Texas A&M International University

Institutional Effectiveness Plan & Practitioner's Manual

Office of Institutional Effectiveness and Planning
http://www.tamiu.edu/adminis/iep/

Revised 2012

Principles of Good Practice for Assessing Student Learning

These principles were developed under the auspices of the American Association for Higher Education (now dissolved) Assessment Forum with support from the Fund for the Improvement of Postsecondary Education and the Exxon Education Foundation. Authors included: Alexander W. Astin, Trudy W. Banta, K. Patricia Cross, Elaine El-Khawas, Peter T. Ewell, Pat Hutchings, Theodore J. Marchese, Kay M. McClenney, Marcia Mentkowski, Margaret A. Miller, E. Thomas Moran, and Barbara D. Wright. (December 1992)

- ► 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 most 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.

TAMIU Mission/Vision Statement, Values, and INTEGRATE

The Institutional Mission Statement approved by The Texas A&M University System and the Texas Higher Education Coordinating Board in April 2009 forms the basis for planning, assessment and budgeting:

> Texas A&M International University, a Member of The Texas A&M University System, prepares students for leadership roles in their chosen profession in an increasingly complex, culturally diverse state, national, and global society. A&M International provides students with a learning environment anchored by the highest quality programs built on a solid academic foundation in the arts and sciences. To fulfill its mission, the University offers a range of baccalaureate and master's programs and the Doctor of Philosophy degree in International Business Administration. In addition to offering excellent undergraduate and graduate programs, the University pursues a progressive agenda for global study and understanding across all disciplines.
>
> Through instruction, faculty and student research, and public service, Texas A&M International University embodies a strategic point of delivery for well-defined programs and services that improve the quality of life for citizens of the border region, the State of Texas, and national and international communities.

Vision Statement: Texas A&M International University aspires to become a premier international university, serving as the agent of change for the people of the region, the nation, and the world through multicultural teaching, research, and service.

Our institutional values are:

Respect – Respect for individuals, their points of view and their diverse backgrounds up

Integrity – Modeling ethical standards of personal and professional behavior

Service – Serve the University and regional, national and international community

Excellence –"Excellence is an art won by training and habituation. We do not act rightly because we have virtue or excellence, but we rather have those because we have acted rightly. We are what we repeatedly do. Excellence, then, is not an act but a habit." **–Aristotle**

INTEGRATE

INTEGRATE (**I**nstitutional **N**etwork **T**argeting **E**valuation, **G**oals, **R**esources and **A**ssessment **T**oward **E**ffectiveness) is the integration of planning, assessment, program review, quality enhancement and resource allocation with the ultimate goal of enhancing student success.

INTRODUCTION

This Institutional Effectiveness Plan & Practitioner's manual is provided as a resource for University faculty and administrative staff in developing institutional effectiveness plans for academic programs and administrative/educational support (AES) units. Information in this document was compiled from sources included in the *Bibliography*. The online version will be periodically updated to reflect current best practices in assessment of student learning outcomes.

Staff from the Office of Institutional Effectiveness and Planning provides assistance to faculty and administrators in:

- obtaining access to and familiarity with WEAVEonline
- developing mission, goals, and outcome statements
- identifying appropriate assessment methods
- developing and administering assessment procedures and analyzing their results

Institutional Effectiveness

The University undertakes an institutional effectiveness process that integrates strategic planning, assessment and budgeting. The institutional effectiveness process is an integral part of the institution, a critical component of the planning, evaluation, and budgeting cycle, and is the basis for change and improvement. This process is a planned and continuous activity that is communicated across the organizational structure and is grounded in the University rule cited below:

> Texas A&M International University is responsible for assessing all programs and services provided by the institution. All academic programs and administrative/ educational support units conduct an annual assessment of student learning and program outcomes. In addition, academic and service units conduct external reviews on a cycle determined by the college/school/division and approved by the appropriate vice president.

The strategic planning process focuses the University's energy in working toward common goals, assesses and adjusts the University's progress toward these goals, results in a disciplined effort producing decisions and actions, and shapes and guides the University in a changing environment. Strategic planning begins with a review of the Annual Institutional Effectiveness Review (AIER) reports to determine implications for changes to the strategic plan.

Assessment guides the strategic planning process by providing data for development of action plans and constructive change, development of priorities and allocation of resources. Components of assessment include developing student learning outcome criteria that reflect elements of both the Institutional Mission and the Strategic Plan; selecting appropriate methodologies to assess achievement of outcomes; gathering and analyzing data by applying the methodologies; sharing the results of the analysis; and making evidence-based improvements when necessary.

Assessment results guide resource allocation decisions that reflect institutional priorities based on the Strategic Plan. This process identifies costs and other resources to support implementation of planning and evaluation activities.

