CURRICULUM ALIGNMENT AROUND LEARNING OUTCOMES AND ASSESSMENT

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Introduction

“College standards are becoming diluted and there is a fuzziness about what faculty teach and what is expected from students.”

(Miller & Malandra, 2006, p. 3/ Commission on the Future of Higher Education)
We must change “the question from ‘What students know and can do’ to ‘What students know and can do as a result of their educational experiences.’”

(Burstei & Winters, 1994, quoted from Anderson, 2002, p. 255 [emphasis added])
What is Curriculum Alignment? Consistency and Intentionality

Declared Curriculum

What we assume/claim students learn

Taught Curriculum

What is actually presented

Learned Curriculum

What students actually learn


What is actually presented
What we assume/claim students learn
What students actually learn

Declared Curriculum
Taught Curriculum
Learned Curriculum


Agenda

I. Learning Outcomes

II. Curriculum Mapping and Alignment

III. Assessment
I. LEARNING OUTCOMES
What is Curriculum Alignment?
Consistency and Intentionality

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Outcomes: SACS

– The institution identifies expected outcomes, assesses the extent to which it achieves these outcomes, and provides evidence of improvement based on analysis of the results in each of the following areas:
  • 3.3.1.1 educational programs, to include student learning outcomes; … (CS 3.3.1)
– The institution identifies college-level general education competencies and the extent to which graduates have attained them (CS 3.5.1)
Outcomes: SACS

– The institution has developed an acceptable Quality Enhancement Plan (QEP) that ...(2) focuses on learning outcomes and/or the environment supporting student learning and accomplishing the mission of the institution... (CR 2.12 / QEP)
Learning Outcomes

• Learning outcome is
  – an intended effect of the educational program experiences that has been stated in terms of
    – specific, observable, and measurable
    – student performance
Program Outcomes Assessment: What Has Been Learned from SACS Commonly Cited Issues?

– “Evidence of the establishment of learning outcomes for each of the specific degree programs was not available”

– “A search of the university’s web site for course syllabi with learning outcomes produced no results. The assessment reports at the department level did not state learning outcomes for the degree program either.”

(SACS reviewers’ comments)
Program Outcomes Assessment: What Has Been Learned from SACS Commonly Cited Issues?

– “…[M]ost academic assessment reports focus on inputs rather than outcomes, and is not possible by looking at most of the assessment reports to determine what *** faculty hope their students will accomplish”

– “Increasing credit hour production is not a student learning outcome, nor is course completion. The evidence provided on course completion demonstrates achievement of multiple learning outcomes and objectives, but the assessment of student mastery of a particular outcome is not provided.”

(SACS reviewers’ comments)
Program Outcomes Assessment: What Has Been Learned from SACS Commonly Cited Issues?

– “Although student learning outcomes were included in the reports, some were general and vague, some were not measurable and some were not reflective of student learning outcomes. For example, in political science, one outcome was stated as, “Students must demonstrate the skills needed to compete successfully in graduate studies and professional occupations”. Another student learning outcome example in psychology indicated that “Students will exhibit broad based knowledge of the discipline of psychology and be able to retrieve specific curricular content.”  

(SACS reviewers’ comments)
Program Outcomes Assessment: What Has Been Learned from SACS Commonly Cited Issues?

- “The core outcome statements are vague and very broad and do not appear to identify attainable and measurable outcomes appropriate for college students. Thus, the Off-Site Committee could not determine that the institution has identified college-level competencies within its general education core.”

(SACS reviewers’ comments)
What is the Purpose of Outcomes?

• Operationally define broad program goals by specifying
  – Knowledge
  – Skills
  – Attitudes / values / dispositions

• Provide framework for curriculum development and review

• Guide faculty teaching and student learning

• Guide program assessment activities
I.1 Developing Statements of Intended Student Learning Outcomes
I.1 Statements of Learning Outcomes: Development and Interpretation

- Contextual (College, School, program)
- Consensus/compromise-based
- Subjective
- *More like art than science*
I.1 Outcome Statements: Best Practices

- Represent cognitive, affective, behavioral dimensions of learning
- Student-focused rather than instructor-centered
- Focus on the learning resulting from an activity rather than on the activity itself
- Specific, measurable, observable
- Reflect the specific, unique contexts of the given program
I.1 Outcome Statements: Best Practices (Cont’d)

• Focus on aspects of learning that are appropriate for the given degree program level

• General enough to capture important learning but clear and specific enough to be measurable

• Focus on important, non-trivial aspects of learning that are credible to the public

• Are understood by students
I.2 Components of Statements of Intended Learning Outcomes
I.2 Elements of Outcome Statements

• **Essential Components**

  – *Behavior*: specify actions or behaviors that follow instruction and could serve as evidence that the goal has been achieved

  – *Focus*: identify the object of learning – content, concept(s), skill, or attitude.
I.2 Elements of Outcome Statements: Example 1

Students will be able to apply quantitative and qualitative reasoning to make business decisions.
I.2 Elements of Outcome Statements (cont’d)

• **Recommended Components**
  – Target groups
  – Conditions
    • information about situations in which the student will be required to demonstrate the behavior – how, when, or where
  – Performance criteria
    • any minimum level of performance or qualities we look for in student evidence
  – Performance stability
    • information about how often the behavior must be observed in order to be a true indicator that the behavior is a stable part of the student’s achievement repertoire
“After analyzing and interpreting information from a firm's financial statements, the graduating B.S. in Business major will be able to apply quantitative and qualitative reasoning to make business decisions, that appropriately consider financial and ethical implications, both individually and in a group settings.”
I.3 Evaluating Statements of Intended Student Learning Outcomes
I. 3 Structure of Outcomes Statements

