University of Central Florida

Developing Program Assessment Plans to Build a Culture of Continuous Improvement

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Workshop W-10

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Goals for the Workshop

- Clear understanding of how to develop an assessment plan
- More knowledgeable about assessment methods
- More knowledgeable about analyzing and reporting assessment results
- More knowledgeable about how to review and assure the quality of assessment plans and the reporting of assessment results

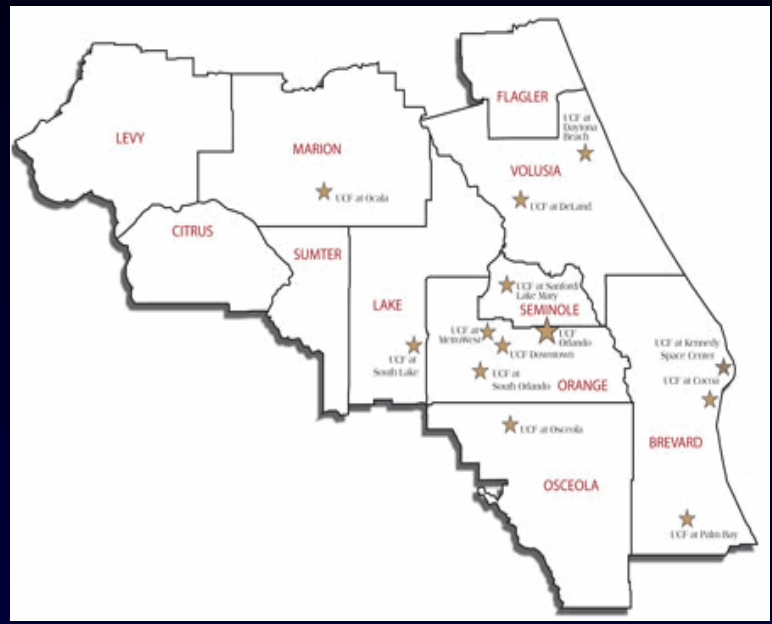
Schedule

- Developing assessment plans
  - *Exercises and discussion*
- Break (2:00)
- Developing assessment plans continued
  - *Exercises and discussion*
- Reporting assessment results
  - *Discussion*
- Conclusions

The University of Central Florida

Stands for Opportunity

- Established in 1963 (first classes in 1968), Metropolitan Research University
- Grown from 1,948 to 48,897 students in 39 years
  - 41,632 undergrads and 7,265 grads
  - Eleven colleges
  - 12 regional campus sites
  - 6th largest public university in U.S.
  - 89% of lower division and 67% of upper division students are full-time



- Carnegie classification:
  - Undergraduate: Professions plus arts & sciences, high graduate coexistence
  - Graduate: Comprehensive doctoral (no medical) [Medical school approved]
- 92 Bachelors, 97 Masters, 3 Specialist, 28 PhD programs, 1 MD program
- Largest undergraduate enrollment in state and second largest in U.S.
- Approximately 1,300 full-time faculty; 9,800 total employees

Schedule

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  - *Exercises and discussion*
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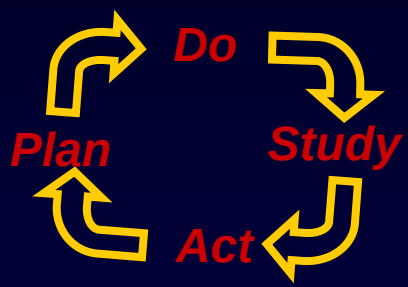
What Do We Mean by Program Assessment?

- It is a **formative** evaluation process designed to support program improvement
- It is continuous



Shewart's PDSA Cycle

- It is focused on improvement
  - Student learning
  - Student development
  - The institution and its people

Systems Supporting Improvement

Linkages

- Share data and information
- Inform budget process

Differences

- Different cycles
- Additional data elements
- Different purposes
  - Continuous improvement
  - Evaluation
  - Planning

Effective Program Assessment Should Answer these Questions

- What are you trying to accomplish?
- How well are you doing it?
- How, using the answers to the first two questions, can you improve what you are doing?
- What and how does a program contribute to the development and growth of its students and/or the support of its customers?
- How can student learning be improved?

Mechanics of Assessment

- Assessment is a continuous improvement process
- To improve, you need to know where you are today and where you would like to go
  - Mission (purpose)
  - Vision (where you would like to go)
  - Goals (steps to getting where you would like to be)
  - Objectives or outcomes (what you need to achieve in order to get there)
  - Measures (how well you are currently doing)
- To improve, you need to take action
  - Analyze your program or operations to determine changes
  - Plan the changes
  - Take action

minimum elements needed for an assessment plan

Assessment Plan Content

- Includes mission or purpose of program
  - States primary functions and activities
  - States why these are done (program purpose)
  - Identifies stakeholders
- Includes a sufficient number of outcomes
  - Student learning outcomes (think, know, do)
  - Program outcomes
- Includes multiple measures for each outcome
  - Direct measures
    - Measurement using an exam of knowledge gained
  - Indirect measures
    - Student's perception of knowledge gain

Process to Develop an Assessment Plan

Step 1: Organize for assessment

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Step 2: Define program mission

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Step 3: Define program and student learning outcomes

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Step 4: Identify measures and assessment methods

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Step 5: Select assessment methods and targets for each outcome

Organizing for Assessment

- Before assessment can begin, key players, committees and structures must be identified and assume responsibility for designing, implementing, and carrying out the assessment process
- Understanding the needs of program or unit can help you think about the design of the assessment plan
- Depending on purpose, the plan can be informal (for internal use) or formal (external audience)

Identify the Scope of the Plan

- What should the assessment include?
  - Assess resources (facilities, students, faculty)
  - Assess processes (pedagogy, advising, feedback)
  - Assess results or outcomes; plan changes
  - Who/what gives you feedback
- Academic program assessment typically focuses on student outcomes
- Administrative unit assessment typically focuses on quality of products, processes, and services
  - Educational support units may also focus on student learning outcomes

Identify Scope of Assessment

RESOURCES	PROCESS	RESULTS	FEEDBACK
Students	Curriculum	Student Learning Outcomes	Alumni
Faculty, Staff	Instruction	Growth and Development	Employers
Facilities	Student Development Opportunities	Success	Parents
Space	Advising	Satisfaction	Community
Physical Resources	Co and Extra Curricular Activities	Service	Students
Financial Resources	Resource Management	Department or University Reputation	Faculty
		Community Impact	Department
			Program

A Checklist for Identifying Program or Unit Needs

- What are you assessing?
- Why are you assessing?
- What do you want to know?
- From whom will you collect the data?
- Who will see the results?
- How will the data be used?
- How often will the data be collected?
- Who will collect the data?
- *(See assessment needs checklist—handout)*

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Defining the Mission Statement

- A broad statement of what the program or unit is, what it does, and for whom it does it
- A clear description of the **purpose** of the program or unit and the learning environment
- Reflects how the program contributes to the education and careers of students graduating from the program or how the unit supports its customers
- Aligned with department, college, and university missions
- Distinctive for your program or unit

Components of a Mission Statement

- Primary functions or activities of the program or unit
  - Most important functions, operations, outcomes, and/or offerings of your program or unit
- Purpose of the program or unit
  - The primary reasons why you perform your major activities or operations
- Stakeholders
  - Groups or individuals that participate in the program and those that will benefit from the program or unit

Structure of a Mission Statement

- "The mission of (name of your program or unit) is to (your primary purpose) by providing (your primary functions or activities) to (your stakeholders)." (Additional clarifying statements)

- (Note: the order of the pieces of the mission statement may vary from the above structure.)

Checklist for Mission Statement

- Is the statement brief and memorable?
- Is it distinctive?
- Does it clearly state the purpose of the program or unit?
- Does it indicate the primary function or activities of the program or unit?
- Does it indicate who the stakeholders are?
- Does it clearly support the department's, college's, and university's missions?
- *(See guidelines for writing and reviewing a mission statement—handout)*

UCF

Example

Primary Purpose

Program Name

- The Mission of the Biology B.S. degree program is to (1) prepare students for employment in various biology-related areas and (2) to prepare them in their pursuit of advanced degrees in biology or health-related professional schools by educating students in the fundamental concepts, knowledge, and laboratory/field techniques and skills of the life sciences.