Definition of Assessment

Assessment is systematic and ongoing. It is the collection, review, and use of evidence about academic and administrative/educational support programs and services provided by the University for improving student learning and development. Assessment examines quantitative and qualitative evidence regarding student competence, uses this evidence to improve learning for current and future students, and presents results to stakeholders. Data is collected, analyzed and shared to determine skills, knowledge and values students have gained from the University experience. Assessment results are used to determine changes to improve programs and services. The impact of those changes is analyzed to close the loop.

Assessment is a repeating cycle involving the following actions:

- In academic programs, publicizing faculty expectations of student learning with appropriate criteria and standards for learning
- In academic and administrative/educational support units, evidence is systematically gathered, analyzed and interpreted to determine how well standards and expectations are met, and
- Results are used to improve curricula and to modify or create student services.

Assessment activities:

- ***Prove*** whether or not intended outcomes are being achieved
- ***Inform*** stakeholders about relevant issues that can impact the program and student learning
- ***Provide*** information to focus conversations on how to improve policies, programs, and practices
- ***Expand*** the scholarship of assessment or extend the foundation of knowledge underlying effective learning, teaching, and assessment.

Functions of Assessment:

- *Formative* assessment is conducted for program improvement and
  to provide feedback to improve teaching, learning, and the curricula
  to identify students' strengths and weaknesses
  to assist in appropriately placing students based on their particular learning needs.
- *Summative* assessment is conducted for evaluation and accountability and
  to use credible evidence for decision-making regarding fund allocation
  to aid in program level decision-making
  to respond to demands of accrediting bodies, state and federal agencies.

Philosophy of Assessment

Assessment is based on two fundamental assumptions:

- *Effective assessment is learner-centered* - "How will students learn?" and "How well did they learn?" not "How will it be taught?" and "How well was it taught?"
- *Effective assessment is systemic* - each component of the system affects the behavior and properties of other components of the system. Institutional assessment efforts must be integrated and must encourage faculty and administrators to focus on the student learning component of teaching within academic programs and courses.

Benefits of Assessment

- Better information
- More and better student learning and development
- Stronger programs
- Intellectual stimulation and faculty, student, and staff rejuvenation
- Enhanced collegiality
- Improved campus-wide communication
- Better administrative decisions
- Evidence to celebrate successes (Bresciani, M.J.)

An Effective Assessment Program is

- *Integrated* - tied to the University mission and strategic goals.
- *Ongoing* - part of the ongoing business of the unit.
- *Implemented gradually* - become part of the University culture slowly, implemented carefully.
- *Multi-faceted* - uses multiple methods of assessment on multiple samples and at various points in the learning process.
- *Pragmatic* - practical with obvious implications to faculty and students.
- *Inclusive* – it is not an administrative activity; faculty, staff, and students must actively participate in assessment.
- *Self-renewing* - data and information must feed back into the system, both on the University and unit level.

For assessment to be successful the process needs to:

1. Articulate the student learning goals
2. Gather evidence documenting student success in meeting the goals through
   a. direct measures such as exams, papers, projects, and performances
   b. indirect measures such as self-reported satisfaction surveys or job and graduate school placement rates
3. Use assessment results to effect change

AIER REPORTING PROCESS

Each academic degree program & administrative unit is expected to participate in the assessment process by conducting an Annual Institutional Effectiveness Review (AIER) of their program and unit/services. Utilizing the web-based assessment management software, WEAVEonline, each unit engages in assessment activities and completes the following report components:

- Mission: publish degree program or unit mission statement
- Outcomes: develop **3 to 5 relevant and measureable outcomes**
- Associations: identify associations with institutional mission and strategic plan
- Measures: define appropriate methods of assessment; **two measures per outcome**
- Targets: determine and measure achievement criteria
- Findings: detail findings and determine if achievement targets were met
- Analysis: disseminate & discuss results with relevant constituents; **document**
- Action Plan: develop action plan to address areas where targets were not met
- Resources: identify resources needed to implement action plan
- Evaluate impact of action plan – **use of results**

Program coordinators are identified for each academic degree program or administrative unit and are responsible for providing oversight for assessing the quality of the program or unit by: (a) leading the administration of assessment activities, (b) reporting assessment results, and (c) documenting the implementation of program or unit improvements as appropriate. Academic program coordinators should hold a terminal degree in the academic discipline of the program, teach in the discipline, and remain current in the discipline through scholarship/development.

University Assessment Committee: The review of all AIER reports is under the guidance of the University Assessment Committee who provides feedback and recommendations to the program coordinators and offers general recommendations regarding improvements to the institution's overall assessment process and practice.

AIER Evaluation Rubric: This document serves as a guideline for the AIER report reviewers to determine if all relevant criteria have been met and properly documented. The reviewers also have the opportunity to provide additional comments and guidance to the program coordinators during the review process.

