Operational Outcomes Assessment for Academic Units

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Overview

- Strategic planning and assessment structure
- Assessment principles
- Mission statement
- Development of outcomes
- Guides for methods and measures
- Data collection and analysis
- Analysis of results and actions
# UK Planning, Budgeting, and Assessment Reporting

<table>
<thead>
<tr>
<th>IE Activity</th>
<th>Unit</th>
<th>Cycle</th>
<th>Reporting Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>University</td>
<td>5 Years</td>
<td>Defined by BOT</td>
</tr>
<tr>
<td><strong>Strategic Planning</strong></td>
<td>Educational &amp; Administrative</td>
<td>3-5 Years</td>
<td>3-6 Months from Completion of Periodic Program Review</td>
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<tr>
<td><strong>Annual Program Review</strong></td>
<td>University</td>
<td>Annual</td>
<td>31-Oct</td>
</tr>
<tr>
<td><strong>Student Learning Outcomes (SLOs) Assessment Reports</strong></td>
<td>Academic Programs</td>
<td>Annual</td>
<td>31-Oct</td>
</tr>
<tr>
<td><strong>Periodic Program Review</strong></td>
<td>Administrative</td>
<td>5-7 Years</td>
<td>12 Months (starts spring term)</td>
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<tr>
<td></td>
<td>Educational</td>
<td></td>
<td>12 Months (starts fall term)</td>
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Strategic Plans

- University (5 year)
  - Current plan: 2009-2014
  - Five goals
  - 21 objectives

- Unit plans (3-5 years)
  - Mission
  - Objective
  - Goal
  - Metrics
  - Strategies
  - Assessment Method
  - Actual Results
  - Descriptive Results
  - Improvement Actions
  - Analysis of Results and Reflection
Annual Program Reviews

- Annual progress report using in the “Strategic Plan Implementation Project 2009-2014” template
- Sometimes objectives are stated as outcomes and sometimes stated as tasks
- In general, current strategic plans do not include operational outcomes
Our Review

- **Satisfactory** means that we think it will look okay to a SACSCOC reviewer—it does not necessarily mean that it is good.
Annual SP/PR Review Observations

- Many department reports look fairly strong
  - Defined strategies and reporting
- Not all units list related metrics
- Quality of assessment methods and measures vary significantly
- Primary focus is on completion of specified tasks
  - Lacks measures of the outcomes
- Very few units include any operational or performance outcomes or measures
  - Needed for accreditation
  - Satisfaction with level of service, adequacy
Issues and Needs

- Better understanding of focus on improvement
- Better understanding of assessment so outcomes and measure make sense
- Better understanding of how to construct an outcome related to mission
- Better understanding of what kinds of measures can be used to describe outcome performance levels
- Better understanding how to interpret results and appropriate actions to take
Effective Program Assessment Should Answer these Questions

- What and how does a program contribute to the development and growth of its students and/or the support of its customers?
- What outcomes are you trying to achieve?
- What is the level of performance?
- How, using the answers to the first three questions, can you improve the program?
- What actions did you take?
- What are the results of these actions?
Assessment Cycle

Planning Phase
- Identify Mission/Purpose
- Educational Goals
- Identify Outcomes and Objectives
- Identify Measures and Methods

PROGRAM
- Assess Impact
- Take Action: Implement Change
- Interpret Evidence
- Gather Evidence

Results Phase
Identify Scope of Assessment

- What should assessment include?
  - Assess resources (facilities, students, faculty)
  - Assess processes (pedagogy, advising, feedback)
  - Assess results or outcomes; plan changes
  - Who receives feedback and how

- Administrative unit assessment typically focuses on quality of products, processes, and services
Developing an Assessment Plan

- Include **mission** or purpose of program
  - State primary functions and activities
  - State why these are done (program purpose)
  - Identify stakeholders
- Include a sufficient number of **outcomes**
  - Program outcomes
- Include multiple **measures** for each outcome
  - Direct measures
  - Indirect measures
- Include **methods** for measurement and targets
Structure of 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?
Representative Mission Statements

- 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.

