation teams or college curriculum committees.

How long should we keep assessment results?

It is advisable to keep assessment project results for at least 3 to 5 years (for ease in knowing what has been done before, for learning from past mistakes, or for doing longitudinal studies). Departments find it useful to do longitudinal studies of assessment projects to determine trends or patterns *over time*. Results of assessment activities may change with time along with the job market, the economy, technology, and even the department itself. Many assessment evaluations are on cycles and will necessitate the use of results from past years. (State commission or accreditation reviews may be every 5 to 10 years. Similarly, some departments do surveys annually, while others prefer to do them every 5 years.)

CHAPTER 13: MAKING THE ASSESSMENT PROCESS MORE MANAGEABLE

*This chapter provides practical advice
for improving the efficiency and effectiveness of assessment activities.*

Topics Presented in Chapter 13

- ◇ Tangible suggestions for making assessment more manageable
- ◇ Setting priorities for assessment
- ◇ Examples of assessment information that may already be on hand
- ◇ Using samples of student work for assessment
- ◇ The basic no-frills department assessment system
- ◇ Developing and using rubrics
- ◇ Available rubric libraries

Tangible Suggestions for Making Assessment More Manageable

Maki (2004) suggests doing the following in order to ensure your assessment is more manageable:

- Develop and maintain an assessment plan so that everyone knows what's coming.
- Pick one learning goal per year for assessment and follow-up discussion and action.
- Embed assessment into existing courses wherever possible.
- Establish *departmental assessment day* to concentrate efforts.
- Collect data from a sample of students rather than all of them, *if you have sufficient numbers of majors*.
- Make submission of work into a student portfolio a requirement for students.
- Identify opportunities such as internships, field experiences, undergraduate research opportunities, and study abroad that provide opportunities to collect evidence of student learning.
- Employ a graduate student to help do the *front line* work of analysis and interpretation.

Setting Priorities for Assessment

Suskie (2009) suggests that in setting your priorities you should:

- Start small.
- Start by focusing on important goals.
- Start with easier assessments.
- Focus on tolls and approaches that yield the greatest dividends for the time and resources invested.
- Work with samples rather than whole populations of students, where possible.
- Stagger assessment activities.
- Take advantage of existing resources.

Examples of Assessment Information That May Already Be On Hand

Suskie lists the following that may already be available to you for your assessment needs:

- Scores on published tests (SAT, placement, certification/licensure)
- Ratings of students by internship/practicum/field experience supervisors
- Assessment information assembled to meet disciplinary accreditation requirements
- Scores and scoring criteria for locally-developed tests and assignments
- Retention and graduation rates
- Information on employment and subsequent education
- Surveys of students and alumni
- Information on student course-taking
- Information on student participation in internships/practica/field experiences, study abroad, Immersive Learning Virginia Ball Center projects, living-learning communities, undergraduate research, etc.
- Information on students' use of technology (Blackboard, library resources)

Using Samples of Student Work for Assessment

Walvoord (2010) reports on the advantages and disadvantages of using samples of student work for assessment:

Advantages

- Information is already available.
- There are no student motivation problems, since students must complete the work for a grade.
- There is no direct cost.
- This work reflects what faculty members actually teach, not what is included on standardized tests; so faculty members are more motivated.

Disadvantages

- Evidence is not comparable across institutions.
- Everyone evaluates differently, so common standards or rubrics and training are needed.
- Information is in multiple parts and multiple formats, so it needs to be collected in portfolios.
- There is quite a bit of work, especially at the beginning.

The Basic No-Frills Department Assessment System

Walvoord recommends that the following be included in a basic department assessment system:

- Learning goals for each degree program, co-curricular program, etc.
- Two measures of how well your students are achieving this goal
 - One direct measure (e.g., student work samples near the time of graduation)
 - One indirect measure (e.g., surveys, interviews, or focus groups that ask students how well they feel they achieved each of the learning goals, what aspects of their program helped them achieve those goals, and what the department might do differently that would help students to learn more effectively)
- One two-hour department meeting per year in which assessment results are discussed, at least one follow-up action to improve student learning is agreed upon, and for which meeting notes are kept

Developing and Using Rubrics

The University of Virginia (n.d.) offers the following suggestions for developing and using rubrics:

Developing rubrics

- Clearly define the assignment including the topic, the process that students will work through, and the product they are expected to produce.
- Brainstorm a list of what you expect to see in the student work that demonstrates the particular learning outcome(s) you are assessing.
- Keep the list manageable (3-8 items) and focus on the most important abilities, knowledge, or attitudes expected.
- Edit the list so that each component is specific and concrete (for instance, what you mean by coherence); use action verbs when possible and descriptive, meaningful adjectives (e.g., *not adequate or appropriate but correctly or carefully*).
- Establish clear and detailed standards for performance for each component. Avoid relying on comparative language when distinguishing among performance levels. For instance, do not define the highest level as *thorough* and the medium level as *less thorough*. Find descriptors that are unique to each level.
- Develop a scoring scale.
- Test the rubric with more than one rater by scoring a small sample of student work. Are your expectations too high or too low? Are some items difficult to rate and in need of revision?

Using rubrics

- Evaluators should meet together for a training/norming session.
- A sample of student work should be examined and scored.
- More than one faculty member should score the student work. Check to see if raters are applying the standards consistently.
- If two faculty members disagree significantly (e.g., more than 1 point on a 4-point scale), a third person should score the work.
- If frequent disagreements arise about a particular item, the item may need to be refined or removed.

Available Rubric Libraries

California State University Fresno <http://www.csufresno.edu/oie/assessment/rubric.shtm>

University of Delaware <http://assessment.udel.edu/resources/rubrics.html>

University of Virginia <http://www.web.virginia.edu/iaas/assess/tools/rubrics.shtm>

CHAPTER 14: MOTIVATING COLLEAGUES TO PARTICIPATE IN ASSESSMENT

The movement to assess student learning in higher education has been around for roughly a quarter of a century. Why, then, is there still resistance to assessment on so many campuses? Marilee Bresciani (2006) suggests two underlying reasons: the value and importance of assessment are not understood, and assessment activities are not supported with appropriate resources. A third reason may be added to these: fear of and resistance to change.
(Suskie, 2009, pp. 69-70)

Topics Presented in Chapter 14

- ◇ What are some sources of resistance to change?
- ◇ What are some tangible actions to promote faculty participation in assessment?
- ◇ What are the benefits of assessment?
- ◇ Has assessment really improved student learning?
- ◇ How can we assess complex student learning?
Isn't assessment just about the lowest common denominator?
How can we capture the ineffable?
- ◇ Does assessment violate academic freedom?
- ◇ Are there factors beyond our control that affect student learning?
- ◇ Why are grades not enough?
- ◇ What are the most common misconceptions about program assessment?
- ◇ What are the most common actions resulting from assessment?
- ◇ What journals publish scholarship on assessment of college student learning?

What are some sources of resistance to change?

Suskie (2009) highlights a few of the sources:

- Some people are satisfied with the status quo.
- Some people don't see the relevance of an initiative to them and, therefore, try to ignore it.
- Some old-timers have seen many initiatives come and go over the years; this too shall pass.
- Some people think they will need to learn and use new skills that are difficult to master.

- Some people feel threatened by a new initiative.
- Some people have misconceptions about a new initiative.
- The prospect of change means the prospect of more work.

What are some tangible actions to promote faculty participation in assessment?

Walvoord (2010) suggests doing the following to encourage your faculty members' participation in assessment:

- Devote at least two hours in one or more faculty meetings each year to discuss what faculty members in each program expect students to be able to do when they graduate, how you know whether or not students have achieved this, and what you could try to address weaknesses.
- Ask each faculty member who regularly teaches the same courses to bring copies of one of his or her syllabi to share with colleagues. Discuss what expectations the faculty member has for the course, what weaknesses he or she sees in student preparation, and how this course fits in with others in the curriculum.
- Adapt faculty performance expectations (or recognize them if they are already there) to explicitly acknowledge participation in assessment of student learning.
- Recognize the scholarship of teaching and learning as a legitimate and important part of research in the department. Reward faculty members who receive grant funding (OIE supplies this!), who make conference presentations, and who publish concerning teaching and learning in the discipline. (See the list of journals that publish on the scholarship of teaching and learning at the end of this chapter.)

What are the benefits of assessment?

