Handbook on Assessment
University of Tampa

Table of Contents

Assessment at UT

- Assessment is grounded in Best Practices as reflected in the following:
  - Academic Department Mission Statement
  - Academic Department Student Learning Outcomes
- Assessment Cycle
  - Submit annual Assessment Plan to Assistant Provost & Assistant/Associate Deans of the college
    - June 1st Unit Assessment Plan Due
  - Submit Annual Assessment Reports to AP and AD's
    - May 1st reporting on most recent academic year's activities/results
      - Based on measures used to assess outcomes
      - Show how data was utilized to improve the strategic and learning outcomes of unit.

Components of an Assessment Plan/Report

- Departmental Mission
  - Purpose of unit within framework of UT
  - Align with UT's mission
  - Align with UT's strategic plan
  - Align with Strategic initiatives (from President, Provost, Deans)
- Program/Unit Strategic Goals or Objectives
  - Broad general statements of long range intended outcomes

    - Link to University mission, strategic planning or initiative
        - Institutional goals
        - Learning outcome goals
- Stated Outcomes
    - Brief, clear statements on institutional or learning outcomes
    - Institutional outcomes
        - outcomes of input or process
    - Learning Outcomes
        - Impact of program on student learning
    - Satisfaction statements/outcomes
        - How satisfied student are with your service/process/curriculum
- Evaluation Methods for each stated outcome
    - Describe instruments and methodology used to measure objectives
    - Assessment must rely on methodologically sound measurement techniques
    - Baseline measures
    - Target for success
- Implementation of Assessment
    - How are instruments selected
    - How are instruments administered
    - When are assessment measures administered?
- Results of evaluation
- Decision and Recommendations based upon assessment results; Link to Budget

Submission by Template

- Standardized template
- Future plans to explore a web-based system

Why Outcomes Assessment?

- To improve and fulfill the Mission of the institution
- SACSCOC Principles of Accreditation: Foundations for Quality Enhancement
- SACSCOC Requirements:
    - 8.1: X engages in **ongoing, integrated, and institution-wide research-based planning and evaluation processes** that incorporate a systematic review of programs and services that a) results in continuing improvement and b) demonstrates that X is effectively accomplishing its mission.
- SACS comprehensive standards
    - 8.2.a: The institution identifies expected outcomes for its **educational programs** and its **administrative and educational support services**; assesses whether it achieves these outcomes; and provides evidence of improvement based on analysis of those results. (*Student outcomes: educational programs*)
    - 8.2b: Student learning outcomes for collegiate-level general education competencies of its undergraduate degree programs. (*Student outcomes: general education*)
    - 8.2c: Academic and student services that support student success. (*Student outcomes: academic and student services*)

What is assessment?

- "The overriding purpose of assessment is to understand how educational programs are working and to determine whether they are contributing to student growth and development (Palomba and Banta, 1999:20)
- "The process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences; the process culminates when assessment results are used to improve subsequent learning." (Huba and Freed, 2000:8)
- "Assessment is putting into place a systematic process that will answer the following questions on a continuous, ongoing basis:
    - What are we trying to do and why?
    - What is my program supposed to accomplish?
    - How well are we doing it?
    - How do we use the information to improve or celebrate successes?
    - Do the improvements we make work?" (Bresciani, 2002:9)
- "Assessment is the systematic and ongoing method of gathering, analyzing and using information from measured outcomes to improve student learning." (University of Central Florida Academic Program Assessment Handbook, 2004:2)