Primary Functions

Stakeholders

Example

Office Name

- The Mission of the UCF Office of Operational ence and Assessment Support (OEAS) is to t efforts to improve the effectiveness of University opera quality of student learning outcom sessment. OEAS will accomplish this by providing support to all administrative units and academic programs through integrated processes that include continuous quality improvement, survey development, data collection, and guidance in assessment.

Primary Purpose

Stakeholders

Primary Functions

Exercises

- The mission of the XYZ Engineering bachelor's program is to educate XYZ students in XYZ engineering.
- The mission of the XYZ bachelor's degree program is to educate students coming from diverse backgrounds in the principles of XYZ engineering that will prepare them for jobs in XYZ engineering.
- The mission of the XYZ bachelor's degree program is to educate (through courses and an internship) students coming from diverse backgrounds in the fundamental skills, knowledge, and practice of XYZ Engineering in order to (1) prepare them for XYZ engineering positions in service and/or manufacturing industries and (2) prepare them for continuing for an advanced degrees in XYZ or related disciplines. The program will promote a commitment to continued scholarship and service among it graduates and foster a spirit of innovation. It will also promote an environment that is inclusive and diverse.

Representative Mission Statements

- **Mission**

  The Organizational Communication Division within the School of Communication provides the knowledge, skills theory and practical applications to prepare students seeking communication careers in corporations, government agencies and not for profit groups. The course content focuses on the process and impact of creating and exchanging messages within a network of interdependent relationships designed to help organizations achieve their mission.

- **Mission**

  The Civil Engineering program faculty strives to create a high quality learning experience for our students. The program will provide a broad engineering education to our graduates that will prepare them for both current and future professional challenges. It will promote a commitment to continued scholarship and service among our graduates and foster a spirit of innovation so that our graduates are positioned to take advantage of new technology in our profession. It will also promote an environment that is inclusive and diverse.

Representative Mission Statements

- **Mission**

  To provide a high quality educational experience to management and general business undergraduate students. The Management program will help students develop management skills and knowledge that will assist them in achieving success in their careers and/or further education.

- **Mission**

  The libraries of the University of Central Florida provide information resources and services to support and enrich the education, research, and community service missions of the University.

Values and Guiding Principles
[Optional for Plan]

- A short description of the code of behavior to which an organization adheres or aspires
- Values indicate what your unit should uphold
  - integrity, respect, community, trust, inclusiveness, and excellence
- Guiding principles indicate how you would like your unit to operate
  - How would you like your unit or program or students to operate or behave?
  - Seize the future; innovate; build community; partner; plan

Examples

- Values
  - Integrity, respect, community, and excellence are the core values that bind our unit together and guide our conduct, performance, and decisions.
- Guiding principles
  - Our organization strives to develop partnerships and work in teams to achieve our mission, plan rather than react, and innovate to achieve operational excellence.

Developing a Vision for Your Unit
[Optional for Plan]

- A short description of what an organization or program will look like if it succeeds in implementing its strategies and achieves its full potential
  - What would you like to become?
  - What direction would you like to move?
  - What would you like to see in the future?

Example

- The vision for XYZ engineering is to become one of the top ten programs that is able to attract students nationally and place graduates at top engineering firms.

Reviewing Your Vision Statement

- Does it indicate what you would like to become or strive for?
- Does it indicate what you would like to look like in the future?
- Do you have a statement that will pull you in a desired direction?
- Is your vision statement inspirational?
- *(See guidelines for writing and reviewing a vision statement—handout)*

Defining Program Goals
[Optional for Plan]

- Goals are long-term organizational or program targets or directions of development
- Goals should help move the organization or program to attain its vision
- They state in broad terms what the organization wants to accomplish or become over the next several years
- Goals provide the basis for decisions about the nature, scope, and relative priorities of projects and activities
- Establishment of goals prior to developing outcomes is recommended
  - Some assessment processes may not include reporting of goals

General Process Used for Generating Goals

- Examine vision
  - Example: become the best program
- Two general approaches to developing goals
  - Review existing documents
  - Ideal unit or program approach
- Think what that unit or program would look like and how its services and operations (refer to your mission) would need to be conducted to reach that vision
  - Improve, minimize, maximize, provide
- State these as goals

Structure of a Goal Statement

- "To (action verb) (object) (modifiers)"

- Example: to attract the best students
- Example: to graduate students who are prepared for industry
- Example: to adequately prepare students for graduate school

Reviewing Your Goals

- Are they consistent with your mission?
- If you achieve your goals have you reached your vision?
- Are your goals aligned with your values?
- *(See guidelines for writing program goals and learning outcomes, and reviewing goals—handouts)*

Process to Develop an Assessment Plan

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Defining Program and Student Learning Outcomes

- Program outcome
  - A specific, measurable statement that describes desired performance
- Operational outcome
  - a type of outcome that addresses operational or procedural tasks, such as efficiency or satisfaction
- Student learning outcome
  - Specific type of program outcome that describes the intended learning outcomes that students must meet on the way to attaining a particular degree
- More precise, specific, and measurable than goal
- There can be more than one outcome related to each goal
- A program or student learning outcome can support more than one goal
- *(See guidelines for writing program goals and learning outcomes, and reviewing outcomes—handouts)*

Think *SMART* When Defining Operational and Student Learning Outcomes

Specific
- Clear and definite terms describing the abilities, knowledge, values, attitudes, and performance

Measurable
- It is feasible to get the data; data are accurate and reliable; it can be assessed in more than one way

Aggressive but Attainable
- Has potential to move the program forward

Results-oriented
- Describe what standards are expected from students or the program

Time-bound
- Describe where you would like to be within a specified time period

Outcomes and Performance Indicators are Linked Concepts

- Performance indicator
  - A means of objectively quantifying the results of programs, products, projects, or services
- When defining outcomes, it may be useful to think about potential performance indicators first

Two Approaches to Generating Outcomes and Performance Measures

First Approach

- Describe mission
- Describe vision
- List goals
- List outcomes
- Determine measureme methods

NEXT

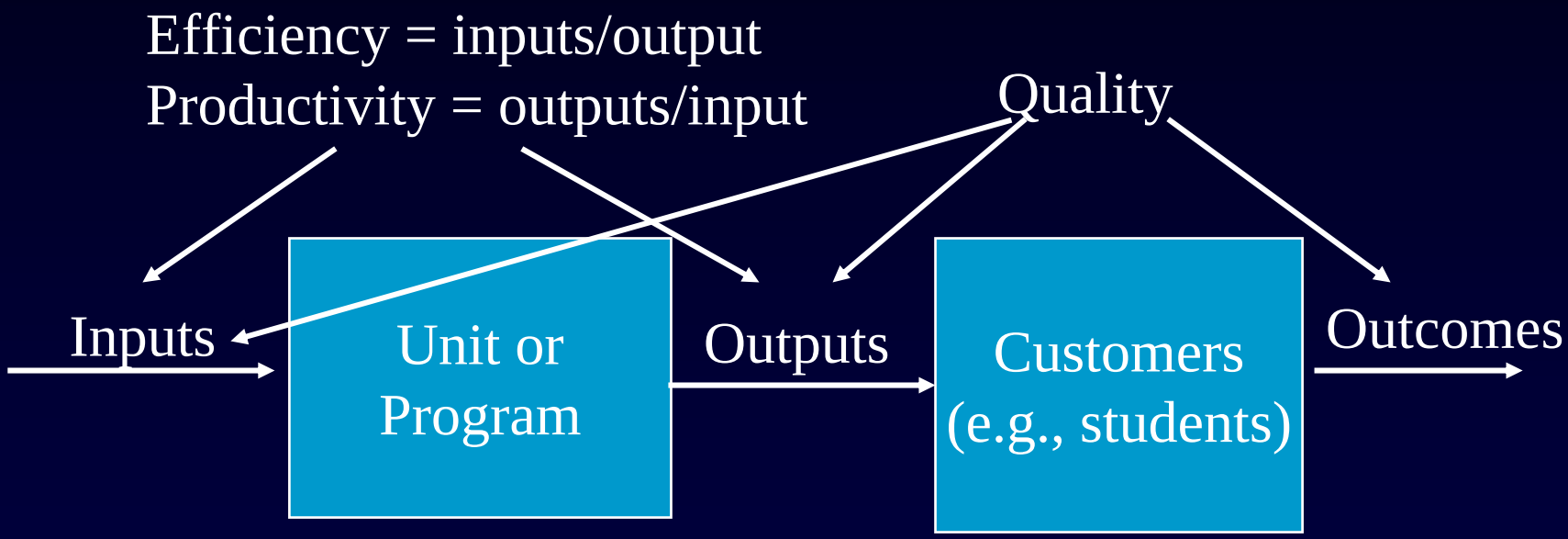
Second Approach

- Describe mission
- Describe vision
- List goals
- Brainstorm performance indicators
- Select "important" performance indicators
- Write outcomes
- Develop measurement methods