In general, benefits include getting faculty members, within and across disciplines, talking about their goals for student learning, seeing how courses fit together, making expectations more clear to students, and sharing detailed feedback with students. (Suskie, 2009; University of Delaware, n.d.; Wolvoord, 2010)

In general, assessment:

- Increases our confidence that we are putting our time and resources into activities that we value as an institution.
- Increases our confidence that we are allocating resources to areas that are producing the outcomes we value.
- Gathers and uses data that will enable us to make decisions that lead to improved instruction, stronger curriculums, and effective and efficient policies.
- Strengthens our ability to say that our graduates are well-prepared to succeed in their future endeavors.

- Has ready access to data that will satisfy the requirements of accrediting agencies and funding agencies, and will inform various accountability driven conversations.
- Gathers and uses data that will strengthen arguments for increased funding and/or resource allocations to areas that are producing valued outcomes.
- Increases the effectiveness of our communications about the value of a university education.

Has assessment really improved student learning?

Yes, according to Suskie and Walvoord. There is an abundance of literature about how assessment has improved student learning within specific disciplines and within specific institutions. For example, see Banta, Jones, and Black (2009); Bresciani (2006); Maki (2010); Peterson and Einarson (2001) in addition to journals listed at the end of this chapter and issues of *Assessment Update* <http://www.josseybass.com/WileyCDA/WileyTitle/productCd-AU.html>.

How can we assess complex student learning?

Isn't assessment just about the lowest common denominator?

How can we capture the ineffable?

Walvoord says that we should be spending our time in assessment concentrating on what really matters most. This is not easy, but it is not impossible. We need to figure out how to effectively evaluate what students do that reflect our goals for them. Many people have been thinking about this, both within and across disciplines. Is your national disciplinary professional association talking about this? An excellent resource for assessment of cross-disciplinary, liberal education college student learning is the Association of American Colleges and Universities (AAC&U) LEAP (Liberal Education and America's Promise) and VALUE (Valid Assessment of Learning in Undergraduate Education) projects. (See <http://www.aacu.org/LEAP> and <http://www.aacu.org/value>.)

Does assessment violate academic freedom?

The Association of American Colleges and Universities' Board of Directors Statement on Academic Freedom and Educational Responsibility (2006) directly addresses this question:

There is, however, an additional dimension of academic freedom that was not well developed in the original principles, and that has to do with the responsibilities of faculty members for educational programs. Faculty members are responsible for establishing educational goals for student learning, for designing and implementing programs of general education and specialized study that intentionally cultivate the intended learning, and for assessing student achievement. In these matters, faculty members must work collaboratively with colleagues in their departments, schools, and institutions as well as with relevant administrators. Academic freedom is necessary not just so faculty members can conduct their individual research and teach their own courses, but so they can enable students—through whole college programs of study—to acquire the learning they need to contribute to society.

Are there factors beyond our control that affect student learning?

Walvoord says that of course there are! Acknowledge factors that you cannot control, such as students' incoming skill levels or the number of hours they spend in their jobs, to establish beginning points for student assessment and to provide a context for learning.

Why are grades not enough?

Suskie and Walvoord list the following reasons:

- Course grades usually tell us something about *how* an individual student knows relative to other students in the same course section, but provide no details about exactly *what* that student actually knows or doesn't know.
- If grades reflect attendance, this does not tell us much about student learning.
- If multiple sections of a class are offered and taught by different people, are the content and grading criteria exactly the same?
- Grades for individual assignments are typically not available to anyone else besides the instructor and the student.
- A degree program should be more than a set of disparate courses. Are there things we want students to know and be able to do that span multiple courses? Do we really know how each course fits into a coherent curriculum?

What are the most common misconceptions about program assessment?

The University of Central Florida (2008, pp. i-11) lists seven:

Misconception 1: *The results of assessment will be used to evaluate faculty performance.*

Nothing could be further from the truth. Faculty awareness, participation, and ownership are essential for successful program assessment, but assessment results should never be used to evaluate or judge individual faculty members' performance. The results of program assessment are *used to improve programs*.

Misconception 2: *Our program is working well, our students are learning; we don't need to bother with assessment.*

The primary purpose of program assessment is to *improve* the quality of educational programs by improving student learning. Even if you feel that the quality of your program is good, there is always room for improvement. In addition, various accrediting bodies mandate conducting student outcomes assessment. Not to conduct assessment is not an option.