Defining Terms: The Common Language of Assessment

- *Program Review*: comprehensive review of an academic program, unit, or division within the university. Conducted on a cycle of 5-6 years. May involve bringing in outside evaluators as well as an in-depth self-review of the unit. Assessment Plans and Assessment Report form a part of the Program Review.
- *Assessment Plan*: an annual plan detailing unit goals and outcomes; how those outcomes are measured.
- *Assessment Report*: a yearly report presenting the results of the unit's assessment measures and how the results are used to inform unit improvements.
- *Strategic Goals/Objectives*: broad general statements of long range intended outcomes
    - Institutional Goals: goals related to process. *Example: Chemistry department will increase the number of students majoring in chemistry.*
    - Learning Outcome Goals: broad statements of knowledge, skills, and abilities that a student attains as a result of the program. *Example: Allow the student to develop the professional skills and awareness necessary to responsibly practice engineering in a global and societal context.*
- *Goals vs. Outcomes*: brief, clear statements on institutional, learning or performance outcomes.
    - *Institutional Goals*: a goal related to process rather than outcomes. *Example: The department of Math will increase the number of graduates from 5 to 10.*
    - *Learning Outcome*: what are the abilities, skills, and values students should receive from participation in your program or unit. Blooms' Taxonomy provides one framework for examining learning outcomes. *Example: Graduates will have effective oral and written communication skills.*
- *Benchmark/Target*:
    - Level of competency program expects graduate to have: ex. 75% will achieve a score of XX on the major field test exam.
    - Comparison programs

How to Build Student Learning Outcomes
Learning Models

- Bloom's Taxonomy of Educational Objectives:
    - Cognitive: knowledge recall and intellectual skills: Knowledge, comprehension, application, analysis, synthesis, and evaluation
    - Affective: concerned with attitudes, values, interests, appreciation and feelings towards people, ideas, places and objects. Affective Outcomes range from receiving (or willingness to participate in an activity) to adopting a value system that directs behavior.
    - Skills: Bloom's taxonomy did not develop this area originally. Others have defined the skill domain to "classify movement patterns and behaviors."
- Building a Learning Outcome: Use concrete verbs not passive or vague verbs. Keep the statements simple.
    - See Appendix A for list of verbs associated with the various cognitive, affective, and skill levels.
- A good learning outcome is SMART:
    - Specific – clear and using action words
    - Measurable – quantify objectives with targets and benefits
    - Achievable – objectives can be achieved in steps
    - Realistic – keep in mind time-frame and monetary concerns
    - Time-bound – when are objectives measured and when is objective achieved
- Perry's Model of Intellectual Development (See Appendix B)
    - Student development through a sequence of nine positions which can be grouped into four major categories
        - Dualism – division of meaning into two realms – ex. Good vs. bad
        - Multiplicity – diversity of opinion and values is recognized as legitimate in areas where right answers are not yet known.
        - Relativism – diversity of opinion, values, and judgment derived from coherent sources, evidence, logic, systems, and patterns allowing for analysis and comparison.
        - Commitment – an affirmation, choice, or decision made in the awareness of relativism.
- Learning Outcomes need to relate to the Mission of the University and your School/Division or Unit.
    - Mission of the University of X is: "The mission of the University of X is to sustain a collaborative learning and research community that supports the personal development of its members and the creation of new knowledge. A X Education prepares students to lead livers of purpose, thoughtful inquiry, and responsible leadership in a global and pluralistic society.

Tools of Assessment: measures, rubrics, etc.

- *Direct Measures*
  - Capstone experience
  - Portfolio assessment
  - Standardized tests (major field achievement, tests of critical thinking, etc.)
  - Performance on national licensure exams
  - Locally developed tests (final examinations in key courses, qualifying examinations, and comprehensive examinations)
  - Gains between entry/exit on published or local tests
  - Student Writing
  - Juried reviews (speeches, performances)
  - External internship evaluations linked to learning outcome objectives
  - Summaries/analyses of electronic discussion threads
  - Student reflections on their values, attitudes and beliefs
- *Indirect measures*
  - Student and alumni surveys
  - Exit interviews
  - Time to degree studies
  - Job placement data
  - Satisfaction survey
  - Self-report measures of student learning
  - Enrollment trends
  - Data from courses
- *Rubric*
  - Guides to score student performance and work. Can be used for assessment, program evaluation and improvement of student learning.

- What is **NOT** a measure of student learning?
  - Faculty publications and recognition
  - Faculty/student ratio
  - GPAs
  - Curriculum review reports
  - Grades

  These are what are termed "Institutional" or "Programmatic" Goals or Outcomes

  Grades vs Learning Outcomes
  - Grades are the summative evaluation of individual student performance in a specific course
  - Learning Outcomes represent the formative evaluation of programs based on all elements of the curriculum

Appendix A

Bloom's Classification of Cognitive Skills – From Ball State University

Bloom's levels of cognitive skills are provided in the table below, along with definitions for each skills, and related behaviors. The terms can be used to create student learning outcomes that tap into each of the ability levels.