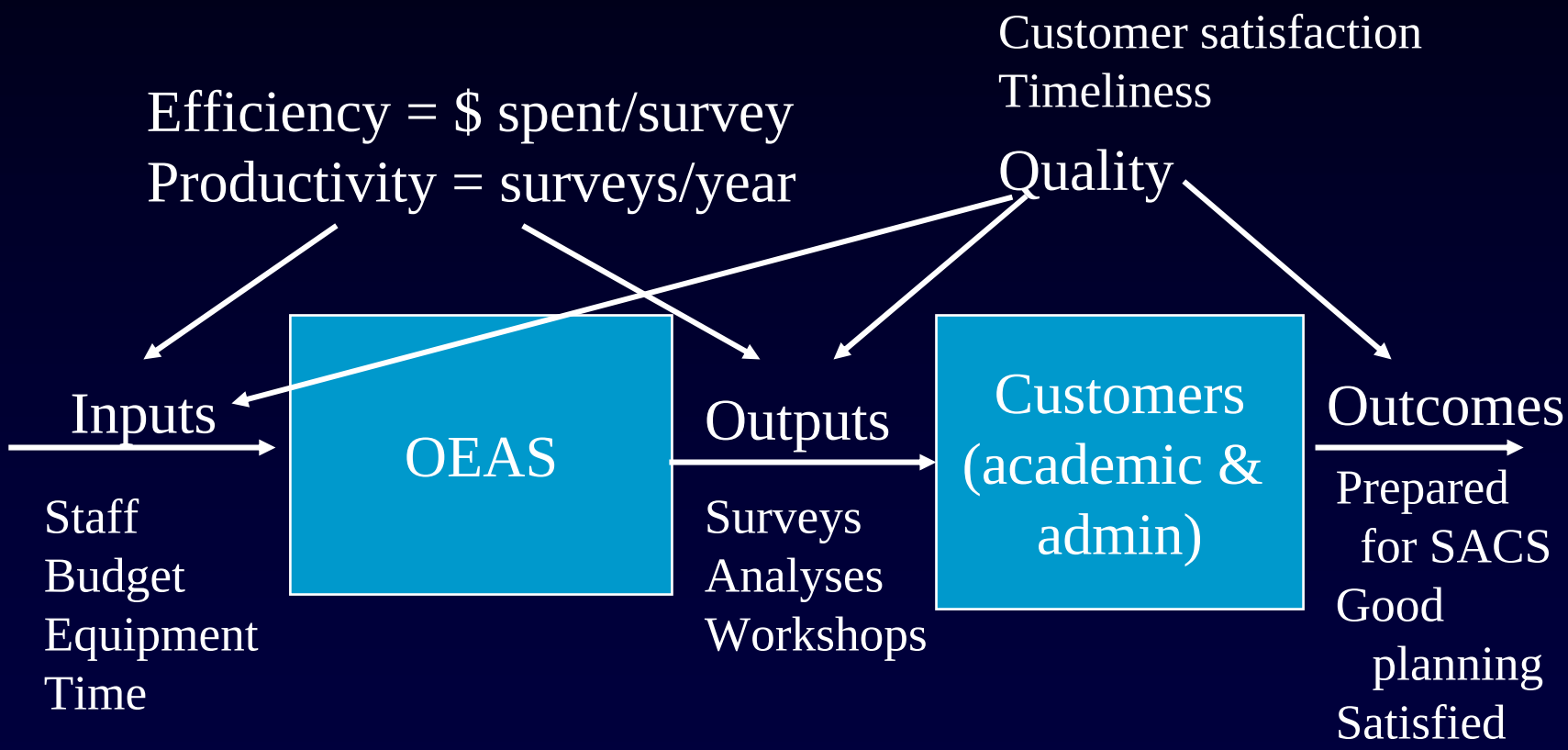
Three Approaches to Brainstorming Performance Indicators

- I/O/O approach: Input, Output, Outcome approach
- Perfect unit or program approach
- Zwicky's morphological box