- Regional Campuses Student Services in conjunction with Student Development and Enrollment Services (SDES) and Regional Campuses (RC), places students first by creating, accessing, delivering and evaluating quality student services which empower and support the success of our diverse regional populations.
UK Mission Statements

- The mission of the University of Kentucky College of Health Sciences is to help the people of the Commonwealth of Kentucky and beyond to gain and retain the highest level of health through creative leadership and productivity in education, research, and service.

- The Mission of the Martin School of Public Policy and Administration is to excel in research, education, and service. We accomplish our unique purpose by engaging in cutting edge theoretical and applied research; preparing students in our masters and doctoral programs in Public Policy and Administration, and sharing our knowledge with the professional and academic communities.
Defining Strategic and Operational Outcomes

- **Strategic outcomes**
  - Implementation of initiatives intended to contribute to a strategic goal
  - Impact on goal performance due to that implementation

- **Operational outcomes**
  - Address regular operational or procedural tasks
  - Generally provide service or product
  - Direct and indirect effects on stakeholders
Think **SMART** When Defining Outcomes

**Specific**
- Clear and definite terms describing 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/service

**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 measurement methods

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

Efficiency = inputs/output
Productivity = outputs/input

Unit or Program

Outsuts

Customers (e.g., students)

Outcomes

Quality
Example: Academic Program

Efficiency = $ spent/course
Productivity = internships/year

Efficiency

Inputs
Faculty
Staff
Budget
Equipment
Time
Facilities

Outputs
Courses
Curriculum
Internships

Students

Outcomes
Academic performance
Employed
Certified
Satisfied

Performance Indicators
• Faculty publications
• Quality of classroom facilities
• Student to faculty ratio
• Student satisfaction
• Employer satisfaction.

Direct measures
Indirect Measures
Quality

Faculty

Staff

Budget

Equipment

Time

Facilities
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

<table>
<thead>
<tr>
<th>Measure</th>
<th>What</th>
<th>Action</th>
<th>Object</th>
<th>Modifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of</td>
<td>students</td>
<td>demonstrate</td>
<td>knowledge</td>
<td>within specified timeframe</td>
</tr>
<tr>
<td>Ratio of</td>
<td>faculty</td>
<td>accept</td>
<td>skill</td>
<td>over a period of time</td>
</tr>
<tr>
<td>Number of</td>
<td>resources</td>
<td>report</td>
<td>activity</td>
<td>with identified level of success</td>
</tr>
<tr>
<td></td>
<td>materials</td>
<td>support</td>
<td>values</td>
<td>in a specific area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>approve</td>
<td>resources</td>
<td>with a specified level of satisfaction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>utilize</td>
<td></td>
<td>with a specified level of efficiency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>document</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>approved</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>complete</td>
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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: number of refereed journal publications
  - Outcome: Faculty members will have a high level of research productivity

- Example performance measure: time-to-degree
  - Outcome: Students will graduate from the program in an efficient manner

- Example performance measure: satisfaction of students with course availability
  - Outcome: program will have a high level of accessibility
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
  - Customers will be highly satisfied with the service and requests for service will increase

- 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
  - The office will provide timely service
  - Advisors will provide high quality academic information to students as evidenced by “very good” to “excellent” student ratings from 90% of the students
Validating Your Mission and Outcomes

Why?

How?

Necessary and Sufficient?
Checklist for an Outcome/Objective

☐ Is it aligned with mission statement?
☐ Is it important to management and reflect key results of program?
☐ Is it possible to collect accurate and reliable data for each outcome with existing resources?
☐ Is it stated so that it is possible to use a single measurement method?
☐ Is it stated so that more than one measurement method can be used?
☐ Can it be used to identify areas to improve?
☐ Is it SMART?
Measuring Outcomes

- Provide an objective means of quantifying program outcomes—quality, efficiency or productivity of students, programs, operations, activities, or services
  - Assessment METHODS
  - Assessment MEASURES