Category	Definition	Related Behaviors
Knowledge	recalling or remembering something without necessarily understanding, using, or changing it	define, describe, identify, label, list, match, memorize, point to, recall, select, state
Comprehension	understanding something that has been communicated without necessarily relating it to anything else	alter, account for, annotate, calculate, change, convert, group, explain, generalize, give examples, infer, interpret, paraphrase, predict, review, summarize, translate
Application	using a general concept to solve problems in a particular situation; using learned material in new and concrete situations	apply, adopt, collect, construct, demonstrate, discover, illustrate, interview, make use of, manipulate, relate, show, solve, use
Analysis	breaking something down into its parts; may focus on identification of parts or analysis of relationships between parts, or recognition of organizational principles	analyze, compare, contrast, diagram, differentiate, dissect, distinguish, identify, illustrate, infer, outline, point out, select, separate, sort, subdivide
Synthesis	repeating something new by putting parts of different ideas together to make a whole.	blend, build, change, combine, compile, compose, conceive, create, design, formulate, generate, hypothesize, plan, predict, produce, reorder, revise, tell, write
Evaluation	judging the value of material or methods as they might be applied in a particular situation; judging with the use of definite criteria	accept, appraise, assess, arbitrate, award, choose, conclude, criticize, defend, evaluate, grade, judge, prioritize, recommend, referee, reject, select, support

Source : The information table above was derived from information presented on the Ball State University's web site (http://web.bsu.edu/IRAA/AA/WB/chapter2.htm), which was accessed in the summer of 2003.

Action Verb List – Suggested Verbs to Use in Each Level of Thinking Skills

Below are terms (verbs) that can be used when creating student learning outcomes for a course or degree program.

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Count	Associate	Add	Analyze	Categorize	Appraise
Define	Compute	Apply	Arrange	Combine	Assess
Describe	Convert	Calculate	Breakdown	Compile	Compare
Draw	Defend	Change	Combine	Compose	Conclude
Identify	Discuss	Classify	Design	Create	Contrast
Labels	Distinguish	Complete	Detect	Drive	Criticize
List	Estimate	Compute	Develop	Design	Critique
Match	Explain	Demonstrate	Diagram	Devise	Determine
Name	Extend	Discover	Differentiate	Explain	Grade
Outlines	Extrapolate	Divide	Discriminate	Generate	Interpret
Point	Generalize	Examine	Illustrate	Group	Judge
Quote	Give examples	Graph	Infer	Integrate	Justify
Read	Infer	Interpolate	Outline	Modify	Measure
Recall	Paraphrase	Manipulate	Point out	Order	Rank
Recite	Predict	Modify	Relate	Organize	Rate
Recognize	Rewrite	Operate	Select	Plan	Support
Record	Summarize	Prepare	Separate	Prescribe	Test
Repeat		Produce	Subdivide	Propose	
Reproduces		Show	Utilize	Rearrange	
Selects		Solve		Reconstruct	
State		Subtract		Related	
Write		Translate		Reorganize	
		Use		Revise	
				Rewrite	
				Summarize	
				Transform	
				Specify	

Source/Reference : These were derived from information collected at various conferences by Dr. Cia Verschelden, the original source is unknown. This information was original posted on the Assessment and Program Review web site (www.k-state.edu/apr) in the summer of 2003.

