Creating An Assessment Database: Conceptual, Practical, and Technical Considerations

Denise Y. Young, Ph.D.
Executive Director for Institutional Effectiveness

Sean Mullins, MSACS
Institutional Research Technical Analyst

North Georgia College & State University

Topics

- Fundamentals of assessment and institutional effectiveness
- 5 steps for documenting institutional effectiveness
- Technical issues
- Demonstration

2

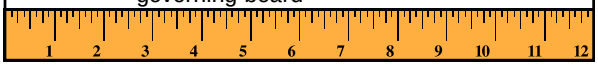
Assessment

- "Any effort to gather, analyze, and interpret evidence which describes institutional, departmental, divisional, or agency effectiveness" (Upcraft & Schuh, 1996)
- Emphasis is on programs and services, not an an individual, but may be need to gather evidence at the individual level

3

Purposes of Assessment

- Demonstrate achievement of expected outcomes (accountability)
- Improvement of program/service
- External constituents
  - Accrediting bodies, funding sources, alumni
- Internal constituents
  - Students, faculty, administration, governing board



Benefits of Formal Planning and Assessment Process

- Understand areas of strengths and/or weaknesses
- Identify and prioritize goals
- Make financial decisions based on evidence
  - Expand programs, new staff, etc.
  - Connects budgeting and planning
- Accountable for quality of product
- Focus on continuing improvement

5

SACS Core Requirement 2.5 Research-Based Planning and Evaluation

- "The institution engages in ongoing, integrated, and institutional-wide research-based planning and evaluation processes that
  - incorporate a systematic review of institutional mission, goals, and outcomes;
  - result in continuing improvement in institutional quality; and
  - demonstrate that the institution is effectively accomplishing its mission."

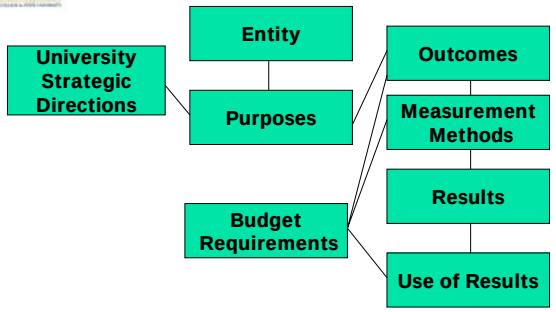
6

SACS Comprehensive Standard 3.3.1 Assessment and Improvement of Academic and Administrative Areas

- "The institution identifies expected outcomes for its educational programs (including student learning outcomes for educational programs) and its administrative and educational support services;
- assesses whether it achieves these outcomes; and
- provides evidence of improvement based on analysis of those results."

7

Conceptual Overview – Application of SACS 2.5 and 3.3.1 to Documenting Institutional Effectiveness



8

Methods for Documenting Institutional Effectiveness

- Word processing template
  - Easy to develop, but difficult to manage over time
- Commercial software designed to track outcomes
  - Powerful, but complicated and confusing for users
- Locally developed assessment database
  - Developed to reflect your institution's philosophy about assessment and institutional effectiveness, but requires commitment of resources

9

Steps in Assessment Process

1. Define entity's purposes
2. Identify intended outcomes
3. Determine appropriate assessment methods
4. Collect data and summarize results
5. Use results to make improvement

10

Step 1 Define Entity's Purposes

- Entity
  - Office or program that has outcomes that are measured and assessed
- Purpose Statements
  - Describe the role of the entity.
  - Use departmental mission statement as starting point
    - Segment
    - Expand
  - Associated with 1 or 2 of the 9 NGCSU Strategic Directions that are most directly connected.

11

Step 2 Identify Intended Outcomes

- Student Learning
  - Describes what is intended that students will be able to think, know, or do as a result of their educational experiences
- Operational: Performance
  - Describes the level of performance of an operational aspect of a program or office
    - Customer satisfaction
    - Quality of work
    - Timeliness of a product or process
- Operational: Task
  - Describes tasks or processes that support an operational aspect of a program or office

12

Step 2 (continued) Identify Intended Outcomes

- Characteristics of outcomes
  - Specific
  - Measurable
  - Aggressive, but attainable
- Connect each outcome to 1 or more purposes
- Identify budgetary requirements to accomplish outcome