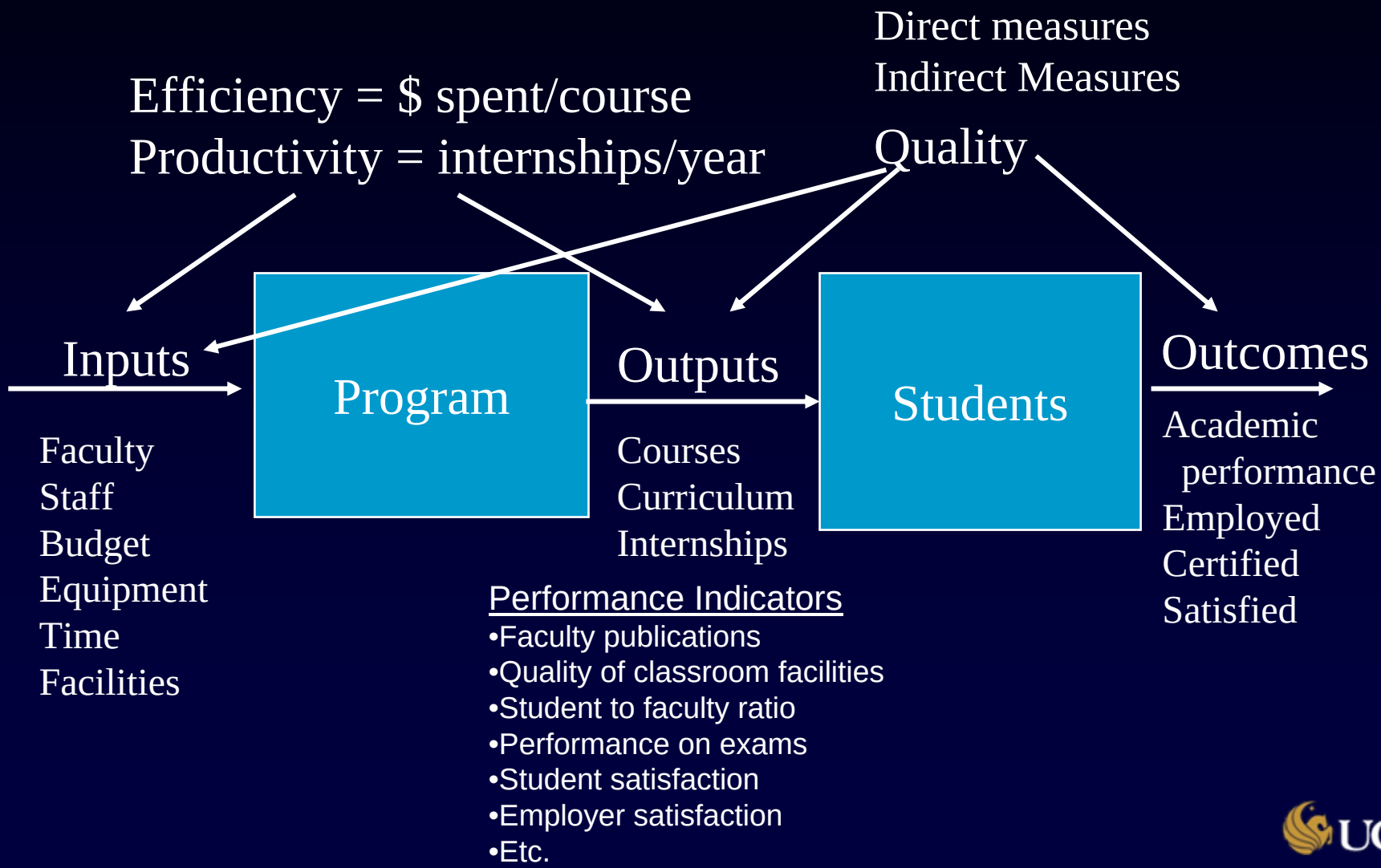
Inputs…Outputs…Outcomes



Example: OEAS



Example: Academic Program

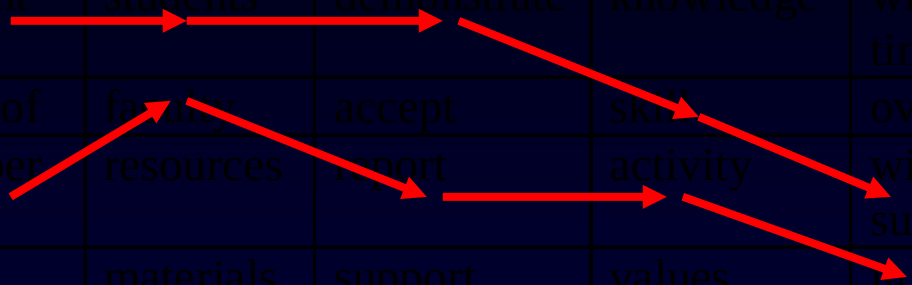


Perfect Unit or Program

- Try to visualize what the “perfect unit” or “perfect graduate” would look like
  - List the primary characteristics, features, or attributes that come to mind, along with the positive effects that they would have
- Next try to visualize a “really bad one”
  - List the characteristics and how they negatively affect the stakeholders
- Sort lists to identify most important performance indicators

Zwicky's Morphological Box

Measure	What	Action	Object	Modifiers
Percent of	students	demonstrate	knowledge	within specified timeframe
Ratio of	faculty	accept	skill	over a period of time
Number of	resources	report	activity	with identified level of success
	materials	support	values	in a specific area
		approve	resources	with a specified level of satisfaction
		utilize		with a specified level of efficiency
		document		
		approved		
		complete		



Zwicky, F., *Discovery, Invention, Research - Through the Morphological Approach*, Toronto: The Macmillian Company (1969).

See **http://www.swemorph.com/ma.html**

Write the Indicators as Potential Outcome Statements

- Write an outcome statement for each important performance indicator
- Ask “what does it take to achieve a high level of performance?”
- Outcome Format: The (object) (action verb) (modifiers)
- Example performance measure: level of student satisfaction with academic information that has been provided by advisors
  - Outcome statement: advisors will provide high quality academic information to students

Converting Performance Measures to Outcomes

- Example performance measure: test scores in a subject area
  - Outcome: Students will have a high level of understanding of the subject area
- Example performance measure: time-to-degree
  - Outcome: Students will graduate from the program in an efficient manner
- Example performance measure: satisfaction of employers with student knowledge
  - Outcome: Students will have a high level of understanding of the subject area

Writing Outcomes

- Do not join elements in one outcome statement that can not be assessed by single method
  - Customers will be highly satisfied with the service and requests for service will increase

No

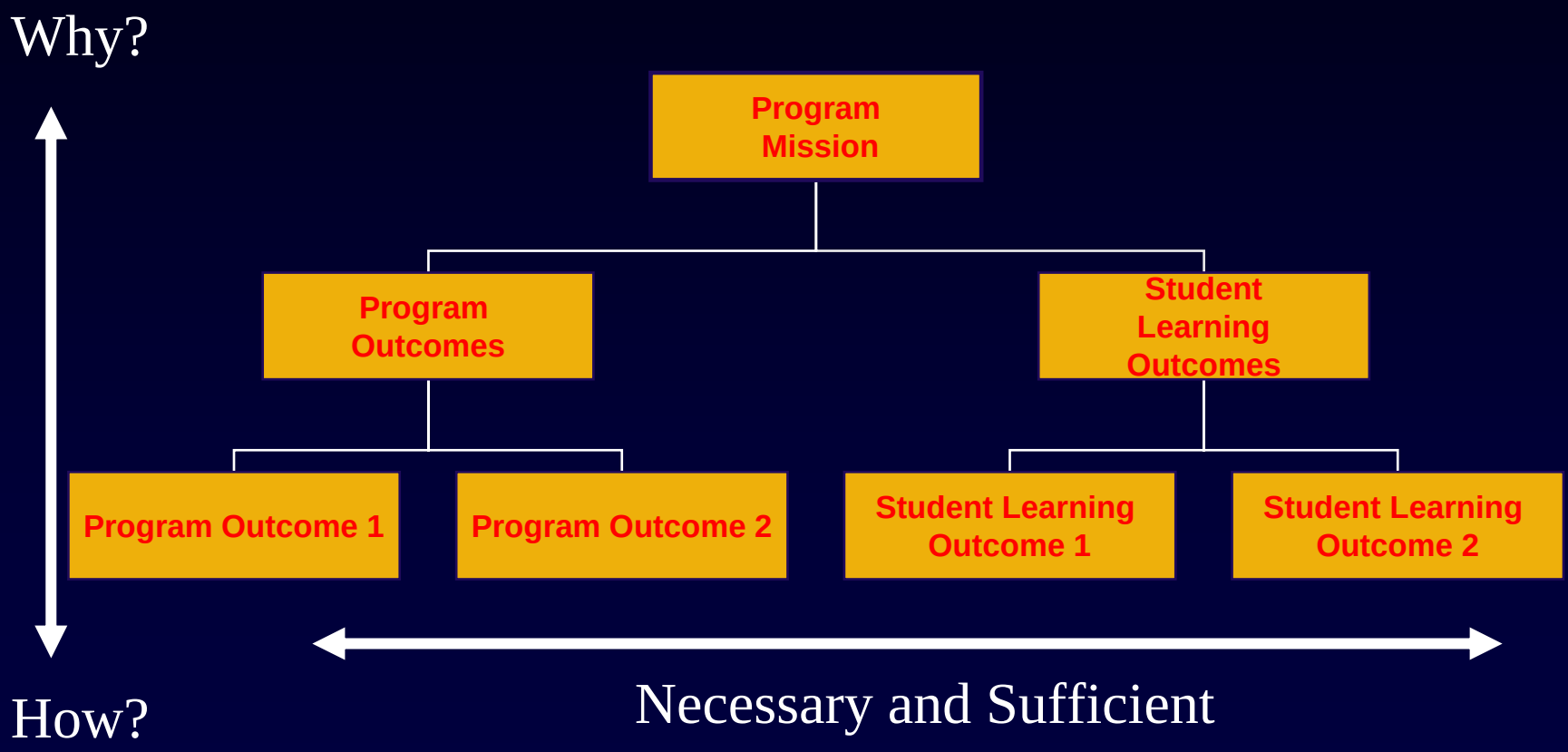
- Should be stated so that the outcome can be measured by more than one assessment method (ideally)
  - The office will provide service ~~within 2 days of request~~

Maybe

  - The office will provide timely service
  - Advisors will provide high quality academic information to students as evidenced by ~~"very good" to "excellent" stud~~ ratings from 90% of the students

Maybe

Validating Your Mission and Outcomes



Evaluate the Quality of the Outcomes

- Are the outcomes aligned with the mission, vision, values, and goals?
- Is each outcome important to management?
- Is it possible to collect accurate and reliable data for each outcome?
- Taken together, would the indicators associated with the outcomes accurately reflect the key results of the programs, operations, or service offered by your unit or program?
- Is there anything missing?
- Are they stated so that it is possible to use a single method to measure the outcome?
- Are they stated so that more than one measurement method can be used?
- Can they be used to identify areas to improve?