AIER Report Timeline: The AIER process is systematic, cyclical and follows an established timeline, determined by the University Assessment Committee, in collaboration with the Director of Institutional Effectiveness and Planning. The timeline is reviewed frequently and is modified as needed.

The most current and approved timeline is outlined below:

Annual Institutional Effectiveness Review (AIER) Timeline

All AIER reports are to be entered on WEAVEonline.

Working sessions scheduled for all program coordinators in computer labs for report assistance. Please register by visiting the following link: https://oitprofessionaldevelopment.tamiu.edu/index.aspx

The University Assessment Committee serves as the primary reviewer of AIER reports during the beginning and end of the assessment cycle, and meets regularly throughout the year.

- **October**
  First section of AIER reports (mission, outcomes, measures & targets) entered by the program coordinators onto WEAVEonline.

  University Assessment subcommittee members conduct review of designated AIER reports with the appropriate Evaluation Rubric and provide feedback to program coordinators.

  Program coordinators make revisions to AIER reports, if applicable.

  All AIER reports should be reviewed and documented on WEAVEonline by end of this month.

- **November to July**
  Assessment activities conducted; data collected and analyzed.

- **May**
  University budget process initiated. Budget forms and instructions are distributed.

  Results and data generated from prior or ongoing assessment activities will be used to inform budget requests.

  Prioritized budget requests due to appropriate Vice President.

- **June**
  Budget Advisory Committee conducts budget hearings and makes recommendations to Executive Officers.

  President, CFO, and Vice Presidents review Budget Advisory Committee recommendations.

- **July/August**
  All completed AIER reports (findings, analysis, action plan) entered by program coordinators on WEAVEonline by end of August.

- **August**
  University Assessment Committee conducts review of AIER process, prepares and disseminates annual report, and completes plan for the following year.

  President presents approved budget to University community.

- **September**
  University Assessment Committee members conduct peer review of completed AIER reports with the appropriate Evaluation Rubric and provide feedback to program coordinators.

  Programs/units utilize completed AIER report results for program/unit improvement and for discussion in planning meetings for upcoming academic/fiscal year. Initiate AIER report for new cycle (September to August).

METHOD SELECTION

When selecting a means of assessment consider the following:

- Assessment tools should evaluate intended outcomes
- Means of assessment should yield viable information
- Use currently available information: enrollment in majors, institution-wide survey results and alumni information
- Select methods that will assess multiple outcomes
- Coordinate assessment efforts with other departments, the University Assessment Committee, and the Office of Institutional Effectiveness and Planning to optimize use of time and resources

FREQUENCY OF ADMINISTRATION

After a method of assessment has been selected, an administration schedule should be developed. Assessments may be conducted daily (counts of clients served), by semester (standardized or locally developed exams) or annually (Student Opinion Survey). Allow sufficient time for the administration of the instrument, data collection, data analysis and implementation to comply with the AIER report deadline.

CRITERIA/BENCHMARK

A critical step in the establishment of an assessment plan is that of identifying a reasonable level of performance/improvement given the resources and personnel available. In academic programs, department faculty should lead discussions regarding program expectations and be directly involved in the establishment of criteria. In AES units, each staff member should be involved in the identification of objectives and the establishment of criteria for success. Establishing a specific indicator for success creates a common target for faculty and staff and motivation for program/unit improvement.

The criteria/benchmark for success should be stated in terms of percentages, percentiles, averages or other quantitative measures. Establish a reasonable benchmark. Avoid using absolutes such as 100%, zero, and all when establishing criteria. If using percentages, the criteria should be no less than 80%.

All programs/units are expected to conduct assessment activities, analyze results, and document the use of results for improvement of programs and services to stakeholders.

SHARING RESULTS

To communicate results effectively, consider the following:

- *Integration*
  Results should be presented in relation to program goals and student learning outcomes. Recommendations should be developed based on data analysis and within a framework to accomplish these changes.
- *Communicate assessment results frequently*
  Conducting and reporting assessment is a predictor of the effectiveness of assessment.
- *Know your audience*
  Identify decision makers and ensure they receive appropriate information. Know the types of information and reports decision makers prefer.
- *Become familiar with and understand the data and what it can mean*

USING ASSESSMENT INFORMATION

Results of assessment should be used to make changes to:

- the program assessment process by restructuring the goal or outcome statement, revising the data collection or conducting a more thorough analysis;
- the operation or academic process by revising admission criteria, advising processes, streamlining course offerings or including technology in the program;
- the curriculum by revising course pre/co-requisites, course content, and adding or deleting courses.

ACADEMIC PROGRAMS

Mission Statement

Elements of a good mission statement:

- *Focus* – To what problem or need does the academic program respond?
- *Purpose* – Concise statement describing the *end result* unit seeks to accomplish.
- *Primary means* – By what means is the purpose accomplished?
- *Values* – Fundamental values, beliefs or guiding principles shared and practiced by department/unit members in daily interaction with others.