Misconception 3: *We will assign a single faculty member to conduct the assessment. Too many opinions would only delay and hinder the process.*

While it is a good idea to have one or two faculty members head the assessment process for the department, it is really important and beneficial to have *all* faculty members involved. Each

person brings to the table different perspectives and ideas for improving the academic program. Also it is important that all faculty members understand and agree to the mission (i.e., purpose) and goals of the academic program.

Misconception 4: *The administration might use the results to eliminate some of the department's programs.*

There are two types of evaluation processes: summative and formative. The purpose of summative program evaluation is to judge the quality and worth of a program. On the other hand, the purpose of formative program evaluation is to provide feedback to help improve and modify a program. Program assessment is intended as a formative evaluation and *not* a summative evaluation. The results of program assessment will not be used to eliminate programs.

Misconception 5: *Assessment is a waste of time and does not benefit the students.*

The primary purpose of assessment is to identify the important objectives and learning outcomes for your program with the purpose of improving student learning. Anything that enhances and improves the learning, knowledge, and growth of your students cannot be considered a waste of time.

Misconception 6: *We will come up with an assessment plan for this year and use it every year thereafter.*

For program assessment to be successful, it must be an ongoing and continuous process. Just as your program should be improving, so should your assessment plan and measurement methods. Each academic department must look at its programs and its learning outcomes on a continual basis and determine if there are better ways to measure student learning and other program outcomes. Your assessment plan should be continuously reviewed and improved.

Misconception 7: *Program assessment sounds like a good idea, but it is time-consuming and complex.*

It is impossible to “get something for nothing.” Effective program assessment will take some time and effort, but there are steps that you can follow that can help you to develop an assessment plan that will lead to improving student learning.

What are the most common actions resulting from assessment?

According to Walvoord, you can expect the following actions from your assessment:

- Changes to the curriculum, requirements, programmatic structures, or other aspects of students' course of study
- Changes to the policies, funding, and planning that support learning
- Faculty development

What journals publish scholarship on assessment of college student learning?

Suskie provides the following lists of journals that cover topics of general interest in higher education and teaching in the specific disciplines.

General Interest Higher Education Publications

American Educational Research Journal
American Journal of Evaluation
Applied Measurement in Education
Assessment and Evaluation in Higher Education
Assessment in Education: Principles, Policy and Practice
Assessment Update
Change
College Teaching
Community College Journal of Research and Practice
Computer Supported Cooperative Work: The Journal of Collaborative Computing
Educational Action Research
Educational Evaluation and Policy Analysis
Educational Policy Analysis Archives
Educational Research
Innovations in Education and Teaching International
Innovative Higher Education
Interactive Learning Research
International Journal for the Scholarship of Teaching and Learning
Journal of College Student Retention
Journal of Educational Measurement
Journal of Excellence in College Teaching
Journal of Graduate Teaching Assistant Development
Journal of Higher Education
Journal of Student-Centered Learning
Liberal Education
National Teaching and Learning Forum
New Directions for Higher Education
New Directions for Program Evaluation
New Directions for Teaching and Learning
Peer Review
Practical Assessment, Research, and Evaluation
Research in Higher Education
Teaching Excellence
Teaching Professor

Journals on Teaching in a Specific Discipline

American Biology Teacher
Biochemical Education
Chemical Engineering Education
College Composition and Communication
College Mathematics Journal
Communication Education
History Teacher
Journal of Accounting Education
Journal of Agricultural Education
Journal of Chemical Education
Journal of College Science Teaching
Journal of Criminal Justice Education
Journal of Economic Education
Journal of Engineering Education
Journal of Environmental Education
Journal of Geography in Higher Education
Journal of Geoscience Education
Journal of Health Education
Journal of Management Education
Journal of Marketing Education
Journal of Nursing Education
Journal of Social Work Education
Journal of Teaching in Physical Education
Journal of Teaching in Social Work
Journal of Teaching Writing
Journalism and Mass Communication Educator
Mathematics and Computer Education
Mathematics Teacher
Physics Teacher
Research in Collegiate Mathematics Education
Research on Science Teaching
Research Strategies: A Journal of Library Concepts and Instruction
Scholar: A Journal of Leisure Studies and Recreation Education
Studies in Higher Education
Teaching English in the Two-Year College
Teaching in Higher Education
Teaching of Psychology
Teaching Philosophy
Teaching Sociology
Trends and Issues in Postsecondary English Studies