Exercises

- The OEAS office will develop reports
- The OEAS office will develop high quality reports
- The OEAS office will develop high quality reports in a timely fashion
- The OEAS office will provide analysis of survey results to units within 60 days of data collection **Maybe**
- The OEAS office will develop high quality unit-level survey reports in terms of the content, analysis conducted, and the format of the report

BREAK

Schedule

- Developing assessment plans
  - *Exercises and discussion*
- Break (2:00)
- Developing assessment plans continued
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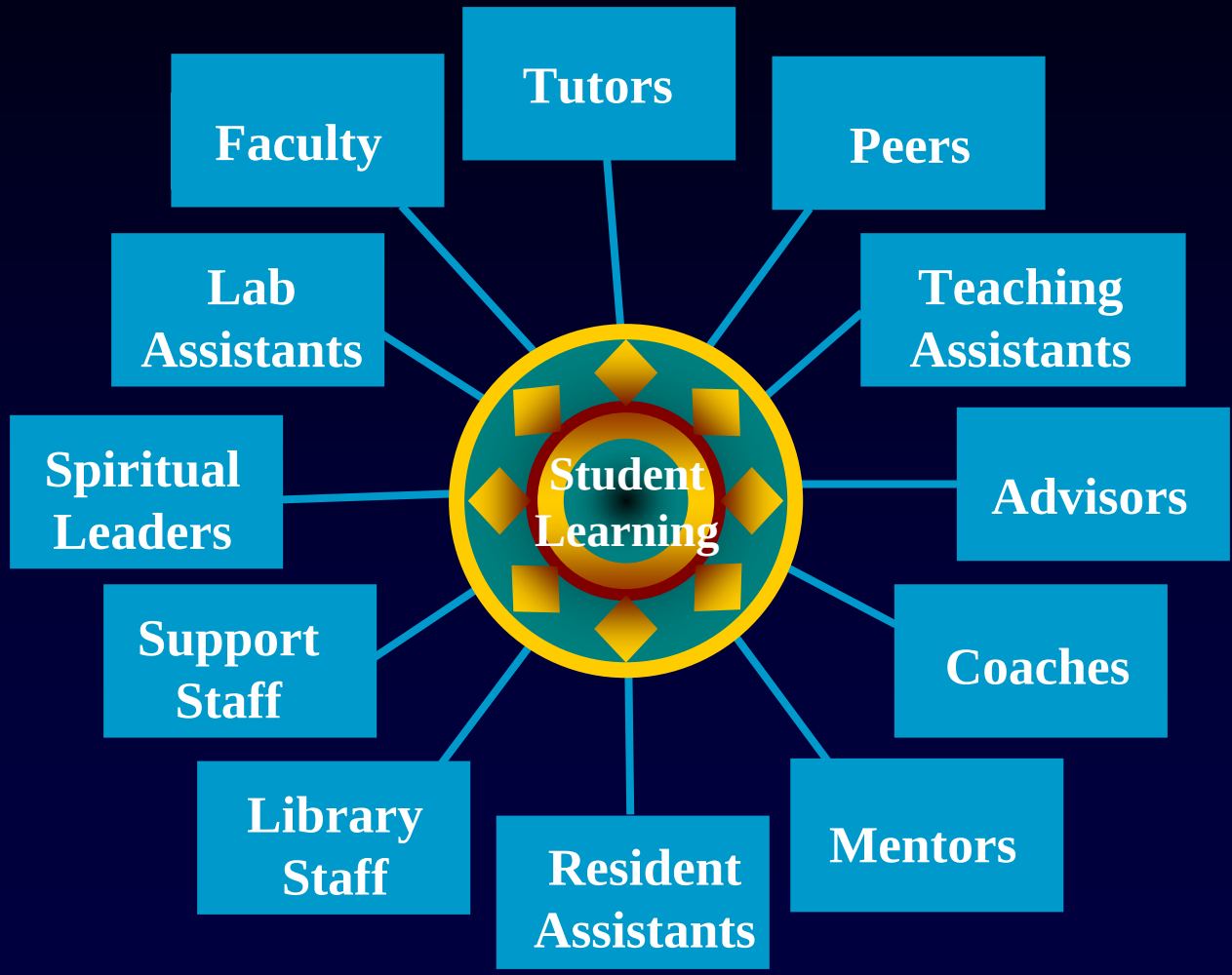
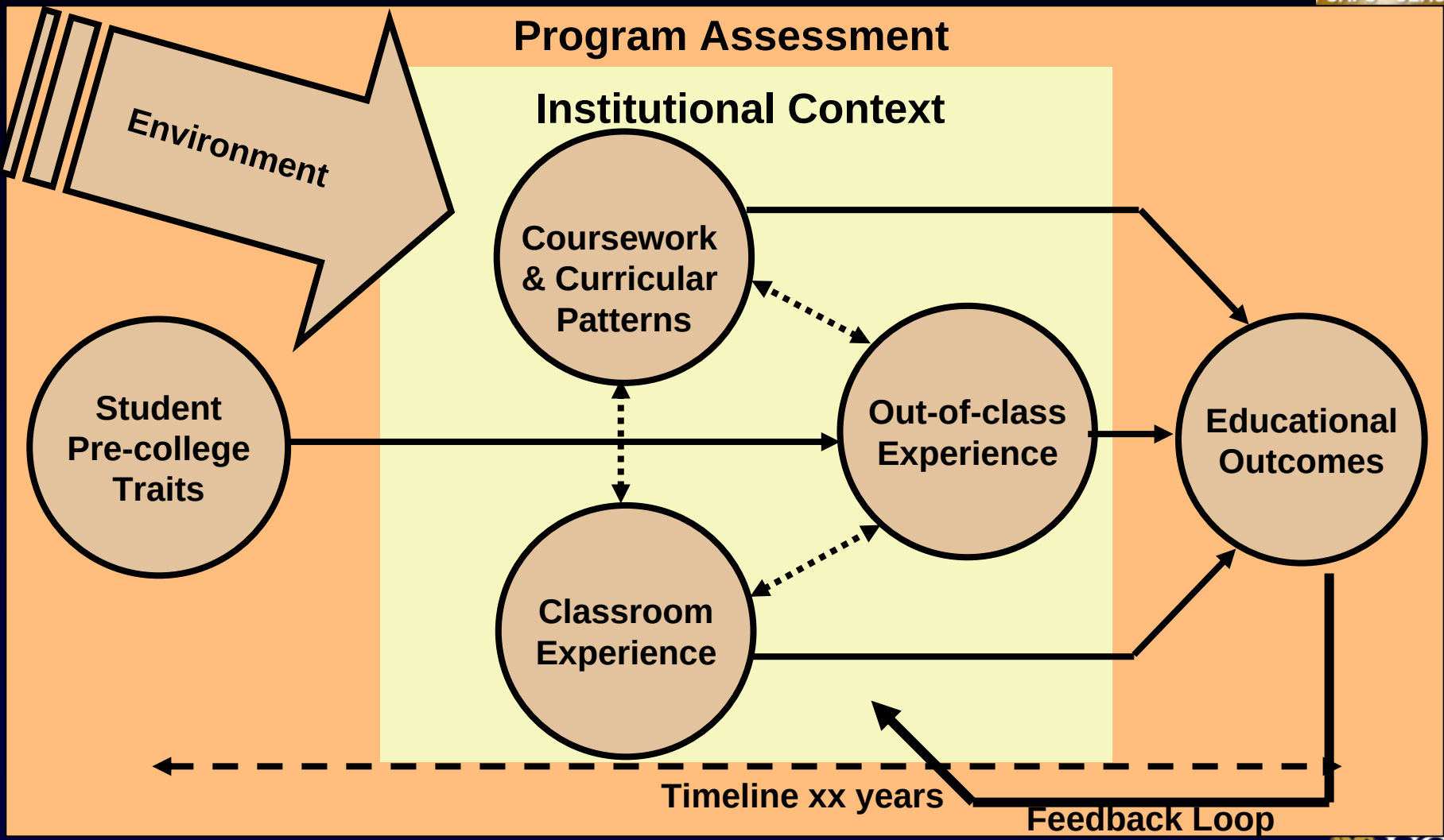
Student Learning is Complex



Educational Outcomes



*adapted from presentation by Dr. Gloria Rogers

Why Are Student Learning Outcomes So Important?