Program Goals

Program goals are intended outcomes of instruction, stated in general terms, further defined by a set of *specific* (observable and measurable) student learning outcomes (SLOs) and encompassing a *domain* of student performance (e.g., "Graduates of the program will analyze social policies and their impact on client systems in social work practice"). Program goals:

- *clarify the types of learning expected from the instruction (i.e., knowledge, comprehension, performance skills, etc.).*
- *focus instruction to avoid concentrating on isolated and unrelated learning tasks.*
- *are general to allow flexibility in teaching methods and materials.*
- *provide a planning and assessment framework.*
- *provide a framework for interpreting assessment results.*

Examples of Program Mission Statements:

The ***Bachelor of Arts in History*** is a traditional liberal arts degree designed to provide a sound undergraduate education that helps prepare graduates to think critically, communicate effectively, and successfully transition to graduate school and/or the job market. In support of these goals, History program faculty are committed to 1) developing historical knowledge among our students; 2) fostering the development of critical thinking and writing skills; and 3) ensuring that our students are prepared for further study in history.

The ***Master of Arts in Political Science*** provides a learning environment in which graduate students may develop their own abilities to analyze and think critically about political ideas, events, and policies. The degree intends to prepare students for a wide range of activities such as teaching, scholarship, research, and public service.

The ***Master of Science in Nursing*** degree program produces culturally competent nursing leaders who are prepared with role specialization as a family nurse practitioner.

The principal focus of the ***Master in Educational Administration*** is to provide graduate students with quality instruction when obtaining a degree in Educational Administration and full state certification in order to practice the school principalship and or the superintendentendcy. All graduates of this program will have developed an in-depth theoretical and practical understanding in their field.

The ***Master in Information Systems*** program provides professional and internationalized education by delivering quality education to students and enhancing their analytical reasoning, ethics, communication, and leadership skills.

Program Goals and Learning Outcomes

Once faculty members articulate the mission of the program, they need to focus on specific student learning outcomes. How are learning outcomes different from program goals? The distinction is not always sharply defined, but generally the focus of learning outcomes is on what students will learn rather than on what will be taught. Thus, goals tend to focus on delivery (i.e. teaching), outcomes on effect (i.e. learning).

Consider the following questions as a guide for discussion:

1) What do we want students in our major to know?

2) What do we want our students to be able to do?

3) What values or attitudes (dispositions) do we want to instill in our students?

Multiple perspectives on learning are useful. Most importantly, learning outcomes should not be developed only by the faculty member "responsible for" assessment. Instead, conversations about the program's learning outcomes should engage, as broadly as possible, other people invested in the success of the program's students.

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- *provide a planning and assessment framework.*
- *provide a framework for interpreting assessment results.*

Program goals are built upon the three basic categories of learning outcomes:

► *Cognitive outcomes* - what students know.

- *Knowledge* is the ability to recognize and recall facts. Knowledge represents the lowest level of cognitive outcomes.
- *Comprehension* is the ability to grasp the meaning of material. Comprehension is the lowest level of understanding.
- *Application* is the ability to use learned material in new and concrete situations. Application requires a higher level of understanding than comprehension.
- *Analysis* is the ability to separate whole into parts to determine relationship. This is a higher intellectual level requiring understanding of content as well as structure of the content.
- *Synthesis* is the ability to combine elements to form a new entity. Synthesis stresses creative behaviors with emphasis on formulating new patterns or structure. This is a higher level cognitive outcome.
- *Evaluation* is the ability to make decisions or judgments based on criteria or rationale. Evaluation is the highest level of the cognitive domain and contains elements from all other categories with the addition of conscious value judgments.

► *Affective* - what students care about

- These outcomes concern an individual's feelings and emotions regarding attitude, interests, preferences and adjustment.

► *Performance outcomes* - what students can do. Examples by level of performance include:

- *Skilled performance*: dancing, singing, instrument playing, speaking, reading, singing, etc.
- *Higher level skills*: creative skills (art), lab skills, communications skills, specialized performance skills (as in business, education)
- *Critical thinking skills* emphasize analysis and evaluation (e.g., identifying and analyzing a problem; evaluating possible solutions, etc.)
- *Creative thinking skills* emphasize production of something new (e.g., producing a plan for solving a problem)

Considerations in selecting program goals:

► Program goals should reflect institution-wide goals and the program's mission.
► Goals should represent all (cognitive, affective, and behavioral) logical learning outcomes of the instructional area.
► Goals should be realistic and attainable by the students.

- ► Goals should take into account:
  - *Student readiness*: the necessary experiences and educational background to proceed successfully
  - *Motivation*: the needs and interest of the students
  - *Retention*: learning outcomes that tend to be retained longest such as comprehension, application, and thinking skills.
  - *Transfer value*: reflect learning outcomes that are applicable to new situations and reflect realistic and complex learning tasks useful in real world situations.