Appendix B

Perry's Model of Intellectual Development

The Stages in Transition

Stage Name	Position	Transition
Dualism	Position 1 **This position is pure, closed structure**. Uncertainty is not adequately perceived. *Truth* is out there and accepted. Authorities know, and if we work hard, read every word, and learn Right Answers, all will be well.	But what about those Others I hear about? And different opinions? And uncertainties? Some of our own *authorities* disagree with each other or don't seem to know, and some give us problems instead of *answers*.
Dualism	Position 2 **Here there is the recognition of limited diversity**. True *authorities* must be right, the others are frauds. We remain *right.* Others must be different and wrong. Good *authorities* give us problems so we can learn to find the right answers by our own independent thought.	But even *good authorities* admit they don't know all the answers, yet.
Dualism--->Multiplicity	Position 3 **Here we see the realization that some truth remains unknown even to true *authorities***. Then some uncertainties and different opinions are real and legitimate *temporarily*, even for *authorities*. They're working on them to get to the *truth*.	But there are so many things they don't know *answers* to! And they won't for a long time.
Multiplicity	Position 4a **This position represents the beginning of the shift from**	But some of my friends ask me to support my opinions with facts and reasons. But the what right do *they* have to grade us?

	certainty to uncertainty. Where *authorities* don't know the *right answers*, everyone has a right to his own opinion; no one is wrong.	About what?
Multiplicity	Position 4b In certain courses *authorities* are not asking for the right answer. They want us to *think* about things in a certain way, *supporting* opinion with data. That's what they grade us on.	But this way seems to work in most courses and even outside them.
Multiplicity-->Relativism	Position 5 **Knowledge is now viewed as relative and contextual**. Then all thinking must be like this, even for *them*. Everything is relative but not equally valid. You have to understand how each context works. *Theories* are not *truth* but metaphors with which to interpret data. You have to think about your thinking.	But if everything is relative, am I relative too? How can I know I'm making the *right choice*?
Relativism	Position 6 **Here we see the acceptance of a truly relativistic world in which infinite contexts exist and that choosing is essential to avoid disorientation.** I see I'm going to have to make my own decisions in an uncertain world with no one to tell me whether or not I am *right*.	I'm lost if I don't make my own *decisions*. When I decide on my career or marriage or values everything will straighten out.
Relativism-->Commitment	Position 7 **This position marks the point of initial commitment in some important aspect of life such as values or career.** Well, I've made my first *Commitment*.	Why didn't that settle everything?

Commitment	Position 8 **Here we see the emergence of additional choices regarding the implementation of initial commitments.** I've made several commitments. I've got to balance them; how many, how deep? How certain, how tentative?	Things are becoming contradictory. I can't make logical sense out of life's dilemmas.
Commitment	Position 9 **Here we see the integration of commitments, and commitments are seen as ongoing activities.** This is how life will be. I must be wholehearted while tentative, fight for my values yet respect others, believe my deepest values to be right yet be ready to learn. I see that I shall be retracing this whole journey again and again; but, I hope, more wisely	Back to square one.

Back to Top

The Stages of Intellectual Development

According to Dary (reflecting Perry -- hey, that rhymes!) the Scale of Intellectual Development, there are **four stages** of intellectual development characteristic of college students. However, later research on the model has shown that most college students do not complete the cycle of stages and that development continues into adulthood.

Stage Name	Stage Description
Dualism	Dualistic thinking is characterized by binary thought processes. That is, met with a course which presents many theoretical positions on a given issue, the typical college freshman will ask, "so, which one is right?" The dualistic thinker sees the world as black and white,

	missing the many shades of gray. Respect for an authoritative position is a hallmark of dualistic thought.
Relativism	The relativistic thinker views the world from a multiplicity of perspectives. However, the relativistic thinker still looks to external authority for guidance. The relativistic thinker has a greater tolerance for uncertainty and can reference the context of an argument, thus, at least in a rudimentary fashion, evaluate the authority within that context. In other words, the relativistic thinker might evaluate a political argument depending upon whether the source was representing the Republican or the Democratic position.
Commitment	The commitment-level thinker sees the multiplicity of divergent viewpoints and has developed a coherent belief system. This thinker acknowledges alternative views but can argue the committed position in a cogent fashion while not punishing others for the alternative view. This thinker can walk a mile in another's shoes and modify cognitive structures accordingly within the frame of reference of a cohesive belief system.
Empathy	The empathetic thinker can genuinely see the world as others see it and is constantly aware of the impact of one's own belief system on the society and culture. The empathetic thinker is capable of using the view of others to defuse argumentation while presenting one's own position effectively. This thinker acknowledges the rights of others to divergent positions while maintaining a cohesive belief system.