- Basis for program improvement
  - Instruction, course design, curricular design
- Communicate instructional intent
  - Included in course syllabi
- Increase awareness of learning (for students)
- Common language
- Advising materials
- Promotional materials
- Support accreditation and evaluation

Details on Student Learning Outcomes

- Describe specific behaviors that a student of your program should demonstrate after completing the program
- Focus on the intended abilities, knowledge, values, and attitudes of the student after completion of the program
  - What is expected from a graduate of the program?
  - What is expected as the student progresses through the program?
  - Three questions
    - What does the student know? (cognitive)
    - What can the student do? (psychomotor)
    - What does the student care about? (affective)

When Defining Student Learning Outcomes

- Frame the learning outcome in terms of the program rather than individual courses or individual students
  - ~~Each student will receive a B or better in the XYZ course~~ **No**
  - Graduates from the program will demonstrate knowledge of engineering fundamentals
- Use concrete action verbs (e.g., define, classify, operate, formulate) rather than passive verbs (e.g., be exposed to) or vague verbs (e.g., understand, know)
  - *(See handout for action verb lists based on Bloom's Taxonomy)*

Types and Levels of Student Learning Outcomes [Bloom's Taxonomy]

- Cognitive: recall and intellectual skills
  - Knowledge, comprehension, application, analysis, synthesis, evaluation
- Affective: attitudes, values, interests, appreciation and feelings toward people, ideas, places, and objects
  - Receiving, responding, valuing, organization, characterization by, value
- Skills (Simpson, 1972)
  - Perception, set, guided response, mechanism, complex overt response, adaptation, origination

When Defining Student Learning Outcomes (SLO)

- Do not join elements in one statement that can not be assessed by single method
  - BSHE graduates will demonstrate knowledge of math, science, and engineering fundamentals, and gain competency in conducting oral presentations. **No**
- SLO statements should focus on the learning results and not on the learning process
  - ~~Computer applications will be introduced in all core engineering courses~~ **No**
  - BSHE graduates will demonstrate proficiency in XXX computer applications

When Defining Student Learning Outcomes (SLO)

- SLO statements should be stated so that the outcome can be measured by more than one assessment method
  - Students completing the XYZ engineering program will score over 95% on a locally-developed exam that tests application of engineering principles **No**
  - Students completing the XYZ engineering program will demonstrate the ability to apply engineering principles
- SLO statements should indicate the level and type of competence that is required of graduates of a program

Checklist for a Student Learning Outcome

- Is it aligned to mission and goal statements?
- Does it clearly describe and define expected abilities, knowledge, values, and attitudes of the graduates of the program?
- Is it simply stated?
- Is it distinctive and specific to program?
- Is it able to be measured by a single method?
- Is it stated so that more than one measurement method can be used?
- Does it focus on the learning results and not the learning process?
- Is it measurable and are there resources available?
- Can it be used to identify areas to improve?

Exercises

- To teach students engineering principles — No
- To adequately prepare students — No
- Students will graduate from the program with the necessary skills and knowledge to succeed in XYZ engineering positions in industry — Maybe

Exercises

- Students completing the BSHE program will demonstrate understanding of engineering principles
- Graduates of the BSHE program will be judged competent in the principles of engineering design by a ~~team of faculty evaluating senior design projects~~ **No**
- Graduates will be able to apply ~~and demonstrate~~ **Maybe** principles of engineering design by formulating requirements and constraints, following an open-ended decision process involving tradeoffs, and completing a design addressing an XYZ engineering need

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Measuring Outcomes

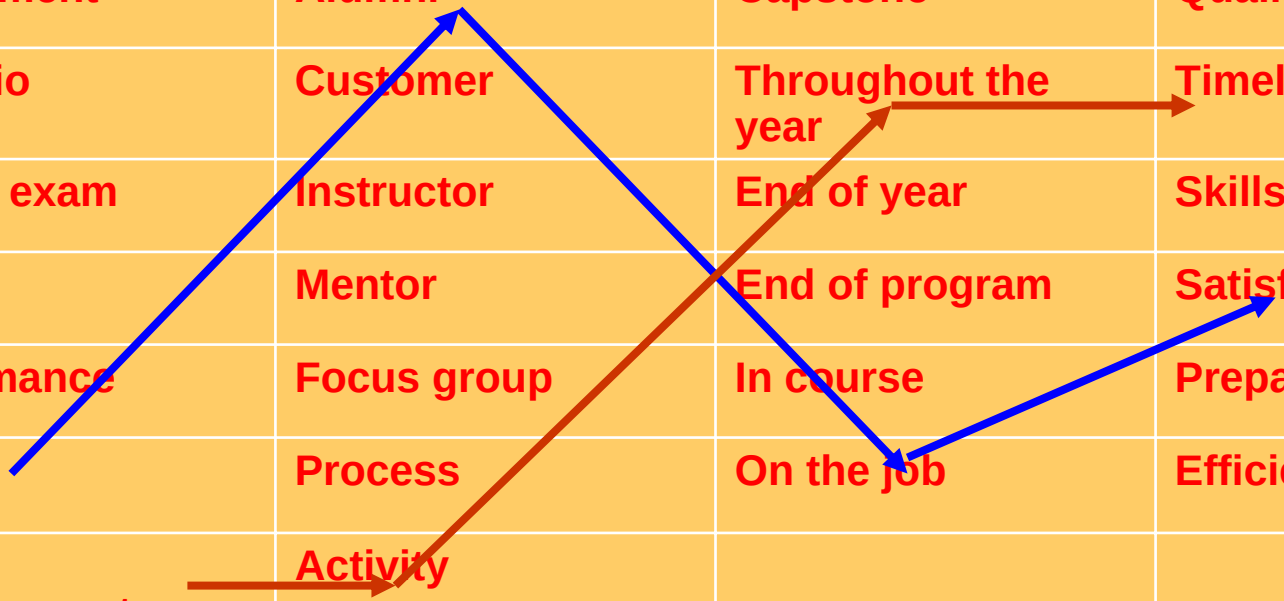
- Should provide an objective means of quantifying the outcomes, quality, efficiency or productivity of programs, operations, activities, or services
- Should indicate how you will measure each of your outcomes
- Provide at least two ways to measure each outcome
- Should indicate when you will measure each outcome

Describing Measurement Methods

- What are you going to use?
  - Presentation, assignment, test, survey, observation, performance rating
- Of and/or by whom?
  - Student, mentor, focus group, customer, process, course
- Context (e.g., where or when)?
  - Point-of-service, capstone, throughout the year, end of program
- For what purpose?
  - Desired program or learning outcome
- Example: Test the students at the end of the program for their level of knowledge in XYZ