Specific and Intended Learning Outcomes

Program faculty should develop program outcomes which describe competencies that graduates should possess, know or be able to do after instruction.

Outcome statements provide the basis for assessment at the course, program, and institutional levels; provide direction for assessment activity; define the faculty expectations of students; and provide stakeholders with information about the educational experience in a given program or department.

A *Specific Learning Outcome* is an *intended* outcome stated in terms of *specific, observable* and *measurable* student performance. Examples are outlined below:

Student-focused rather than instructor-focused. Intended outcomes are formulated to focus on student learning, i.e. they describe what students should know, understand, or be able to do with their knowledge at the end of a program.
Poor: "The program will include instruction in multimedia techniques"
Good: "Students the will effectively use multimedia to prepare presentations"

Focus on the learning resulting from an activity rather than on the activity itself.
Poor: "Students will study at least one non-literary genre of art"
Good: "Students will conduct an analytical appreciation of a specific art form"
"Students will communicate the appreciation [of art] to others either in written or verbal form"

Reflect state mandates and institutional expectations about learning. Typically these expectations address the transferable or orthogonal competencies (e.g., writing, critical thinking, leadership skills, quantitative reasoning). Departments and programs should reinforce these broad goals in the statements of expected learning outcomes and, subsequently, in the curricula.

Reflected in program curriculum and translated into course specific objectives. A good practice is to ask instructors to state explicitly in each course syllabus the program level goals and outcomes addressed in that course.

Focus on important, non-trivial aspects of learning that are credible to the public. One pitfall to avoid in formulating intended outcomes is focusing on easy-to-measure, but relatively unimportant outcomes. This can happen when learning outcomes are developed by carving up

the content of the discipline into smaller pieces. The focus of learning outcomes is not on less content but rather is on what students can do with the content they have learned.
Poor: "Students will recall the stages of mitosis"
Good: "Students will be able to reason effectively by using simplified economic models such as supply and demand, marginal analysis, benefit-cost analysis, and comparative advantage"

Are general enough to capture important learning but clear and specific enough to be measurable. For example, the outcome, "Students will be able to solve problems," gives little guidance for assessment. In contrast, the outcome "Students will work effectively with others on complex, issue-laden problems requiring holistic problem solving approaches," can be assessed by developing assessments that require teams of students to develop solutions to complex, issue-laden problems, as defined by the discipline. They can, then, be judged on the effectiveness of their team skills, the quality of their solution, and their ability to use holistic problem solving approaches.
Poor: "Students will be able to solve problems"
Good: "Students will work effectively with others on complex, issue-laden problems requiring holistic problem solving approaches"

Are effectively worded

- use action verbs that describe definite, observable actions. Faculty members should select those verbs that (i) most clearly convey instructional intent and (ii) most precisely specify the student performance the program is willing to accept as evidence that the general instructional goal has been achieved
- include a description under which the action takes place – "when given x, the student will be able to…"
- indicate an appropriate level of competency assessed through one or more indicators.

CRITICAL AND CREATIVE THINKING – BLOOM'S TAXONOMY
COGNITIVE DOMAIN- SUGGESTED VERBS TO USE BY LEVEL

Level of Learning	Description	Verbs
Knowledge **Remembering**	The ability to recognize and recall facts. Knowledge represents the lowest level of learning outcomes.	collect, copy, count, define, describe, draw, duplicate, enumerate, examine, identify, label, list, match, memorize, name, outline, point, quote, read, recall, recite, recognize, record, relate, repeat, reproduce, retell, select, show, state, tabulate, tell, write
Examples of knowledge: vocabulary, events, dates, places		
Comprehension **Understanding**	The ability to grasp the meaning of material. Comprehension is the lowest level of understanding.	associate, change, cite, compare, compute, construct, contrast, convert, decode, defend, define, describe, differentiate, discriminate, discuss, distinguish, estimate, explain, express, extend, extrapolate, generalize, give examples, group, identify, illustrate, infer, interpret, locate, order, paraphrase, predict, recognize, report, restate, review, rewrite, solve, summarize, tell, trace
Examples of comprehension: translating materials, understanding facts and principles, infer cause and consequence		
Application **Applying**	The ability to use learned material in new and concrete situations. Application requires a higher level of understanding than comprehension.	act, add, administer, apply, articulate, calculate, change, chart, classify, complete, compute, construct, demonstrate, determine, develop, discover, divide, dramatize, employ, establish, examine, experiment, graph, illustrate, interpolate, interpret, manipulate, modify, operate, organize, practice, predict, prepare, produce, relate, report, schedule, show, sketch, solve, subtract, teach, transfer, translate, use
Examples of application: solve mathematical problems, apply concepts, use information in new situations		