Appendix C

Curriculum Mapping

An efficacious method of mapping outcomes onto the curricular structure is by producing a curriculum map. Below is a simple method of constructing a curriculum map.

Curriculum Map for [enter program name and CIP Code]

Key: Introduced Reinforced Assessed

Courses SLOs	Course1	Course2	Course3	Course4	Course5	Course6	Course7	Additional Assessments
Content Knowledge								
#1								
#2								
Critical Thinking								
#3								
#4								
Communication								
#5								
#6								

Appendix D

Guidelines for Developing Rubrics for Use in Learning Outcomes Assessment

Step 1: Gather student work samples and sort them into 3 to 5 scoring (qualitative) groups from lowest to highest.

Step 2: Set initial matching labels for the student work, e.g. the ones that best exemplify "weakest" to "strongest" quality of work.

Step 3: Write ***descriptors*** to describe each level of performance for each group. These will become the range shown on your rubric along the x-axis (row labels). It is best to begin with the highest level of work.

- After writing descriptors, take note of the specific qualitative words that will vary with the level of student work.
- These highest-level descriptive words will be the ones that vary as you write your descriptors for less effective student work.
- If you intend to use the rubric also for grading, make sure you make an effort up front to match a letter grade with the work quality for each row (quality descriptors).
- Use words that convey various degrees of performance: Depth, Breadth, Quality, Scope, Accuracy, Logical, etc.
- Also consider descriptors that demonstrate a range from absence to presence, completeness to incompleteness, consistency to inconsistency or frequency of a desired attribute.

Step 4: Establish headings for the columns which provides the ***scale*** against which student work will be judged.

- Select terms that reflect the range or scoring levels:
- Examples of these are the following:
  - Needs improvement, Satisfactory, Good, Exemplary
  - Beginning, Developing, Accomplished, Exemplary
  - Novice, Apprentice, Proficient, Distinguished
  - Each of these may be accompanied by a numeric value, e.g. 1 – 4.
- Avoid odd numbers: studies have shown that evaluators tend to choose the neutral middle score more often in odd-numbered scales.
- In most scales 1 is normally the lowest, but 0 may be used if there is the possibility of the complete absence of a desired characteristic of the work.

Step 5: Put the descriptors into categories of critical ***performance elements***. These will become the elements in the vertical (y) axis or columns. An acceptable range is 3 – 15 items each of which should focus on a different skill.

- You evaluate only measurable criteria.
- Subjective descriptors, e.g. "the topic was interesting," are hard to measure.
- The rubric should fit on a single page.

Step 6: Test the rubric by using it with a few student papers.

- If necessary, make changes based on the use with trial papers.
- It is now time to establish inter-rater reliability.

Step 7: Have one or more colleagues review the rubric.

- If necessary, make changes based on agreement with colleagues.
- Have the colleagues score an array of sample work which you have already scored using the same rubric.
- Calculate the correlation between your scores and the scores of your colleagues.
- The correlation should be 0.7 or higher.
- NOTE: you may ask the Office of Assessment or Institutional Research for assistance in calculating the correlation coefficients.

Below is a sample, single-skill rubric to evaluate written communication.

NOTE: the column and row structure as well as the numerical scale related to the skill level.

SCALE =	**1 point - NOVICE**	**2 - APPRENTICE**	**3 - PROFICIENT**	**4 - DISTINGUISHED**
performance elements are in this column	*descriptors for lowest performance levels will be in this column*			*this column represents what is the highest level you expect to see*
sample CLARITY & COHERENCE	Sentence structure, word choice, lack of transitions and/or sequencing of ideas make reading and understanding difficult.	Sentence structure and/or word choice sometimes interfere with clarity. Needs to improve sequencing of ideas within paragraphs and transitions between paragraphs to make the writing easy to follow.	Sentences are structured and words are chosen to communicate ideas clearly. Sequencing of ideas within paragraphs and transitions between paragraphs make the writer's points easy to follow.	In addition to meeting the requirements for a "3," writing flows smoothly from one idea to another. The writer has taken pains to assist the reader in following the logic of the ideas expressed.