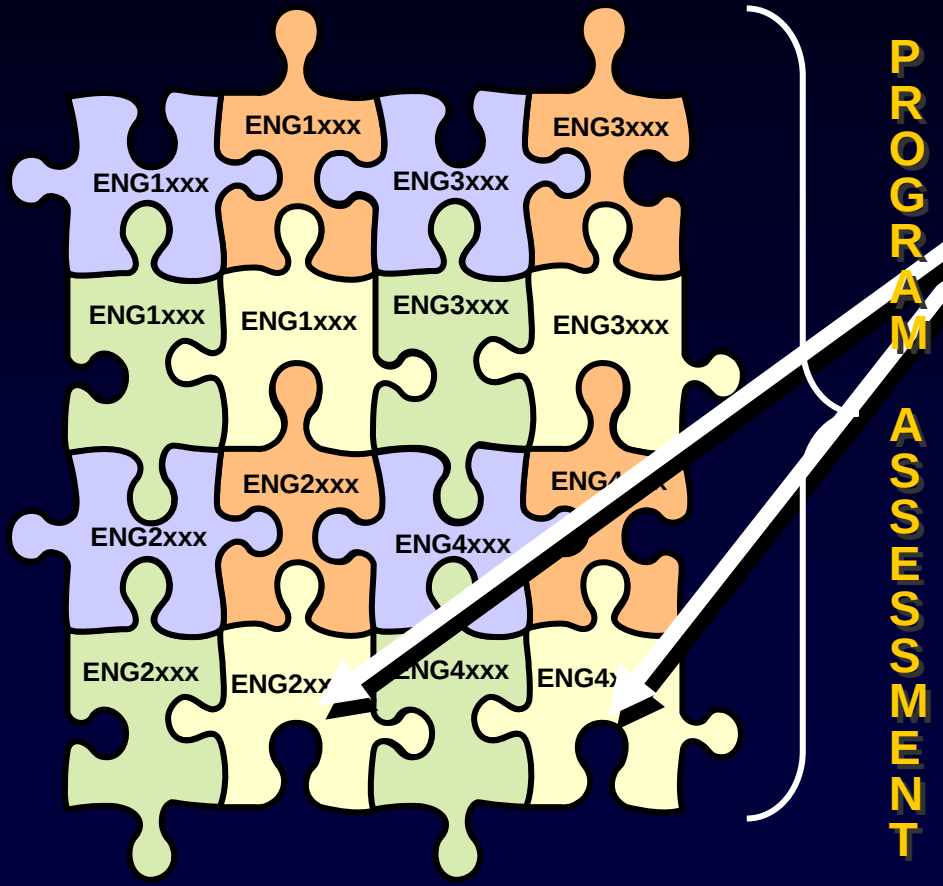
Creating Measures

What	Who	Where/When	Outcomes
Presentation	Student	Point-of-service	Learning
Assignment	Alumni	Capstone	Quality
Portfolio	Customer	Throughout the year	Timeliness
Test or exam	Instructor	End of year	Skills
Project	Mentor	End of program	Satisfaction
Performance	Focus group	In course	Preparation
Survey	Process	On the job	Efficiency
Direct measurement	Activity		
Transcripts			



Student Learning Outcomes Assessment

Courses in the Curriculum



Learning Outcomes

- Oral communication
- Written communication
- Teamwork skills
- Quantitative skills
- Ethics
- Discipline knowledge
- Professional skills
- Performance skills

*adapted from presentation by Dr. Gloria Rogers

Assessment Matrix Can be Useful to Link the "Where" with the "Outcomes"

Learning Outcome	Course 1234	Course 2345	Course 3456	Capstone
Application of theory	**Introduced** **Assess**	**Emphasized**	**Emphasized** **Assess**	**Reinforced** **Assess**
Skills and knowledge		**Introduced**	**Emphasized** **Assess**	**Reinforced** **Assess**
Communication skills		**Introduced**		**Emphasized** **Assess**

Categories of Assessment Methods

- Student learning
  - **Direct measures** evaluate the competence of students
    - Exam scores, rated portfolios, employer rating
  - **Indirect measures** evaluate the perceived learning
    - Student perception, self-assessment
- Program or unit processes or operations
  - **Direct measures** evaluate actual performance
    - Customer satisfaction, error rates, time, cost, efficiency, productivity
  - **Indirect measures** evaluate the perceived performance
    - Perceived timeliness, perceived capability
- Curriculum
  - Methods used to check alignment of curriculum with outcomes
    - Curriculum mapping

Assessment Matrix Can Be Useful to Link the "What" with the "Outcomes"

Outcomes	Graduating Senior Survey	Capstone Course	Portfolio	Focus Group
Satisfaction with advising	**Direct**			**Indirect**
Skills and knowledge	**Indirect**	**Direct**	**Direct**	**Indirect**
Communication skills		**Direct**	**Direct**	**Indirect**

Curriculum or Course-based

- Performance-based
  - Capstone courses
  - Capstone projects
  - Case studies
  - Minute Papers
  - Homework assignments
  - Course-embedded exam questions
  - Portfolios
  - Reflective essays
- Other (help determine appropriate measures)
  - Curriculum and syllabus analysis
  - Content analysis of courses

Types of Examinations or Tests

- Standardized exams
  - National test
  - State test
  - Good when external comparisons are required
  - Scales and individual results are good for internal alignment with program outcomes
- Juried competitions
  - Recitals or shows
- Locally developed exams
  - Pre-post tests
  - Course-embedded exam questions
  - Comprehensive exam
  - Qualifying exam

National Surveys

- Freshmen
  - Cooperative Institutional Research Program (CIRP)
  - College Student Expectations Questionnaire (CSXQ)
  - National Survey of Student Engagement (NSSE)
  - Your First College Year (YFCY)
- Seniors
  - National Survey of Student Engagement (NSSE)
- All students
  - Student Satisfaction Inventory (SSI)
- Faculty
  - Institutional Priorities Survey (IPS)
  - Faculty Survey of Student Engagement (FSSE)

Locally Developed Surveys

- Institutional level
  - Alumni survey
  - Employer survey
  - First destination survey
  - Graduating student survey
  - Non-returning student survey
  - Student satisfaction survey
  - Orientation survey
  - Climate survey
- Program or department level
  - Advisory board survey
  - Customer survey
  - Peer review survey
  - Point-of-service survey
  - Program-specific survey

Process to Develop an Assessment Plan

Step 1: Organize for assessment

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Step 2: Define program mission

↓

Step 3: Define program and student learning outcomes

↓

Step 4: Identify measures and assessment methods

↓

Step 5: Select assessment methods and targets for each outcome

Identify MATURE Measures

Matches
- Directly related to the outcome it is trying to measure

Appropriate methods
- Uses appropriate direct and indirect measures

Targets
- Indicates desired level of performance

Useful
- Measures help identify what to improve

Reliable
- Based on tested, known methods

Effective and **E**fficient
- Parsimoniously characterize the outcome

After Identifying the List of Potential Measures You Need to…

- Select the “best” ones
  - Try to identify at least two measure per outcome
- Identify performance targets
  - Balance between stretch targets versus achievable targets
- Example: indirect method
  - Survey (using the Graduating Senior Survey) the students at the end of the program for their level of satisfaction with their communication skills
  - 90% or more of the students will rate their level of satisfaction with their communication skills as “very good” to “excellent” on a survey (using the Graduating Senior Survey) that the students complete at the end of the program

Structure of a Measure

- "(Target) (subject) (action verb) (criteria) (object) (method)"

- Example: 90% of students completing the program will achieve an evaluation of satisfactory or above in critical thinking as determined by a panel of industry reviewers for the capstone project using the critical thinking rubric developed by the program faculty

Challenges and Pitfalls

- One size does not fit all—some methods work well for one program but not others
- Do not try to develop the perfect assessment all at once—take a continuous improvement approach
- Allow for ongoing feedback
- Match the assessment method to the outcome and not vice-versa

Hints on Selecting Measures

- Match assessment method with learning outcome
  - Students completing BSHE will demonstrate competence in engineering principles comparable to graduates of other similar national programs
    - In a ~~locally developed exam administered at the end of the program,~~ 95% of the students will achieve a score of 90% or better **No**
    - 95% of our students will equal or exceed the national average on the FE examination administered twice a year
- The assessment results should be useful for improving program
  - Students completing BSHE will demonstrate competence in conducting research
    - 90% of our graduates will successfully complete their senior design project **Not Useful**

Hints on Selecting Measures

- Results should be easily interpreted and unambiguous
- Data should not be difficult to collect or access
- Information should be directly controllable by the unit or program
- Identify multiple methods for assessing each outcome
  - Direct and indirect measures
  - Qualitative and quantitative
  - Passive or active measures
  - Within different courses
  - Conducted by different groups
- Identify subcomponents of a measurement approach that allow deeper analysis