Level of Learning	Description	Verbs
Analysis **Analyzing**	The ability to separate whole into parts to determine relationship. This is a higher intellectual level requiring understanding of content as well as structure of the content.	analyze, appraise, arrange, breakdown, calculate, classify, combine, compare, connect, contrast, correlate, criticize, debate, deduce, design, detect, determine, develop, diagram, differentiate, discriminate, distinguish, divide, examine, experiment, explain, focus, identify, illustrate, infer, inspect, interpret, inventory, order, outline, point out, prioritize, question, relate, select, separate, subdivide, test, translate, utilize
Examples of analysis: recognize and explain patterns, analyze relationship between parts		
Synthesis **Evaluating**	The ability to combine elements to form a new entity. Synthesis stresses creative behaviors with emphasis on formulating new patterns or structure. This is the highest level of understanding.	adapt, anticipate, arrange, assemble, categorize, collaborate, combine, compile, compose, conceive, construct, create, design, devise, drive, establish, explain, express, facilitate, formulate, generalize, generate, group, integrate, intervene, invent, make, manage, modify, negotiate, order, organize, originate, plan, predict, prepare, prescribe, propose, rearrange, reconstruct, reinforce, relate, reorganize, revise, rewrite, set up, specify, speculate, structure, substitute, summarize, synthesize, tell, transform, validate, write
Examples of synthesis: create new ideas, propose plans, integrate learning to solve problems		
Evaluation **Creating**	The ability to make decisions or judgments based on criteria or rationale. Evaluation is the highest level of the cognitive domain and contains elements from all other categories with the addition of conscious value judgments.	appraise, ascertain, assess, choose, compare, conclude, contrast, convince, criticize, critique, decide, defend, determine, discriminate, estimate, evaluate, explain, grade, interpret, judge, justify, measure, persuade, rank, rate, reframe, relate, resolve, revise, score, select, summarize, support, test, validate, value, write
Examples of evaluation: critique ideas, make recommendations, assess value and make choices		

Updated by Richard C. Overbaugh and Lynn Schultz, Old Dominion University.

Curriculum Mapping

Curriculum mapping evaluates the program/department curriculum in relation to intended outcomes to ensure that students receive instruction in the appropriate order and are provided with enough repetition to achieve learning outcomes. Curriculum mapping enables the program/department to identify gaps in the curriculum and provides an overview of the accomplishments of each course. An example is provided below:

Outcomes	3300	3305	3310	3320	3322	4330	4350	4360
1. Graduates will employ a range of public speaking tools to demonstrate their communicative competence.	I	I, E, R, A	I	I, E, R, A	I, E, R, A	E, R, A	E, R, A	E, R, A
2. Communication graduates will be able to identify and approach practical communication problems within professional settings, invaluable interpersonal and organizational ways.	I	I, E, R, A	I	I, E, R, A	I, E, R, A	E, R, A	E, R, A	E, R, A
3. Communication graduates will successfully write an essay that demonstrates their theoretical knowledge, research and writing skills while analyzing a practical topic or professional problem.	I	I	I	I	I	E, R, A	E, R, A	E, R, A

Introduced=I, Emphasized=E, Reinforced=R, Applied=A

ADMINISTRATIVE AND ACADEMIC/STUDENT SUPPORT UNITS

Administrative and academic/student support units provide essential services to the institution and to students. Administrative units do not impact instructional programs directly and include units such as Budget/Payroll/Grants/Contracts, Physical Plant or Receiving. Academic/student support units contribute to student learning and include units such as the Killam Library, University College, University Learning Center, and the Writing Center. These services are student-centered and are essential to the overall learning environment at TAMIU.

As part of the assessment process, Administrative and Academic/Student Support Units develop a mission statement that supports the Institutional Mission.

Mission Statement

Elements of a good mission statement**:**

- *Focus* – To which need does the AES unit respond?
- *Purpose* – Concise statement describing the *end result* the unit seeks to accomplish.

- *Primary means* – By what means is the purpose accomplished?
- *Values* – Fundamental values, beliefs or guiding principles shared and practiced by unit members in daily interaction with others.

Unit Outcomes

Unit outcomes are *specific* (observable and measurable) outcomes that assess a process or service within one assessment cycle. The outcomes should be under the direct control of the unit and be related to a University Strategic Plan goal and objective.

Unit outcomes for administrative units are primarily process oriented describing the support process/service the unit intends to address. Examples include:

- The Comptroller/Business Office will promptly process vendor invoices
- Transcript requests submitted to the University Registrar will be completed and returned promptly
- Human Resources will recruit and retain quality staff
- The Killam Library will provide adequate collections to support university programs

Unit outcomes for educational support units may include both process and student outcomes. Examples of student outcomes include:

- Students will prepare an acceptable resume for potential employers
- Students will utilize the library's reference services efficiently
- Students will improve their writing skills through use of the Writing Center

GENERAL ASSESSMENT INFORMATION

Identifying Appropriate Assessment Methods

There should be at least two methods for assessing each outcome. Assessment methods must gather evidence closely related to the intended outcomes. Choose means of assessment that

- answer important questions
- follow identified "good practices"
- are manageable
- result in feedback highlighting accomplishments
- identify areas requiring attention

The following table provides information on a variety of assessment methods.