- Indicate how you will measure each of your outcomes

- Provide at least two ways to measure each outcome

- Indicate when you will measure each outcome
Categories of Assessment Methods

- Program or unit processes or operations
- **Direct measures** evaluate actual performance
  - Customer satisfaction, retention, time, cost, efficiency, productivity
- **Indirect measures** evaluate the perceived performance
  - Perceived timeliness, perceived capability
Describing Measurement Methods

- What are you going to use?
  - Program data, survey, observation, performance rating

- Of and/or by whom?
  - Student, focus group, customer, process, course

- Context (e.g., where or when)?
  - Point-of-service, throughout the year, end of program

- For what purpose?
  - Desired program outcome

- Example: Survey the faculty at the end of the academic year for their level of publication activity
Assessment Methods

- Operational data
  - Volume
  - Time
- Content analysis
- Point-of-service assessment
- National surveys
- Locally-developed surveys (institution/department)
  - Graduating student
  - Faculty
  - Non-returning student
  - Employer
  - Alumni
Identify MATURE Measures/Methods

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

**Appropriate methods**
- Uses appropriate direct and indirect methods

**Targets**
- Indicates desired level of performance

**Useful**
- Helps to identify what to improve

**Reliable**
- Based on tested, known methods

**Effective and Efficient**
- Parsimoniously characterize the outcome
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
# Creating Measures

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

- “(Target) (subject) (action verb) (criteria) (object) (method)”

- Example: 95% of students taking the licensure examination will pass it on the first attempt
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

- 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
- Use methods that can assess both the strengths and weaknesses of your 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
Hints on Selecting Measures

- Match assessment measure with learning outcome
- The assessment should be useful for improving the program
- When using surveys, target all stakeholders
- Methods and measures should be built on existing data collection
  - Accreditation criteria
  - Program review
Example

- Outcome 1: students will receive timely reviews of portfolio artifacts
  - 95% of the portfolios are properly analyzed and provided to the students within two weeks of submission as obtained by measuring the time it takes to deliver the review from the time of submission (direct measurement of timeliness)
  - 95% of the students are “satisfied” or “very satisfied” with the perceived timeliness obtained through a student survey given at the end of the semester (indirect measurement of timeliness)
Reporting Results and Actions

- Collect and analyze assessment data
- Review results and determine actions
- Implement assessment and program changes
- Assess impact of changes
Collect the Data

- Decide how data will be collected based on selected measures and methods (e.g., survey administration, facilitation of focus group)
  - Use institutional data and resources
  - Collect data locally using internal resources
- Clearly identify sample and sampling method
  - Random, census, stratified, or convenience sample
- Decide how to best document data for analysis
  - Spreadsheet, database, paper copies, electronic
Analyze the Data

- Goal of 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 what analysis tools will be used
  - Excel, SPSS, paper and pencil
- Determine how results will be presented
  - Tables, graphs, units, numbers versus percents
Review the Results

- Purpose is to critically examine the results and determine what actions should be taken
- Involve relevant 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
- Consider the quality of the data
Determine Required Actions

☐ If you meet targets, the goal is still improvement…
  ■ May want to raise your targets
  ■ May want to choose something else to assess

☐ Results can indicate that you are not meeting your targets
  ■ Data may be questionable—change method of measurement
  ■ Your program or unit may require changes
  ■ You have not been able to meet your target yet, but are moving in the right direction—continue to track improvement
  ■ You have not been able to meet your target yet, but are moving in the wrong direction and need to take some action
Implement Actions

- Takes time and resources
  - Course modification
  - Classroom improvement
  - Hire additional staff
  - Training
  - May need to link to a budget request

- Document actions taken or not taken
  - Who, what, when, where, and why?
Assess the Impact

- Need to determine whether actions are effective or not
- Referred to as “Closing the loop”
- 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”
National Resources

- Measuring Quality in Higher Education—Vic Borden and Brandi Kernel

- National Institute for Learning Outcomes Assessment—Stan Ikenberry, George Kuh and Peter Ewell
  - http://www.learningoutcomesassessment.org/index.html

- Internet Resources for Higher Education Outcomes Assessment
  - http://www2.acs.ncsu.edu/upa/assmt/resource.htm
Discussion and Questions

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