REFERENCES

- Association of American Colleges and Universities. (2006). *Board of Directors statement on academic freedom and educational responsibility*. Retrieved from http://www.aacu.org/about/statements/academic_freedom.cfm
- Astin, A. W., Banta, T. W., Cross, K. P., El-Khawas, E., Ewell, P. T., Hutchings, P., et al. (1992). *Nine principles of good practice for assessing student learning*. American Association for Higher Education. Retrieved from but no longer available <http://www.aahe.org/assessment/principl.htm>
- Banta, T. W., Jones, E. A., & Black, K. E. (2009). *Designing effective assessment: Principles and profiles of good practice*. San Francisco: Jossey-Bass.
- Bresciani, M. (2006). *Outcomes-based academic and co-curricular program review: A compilation of institutional good practices*. Sterling, VA: Stylus.
- Dillman, D. (2000). *Mail and internet surveys: The tailored design method*. New York: John Wiley.
- Fresno State University, Office of Institutional Effectiveness. (n.d.). *Guide to student outcomes assessment*. Retrieved from <http://www.fresnostate.edu/academics/oie/assessment/assessment-guide.html>
- Harrow, A. J. (1972). *A taxonomy of the psychomotor domain: A guide for developing behavioral objectives*. New York: David McKay Company, Inc.
- Johnson, R., McCormick, R., Prus, J., & Rogers, J. (1993). Assessment options for the college major. In T. W. Banta & Associates (Eds.), *Making a difference: A decade of assessment in higher education* (pp. 153-167). San Francisco: Jossey-Bass.
- Maki, P. L. (2004). *Assessment for learning: Building a sustainable commitment across the institution*. Sterling, VA: American Association of Higher Education and Stylus Publishing.
- Maki, P. L. (2010). *Coming to terms with student outcomes assessment: Faculty and administrators' journeys to integrating assessment in their work and institutional culture*. Sterling, VA: Stylus.
- Northern Arizona University. (2006). *The path to achievement and excellence in assessing student learning at NAU: A guide for faculty, sharing our best practices, 2007-2008*. Retrieved from https://www4.nau.edu/assessment/documents/guide%20to%20program%20assessment_final2007.pdf
- Palomba, C. A., & Banta, T. W. (1999). *Assessment essentials: Planning, implementing, and improving assessment in higher education*. San Francisco: Jossey-Bass.
- Peterson, M. W., & Einarson, M. K. (2001). What are colleges doing about student assessment? Does it make a difference? *Journal of Higher Education*, 72(6), 629-669.

- Simpson, E. (1972). *The classification of educational objectives in the psychomotor domain: The psychomotor domain* (Vol. 3). Washington, DC: Gryphon House.
- Suskie, L. A. (1992). *Questionnaire survey research: What works*. Tallahassee, FL: The Association for Institutional Research.
- Suskie, L. A. (2009). *Assessing student learning: A common sense guide* (2nd ed.). San Francisco: Jossey-Bass.
- University of Central Florida, Office of Operational Excellence and Assessment Support. (2008). *Program Assessment Handbook*. Retrieved from http://oeas.ucf.edu/doc/acad_assess_handbook.pdf
- University of Connecticut. (n.d.). *Assessment primer*. Retrieved from <http://assessment.uconn.edu/primer/index.html>
- University of Delaware, Office of Educational Assessment. (n.d.). *Student learning outcomes assessment manual*. Retrieved from <http://assessment.udel.edu/resources/ud-assessment-manual.html>
- University of Hawai'i, Assessment Office. (n.d.). *Curriculum mapping/curriculum matrix*. Retrieved from <http://manoa.hawaii.edu/assessment/howto/mapping.htm>
- University of Virginia, Office of Institutional Assessment & Studies. (n.d.). *Planning assessments*. Retrieved from <http://www.web.virginia.edu/iaas/assess/process/plan.shtm>
- Walvoord, B. E. (2010). *Assessment clear and simple: A practical guide for institutions, departments, and general education* (2nd ed.). San Francisco: Jossey-Bass.