Assessment Methods

Method	Description	Strengths	Weaknesses
Alumni Survey (Indirect)	Surveying alumni provides information on program satisfaction, career preparation, what jobs/graduate degrees majors have obtained, starting salaries, and skills needed to succeed in the job market/graduate study. Surveys provide opportunities to collect data on program areas that should be changed, altered, improved or expanded.	Alumni surveying is relatively inexpensive and offers the opportunity for improving/ continuing relationships with program graduates.	Contact information must be up-to-date and accessible to get an acceptable response. Developing an effective survey is time-consuming.
Culminating Assignments (Direct)	These may include capstone course(s), performance portfolios, internship, or theses that offer students the opportunity to apply knowledge and skills acquired in the major, provide a final common experience, and offer faculty a way to assess student achievement. Culminating assignments are usually taken the semester before graduation.	Colleges and universities use culminating assignments to collect data on student learning in a specific major, general education or core requirement.	A comprehensive capstone course and appropriate assessment methods may be difficult to develop.
Course - Embedded Assessment (Direct)	Course-embedded assessment refers to methods of assessing student learning within the classroom environment, using course goals, objectives and content to gauge the extent of the learning that is taking place. This technique generates information about what and how students are learning within the program and classroom environment, using existing information that instructors routinely collect (test performance, short answer performance, quizzes, essays, etc.) or through assessment instruments introduced into a course specifically for the purpose of measuring student learning.	This method of assessment is often effective and easy to use because it builds on the curricular structure of the course and often does not require additional time for data collection since the data comes from existing assignments and course requirements.	Course-embedded assessment does, however, take some preparation and analysis time and, while well documented for improving individual courses, there is less documentation on its value for program assessment.

Method	Description	Strengths	Weaknesses
Curriculum Analysis (Direct)	Curriculum analysis involves a systematic review of course syllabi, textbooks, exams, and other materials to help clarify learning objectives, explore differences and similarities between course sections, and/or assess the effectiveness of instructional materials. It offers a way to document which courses will cover which objectives and helps in sequencing courses within a program. Also see Matrices.	Using curriculum analysis as an assessment tool can be a valuable way of tracking what is being taught where. It can provide assurance that specific learning goals and objectives are being covered in the program and can pinpoint areas where additional coverage is needed.	This method, however, can be time-consuming, particularly in large departments with many courses and different instructors, and there may be little consistency between how learning objectives are addressed in one course and how they are taught in another.
Delphi Technique (Indirect)	The Delphi technique elicits information and judgments from participants to facilitate problem-solving, planning, and decision-making. Contributors may not meet physically but may exchange information via mail, FAX, or email. The technique takes advantage of participants' creativity as well as the facilitating effects of group involvement and interaction. It is structured to capitalize on the merits and minimize liabilities of group problem-solving.	The Delphi technique can be useful in bringing together diverse opinions in a discussion forum.	This technique fails, however, when the facilitator lacks objectivity or when the participants feel unsafe or insecure in voicing their real opinions. For this technique to succeed, care must be taken to appoint an impartial facilitator and to convince participants that differing opinions are welcome.

Method	Description	Strengths	Weaknesses
Employer Survey (Indirect)	Employer surveys help determine if graduates have the necessary job skills. Such surveys may indicate other skills employers value that graduates are not acquiring as well as information about the curriculum, programs and student outcomes that other methods cannot.	Employer surveys provide external data and help faculty and students identify the relevance of educational programs.	Ambiguous, poorly worded questions will generate problematic data. Data collected may provide valuable information on current opinion but may not provide enough detail to make decisions. It may be difficult to determine who should be surveyed, and obtaining an acceptable response rate can be costly and time intensive.
Focus Groups (Indirect)	Focus groups are in-depth qualitative interviews with a homogeneous group of 6-10 individuals brought together by a moderator to discuss a specific issue and emphasizing insights and ideas.	Focus groups provide data about participants' experiences, attitudes, views and suggestions in a nurturing environment. These groups allow a small number of individuals to discuss a specific topic in detail, in a non-threatening environment.	The number of questions may be limited; data collected is not useful for quantitative results. Moderators must be well trained and highly skilled.
Institutional Data (Indirect)	A variety of student data are routinely collected. Data can track program history, student academic progress and graduation and retention rates.	Data are easily accessible and readily available through Institutional Research and on the University web page. Data offer both current and longitudinal information.	Data sets may be large and difficult to sort through. The information collected is general (age, gender, race, etc.) and may not directly relate to program goals and objectives.