Hints on Selecting Measures

- Use methods that can assess both the strengths and weaknesses of your program
- Capstone or culminating senior projects are ideal for student learning outcomes assessment
- When using surveys, target all stakeholders
- Build on existing data collection
  - Accreditation criteria
  - Program review

Example

- Outcome 1: clients will receive timely analyses of survey results
  - 95% of the results are properly analyzed and provided to the client within two weeks of survey administration as obtained by measuring the time it takes to deliver the survey from the time of administration (direct measurement of timeliness)
  - 95% of the clients are “satisfied” or “very satisfied” with the perceived timeliness obtained through a customer survey given at the point of service (indirect measurement of timeliness)

Representative Student Learning Outcomes and Measures

- **Outcome 1**
  Graduates will demonstrate knowledge needed by elementary classroom teachers.
  - 1.a. Elementary Education graduate students will earn satisfactory ratings on the educational foundations, educational research and instructional trends questions on the comprehensive examination on the first attempt as judged by a panel of College of Education faculty.
  - 1.b. Elementary Education graduate student teachers will earn a rating of Satisfactory for each of the 12 Florida Educator Accomplished Practices by the Supervising Teacher on the final graduate internship evaluation.
  - 1.c. Elementary Education graduate student teachers will earn a rating of "3" (meets pre-professional standards) or higher for each of the 12 Florida Educator Accomplished Practices by the College Coordinator on the final graduate internship evaluation.
  - 1.d. Elementary Education graduate students will meet or exceed the cut-off score for the professional education and subject area sub-tests of the Florida Teacher Certification Examination in Elementary Education.

Representative Program Outcomes and Measures

- **Outcome 2**

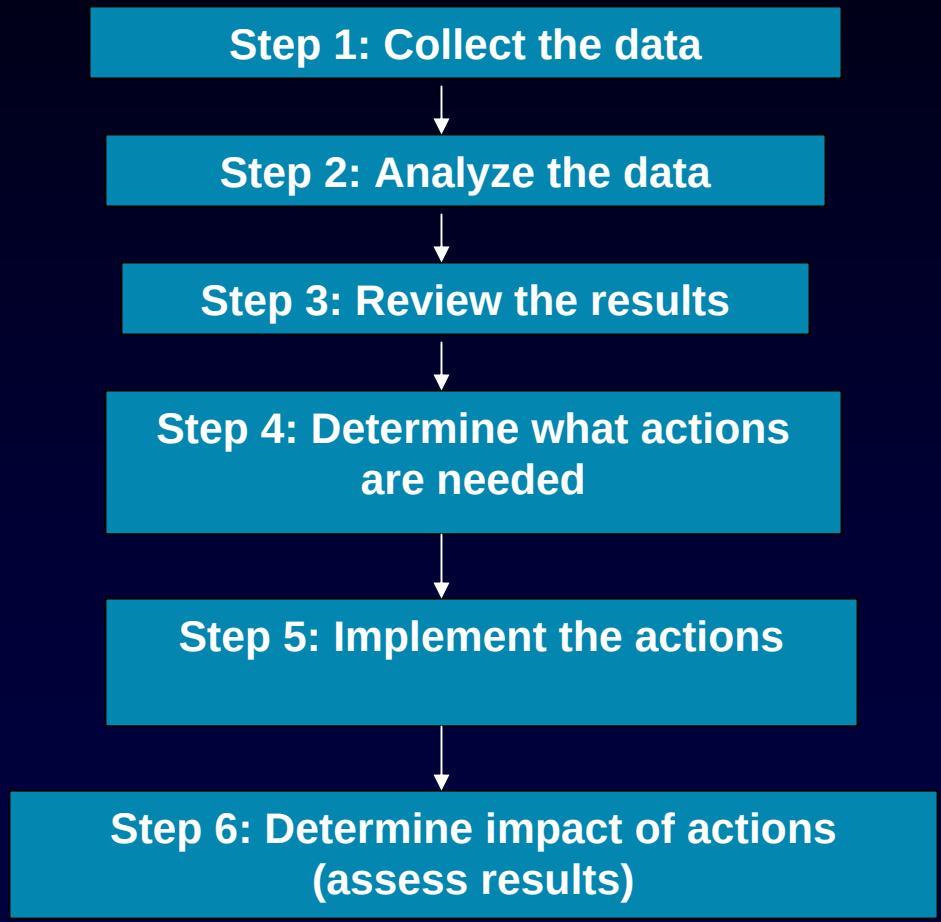
  2. As a measure of the systematic evaluation of online learning by faculty and departments, the number of online degree and certificate programs will increase each year.

  - 2.a. Measure of the number of online programs (versus just online courses) to determine growth.
  - 2.b. Measure the increase in programmatic, collaborative faculty development activities within academic programs across UCF that are facilitated by CDWS staff to ensure scalable, sustainable course development for maximum return on investment.
  - 2.c. Create a database to track faculty participation in collaborative programmatic development for online courses. Focused attention to serve certain departments will increase participation in CDWS-facilitated, systematic development activities.

Schedule

- Developing assessment plans
  - *Exercises and discussion*
- Break (2:00)
- Developing assessment plans continued
  - *Exercises and discussion*
- Reporting assessment results
  - *Discussion*
- Conclusions

Process to Report Assessment Results



Collecting the Data

- The assessment plan has identified your measures and instruments
- Clearly identify sample and sampling method
  - Random, census, stratified, or convenience sample
- Decide how the data will be collected (e.g., survey administration, facilitation of focus group)
  - Use institutional data and resources
  - Collect data locally using internal resources
- Decide how to best document the data for analysis
  - Spreadsheet, database, paper copies, electronic
- Then schedule it and do it
  - Do not put it off!

Analyzing the Data

- Goal of the analysis is to determine what needs improvement
  - Secondary goal is to identify what is doing well
- Determine who will analyze the data
  - Internal versus external sources
  - Use of students
- Determine how results will be presented
  - Tables, graphs, units, numbers versus percents
- Determine what analysis tools will be used
  - Excel, SPSS, paper and pencil

Reviewing the Results

- Purpose of reviewing the results is to critically examine the results and determine what actions should be taken
- Should involve all constituencies
  - Academic program: faculty, staff, students, industrial advisory board, community
  - Support office: staff, various customers, division head
- Determine how the review will be conducted
  - Present results
  - Brainstorm potential solutions
- Compare to targets
- Also consider the quality of the data

Determining Required Actions

- Although the results can indicate that you are meeting your targets, the goal is still improvement…
  - May want to conduct deeper analysis
  - May want to raise your targets
  - May still identify areas of lower performance
  - May want to choose something else to assess
- Results can indicate that you are not meeting your targets
  - Data may be questionable
  - Your program or unit may require changes
  - You have not been able to meet your target yet, but are moving in the right direction
  - You have not been able to meet your target yet, but are moving in the wrong direction and need to take some action

Implementing Actions

- Takes time and resources
  - Course modification
  - Classroom improvement
  - Hire additional staff
  - Training
- Need to link to a budget request
  - Who needs to approve the request?
  - When does it need to be submitted?
  - What happens if funds aren't available?
- Document actions taken or not taken
  - Who, what, when, where, and why?

Assessing the Impact

- "Closing the loop"
- Continuous improvement is what assessment is really trying to achieve
- Need to determine whether actions are effective or not
- Implemented changes do not always result in improvements
  - Takes time before impact is apparent
  - Not the only thing that is changing
- Impact is usually assessed in the next "assessment cycle"

Schedule

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- Conclusions

Conclusions

- Successful program assessment requires
  - Well-designed and functioning program assessment SYSTEM
  - High-quality assessment plans
- Assessment plans must include
  - Mission
  - Program and student learning outcomes
  - Measurement methods
  - Results of measurements
  - Planned and completed actions
  - Results of actions taken on subsequent performance
- Review checklists
  - Provide guidance for developers
  - Ensure consistency in review process
  - Align review with purpose of program assessment system

Workshop Assessment

Please complete the assessment form for the workshop.

THANK YOU FOR YOUR ATTENDANCE AND PARTICIPATION

Questions

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