13

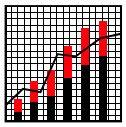
Step 3
Determine Appropriate Assessment Methods

- At least 1 measurement method per outcome
  - Multiple measures desirable for triangulation of results.
  - Quality of assessment more important than several measures that are not very meaningful
- May already be collecting data, but not using it
- Multiple outcomes may be able to be assessed with the same method

14

Examples: Assessment Measures

- Usage of programs, services, and facilities
- User satisfaction
- Needs assessment of users
- Complying with professional standards
- Benchmarking with other institutions
- Cost effectiveness
- Strategic plan accomplishments
- Student learning outcomes



15

Step 3 (continued)
Determine Appropriate Assessment Methods

- Frequency of measurement (e.g., each semester, annually, every 3 years, etc.)
  - Not every outcome has to be assessed every year
- Criteria for success (e.g., score of 8 on a 10-point rubric, 80% pass rate, 75% satisfied or very satisfied, etc).

16

Step 4
Collect Data & Summarize Results

- Represents applied research so report with appropriate rigor
- Include time period, number of subjects, etc.
- Outside reader should be able to understand the degree to which the outcome was attained
- Upload detailed results/analysis
- Remove names, id numbers, individual identifiers

17

Step 5 Use Results for Improvement

- Show how results were used to improve learning, programs, or services
- Be specific
- Detailed documents may be uploaded
- “Closing the Loop”
- Continue to monitor as needed

18

Technical Considerations

- Requirements and Specifications
- Web vs Desktop Application
- Development Environment
- Data Storage

19

Requirements and Specifications

- Have a clear perception of an end in mind
  - A good blueprint must be in place before
- Start a data dictionary to define the project, both the process and the underlying code and database

20

Data Dictionary

TABLE: Entity **DEFINITION:** Table is responsible for holding the appropriate information pertaining to the specific department, i.e. Academic Affairs or Biology. Information held in this table includes the description of the entity and foreign keys to the tables related to the entity. This is the most central table of the database as most all of the other tables will be related to this table in some form.
FIELDS: entityID, enitityDesc, entityLevel, associationID, schooled, missionID, tierID
RELATIONS: *Mission*, this table holds the mission statement. *Outcome*, this table contains the outcome information for the entity. *School*, this table holds the school the entity belongs to if applicable. *Tier*, this table holds the tier description of the table.
CREATED: 04-04-06 | **LAST MODIFIED:**
CHANGE HISTORY:

21

Web vs. Desktop Application

- Web
  - Who will host the service?
  - Pros:
    - Easy rollout, maintain and version control
    - Many platforms to choose from
    - Accessible from most any internet connection
  - Cons:
    - Tougher to implement security
    - Coding for different browsers, IE vs FF

22

Web vs. Desktop Application

- Desktop
  - Will IIT allow it to be installed?
  - Pros:
    - Easier security control
    - Eliminates have to write for different browsers
  - Cons:
    - Tougher to rollout, maintain and version control
    - Fewer platforms to choose from
    - Only accessible from workstations installed on

23

Development Environment

- Microsoft .NET
  - All in one enviroment that allows for both web & desktop development
  - Many point and click development features
- Dreamweaver & FrontPage
  - Geared towards easy web page development but requires more knowledge of coding to create simple connections.

24

Data Storage

- Database Selection (Access, MySQL, SQL, Oracle)
  - All DB's are relatively easy to access
  - Ease of backup
  - MySQL & Oracle free for development
  - All will cost when implementation occurs.
  - Proper definition, DD, of your elements will ease the creation of the data structure

25

Hindsight

- Would have created a desktop application, browser issues.
- Implement spell-check on the front end
- Integrate more checks of user input fields on the front end, don't assume the end user will use it how you intended

26

Key Improvements in SAINT

- Spell-Checker
- Reports
- Text formatting in Results section
- Document uploading
- Sorting
  - Purposes, Outcomes, and Measures sorted by start date, with the earliest listed first (chronological order)
  - Results and Use of Results sorted by start date, with the most recent listed first (reverse chronological order)

27

Questions/More Information

- http://www.ngcsu.edu/Resource/IRP/irphome/Links/presentations.shtml
- Dr. Denise Y. Young
  - dyoung@ngcsu.edu
- Sean Mullins
  - smmullins@ngcsu.edu

28