Method	Description	Strengths	Weaknesses
Matrices (Indirect)	A matrix is a grid of rows and columns used to organize information. A matrix may be used to summarize relationships between program objectives, course syllabus objectives, course assignments, or courses in a program; for curriculum review, to select assessment criteria or for test planning; or to compare program outcomes to employer expectations.	A matrix can provide an overview of how course components and curriculum link to program objectives, can help tailor assignments to program objectives, and can lead to discussions that in turn lead to appropriate changes in courses or curricula.	A matrix can provide a clear picture of how program components are interconnected and also reveal where they are not. Acknowledging and responding to disconnects may involve serious discussion, flexibility and willingness to change.
Performance Assessment (Direct)	Performance assessment is linked to the curriculum and uses real samples of student work to assess skills and knowledge. Student work includes class assignments, auditions, recitals, projects, presentations and similar tasks. Performance Assessment requires students to use critical thinking and problem-solving skills within a context relevant to their field/major; is rated by faculty and assessment data collected; and provides students with feedback on the performance evaluation.	Performance assessment can yield valuable insight into student learning; provides students with comprehensive information on improving their skills; strengthens faculty-student communication; and increases the opportunity for students' self-assessment.	Performance assessment is labor-intensive and may be an additional burden for faculty and students. Skills to be examined and specifying evaluation criteria may be difficult and time-consuming.
Portfolios (Direct)	Portfolios are collections of student work over time to demonstrate student growth and achievement. Portfolios may be used for certification, licensure, or external accreditation reviews. Portfolios may contain: research papers, process reports, tests and exams, case studies, audiotapes, personal essays, journals, self-evaluations and computational exercises.	Portfolios can be valuable resources when students apply to graduate school or employment. Portfolios encourage students to take greater responsibility for their work.	Portfolios may be costly and time-consuming; require extensive effort for both students and faculty; and may be difficult to assess and store.

Method	Description	Strengths	Weaknesses
Pre-test / Post-test Evaluation (Direct)	Locally developed tests and exams administered at the beginning and end of a course or program to monitor student progress and learning. Results identify areas of skill deficiency and track improvement within the time frame.	Pre- and post-tests can effectively collect information on students upon entry and exit of a program/course and can assess student knowledge quickly to allow comparisons between different student groups or the same group over time.	Pre- and post-tests require time to develop and administer. Tests should measure what they are intended to measure over time; in line with program learning objectives and have consistency in test items, administration and application of scoring standards.
Standardized and Local Test Instruments (Direct)	Standardized instruments (developed outside the institution and applied to a large group of students using national/regional norms and standards) or locally-developed assessment tools (created within the institution/program/ department for internal use) may be selected depending on specific needs and available resources. Knowing what to measure is key to successful selection of standardized instruments. It is also important to administer the assessment to a representative sample to develop local norms and standards. Locally developed test instruments can be tailored to measure local needs regarding specific performance expectations for a course or group of students.	Local test instruments are directly linked to local curriculum and can assess student performance on a set of local criteria. Standardized tests can be administered immediately and thus less expensive than developing and creating local tests. Results can be tracked and compared to norm groups and subjectivity/misinterpretation is negligible.	Developing a local tool along with a scoring key/method is time-consuming. Performance cannot be compared to state or national norms. Standardized measures may not relate to local curricula and costs can be substantial. Test results may not contain locally-relevant information to be useful.

Method	Description	Strengths	Weaknesses
Student Surveys and Exit Interviews (Indirect)	Surveys and interviews ask students to respond to a series of questions/statements about their academic experience. Questions can be open-ended or close-ended. Surveys and interviews can be written or oral. Survey types include in-class, mail or telephone questionnaires/interviews. Interviews may be structured as in-person interviews or focus group interviews.	Surveys can be inexpensive and easy to administer and are best suited for short and non-sensitive topics. They can be used to track opinions. Data is easy to collect and tabulate. An interview can explore topics in-depth and collect rich data.	Items may be ambiguous and poorly written and not generate enough detail for decision making. Information may be distorted if the respondent feels a lack of privacy and anonymity. The success of interviews depends on the skills of the interviewer.
Syllabus Analysis (Indirect)	Syllabus analysis (review of textbooks, exams and curricular material) involves review of current course syllabus (written or oral assignments, readings, class discussions/ projects and student learning outcomes) to determine if the course is meeting the goals/objectives of the instructor/ department.	Used learning objectives need to be clarified; explore the differences/similarities between course sections; or assess the effectiveness of instructional materials. Syllabus analysis can provide information to enhance assessment plans.	The review is time consuming and may result in inconsistency in collecting and analyzing the data when there is more than one reviewer.

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Institutional Effectiveness Plan & Practitioner's Manual

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