• Do all statements include essential components?
• Are optional components typically included in the statements?
  – Frequency
  – Variability
• Are outcomes effectively worded?
  – Active verbs
  – Clear identification of focus
I.3 Content of Outcomes Statements

- Are outcomes *student-focused* rather than instructor-centered?
- Do outcomes focus on the *learning* resulting from an activity rather than on the activity itself?
- Are outcomes general enough to capture important learning but clear and specific enough to be measurable?
- Do outcomes reflect the specific, *unique* contexts of the given program or course?
- Do outcomes focus on aspects of learning that are appropriate for the given degree program/course *level*?
- Do outcomes focus on important, non-trivial aspects of learning that are credible to the public?
I.4 Setting Performance Standards
I.4 Performance Standards

• Performance Standards
  – Internal benchmark should be established for each learning outcome to determine if student performance is acceptable or not
  – It is important to determine what level of student performance on a specific learning outcome triggers curricula interventions
I.4 Setting Performance Standards

- Professional judgment of faculty
- Predetermined standard
- Data-based standard setting. E.g.,
  - Angoff Method
  - Bookmark Procedure
II. CURRICULUM MAPPING AND ALIGNMENT (HANDOUTS WITH A DETAILED DESCRIPTION OF THE PROCESS ARE AVAILABLE)
What is Curriculum Alignment?
Consistency and Intentionality

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Curriculum Alignment

• SACS Accreditation
  – The institution offers degree programs that embody a coherent course of study that is compatible with its stated mission and is based upon fields of study appropriate to higher education. (CR 2.7.2)
  – The institution requires in each undergraduate degree program the successful completion of a general education component at the collegiate level that . . . is based on a coherent rationale. (CR 2.7.3)
Curriculum Alignment

• SACS Accreditation

  – “The institution places primary responsibility for the content, quality, and effectiveness of the curriculum with its faculty.” (CS 3.4.10)
Alignment of Curricula with Intended Outcomes

• There should be clear evidence that the work students are doing in one or more classes directly supports student achievement of the intended learning outcomes

• The alignment of program learning outcomes and curricula is critical. If statements of student learning outcomes are adopted but are not addressed in the curricula, the outcomes assessment process will be worthless
Purpose of Curriculum Alignment: Curriculum Effectiveness

- Curriculum Effectiveness
  - Increasingly complex understanding of theories, principles, and practices
  - Increasingly complex levels of analysis and development of skills
  - Application of theories and principles

(SACS-COC, 2005, p. 47)
Purpose of Curriculum Alignment: Curriculum Coherence

- Curriculum Coherence
  - Complexity
  - Sequencing
  - Linkages

(Adapted from SACS/COC (2005), Relevant Questions for CR 2.7.2)
Curriculum Alignment

• Curriculum Mapping

• Curriculum Map Audit

• Curriculum Map Analysis and Action
II.1 Curriculum Mapping

- Curriculum mapping refers to the data collection phase of a curriculum alignment process. It includes organizing and recording information about the curriculum to permit a visual display of the relationships between and among curricular components.

- Curriculum map is a snapshot of a course of study at a particular point in its development. A curriculum map represents the relationship of courses to program learning outcomes by charting courses, program outcomes, and linkages between and among curricular components.
II.1 Curriculum Matrix

Two-dimensional data collection instrument

– Columns (program outcomes/objectives)
  • Syllabus guidance
  • Level of content delivery
  • Feedback / Assessment

– Rows (core program courses)
II.1 Curriculum Mapping Process Components

• Syllabus analysis and update

• Reflection on the level of content delivery

• Assessment inventory
II. 1 Curriculum Mapping Process Steps

1. List program outcomes/objectives.
2. List program core courses.
3. Analyze syllabus to determine alignment between course and program learning outcomes.
4. Make a judgment regarding the level of content delivery.
5. Analyze course syllabus and indicate whether students have opportunities to (i) demonstrate what has been learned on each program goal and (ii) receive feedback in a formal way.
II.2 Curriculum Map Audit

• The alignment of intended student learning outcomes and curricula is critical. If learning outcomes are formally adopted but are not addressed in the curricula, the outcomes assessment process will be worthless.

• To verify and confirm what is on the program curriculum map
• To create a repository of materials supporting subsequent planning, assessment, and reporting activities
II.2 Artifacts of Curriculum Map Audit

• Syllabi with clearly highlighted sections demonstrating
  – The extent to which given program outcomes are reflected in the given course outcomes
  – Specific course activities addressing given program outcomes
  – Course assessments measuring student performance on the given program outcome
II.2 Artifacts of Curriculum Map Audit (Cont’d)

• Samples of
  – Teaching and learning materials facilitating student development of a given program outcome
  – Assessment instruments / tools / criteria
  – Student course work on the given program outcome
II.3 Analysis of Curriculum Map Data

- Systematic study, interpretation, reflection, and judgment of curricular components such as
  - course sequencing,
  - increasing complexity,
  - and established linkages
II.3 Analysis of Curriculum Map Data: Review Questions

1. Do students receive appropriate syllabus guidance? Are program outcomes explicitly referenced in course learning outcomes?

2. Do students have multiple opportunities to develop program outcomes?

3. Are levels of content delivery (I, E, R, A) organized in a logical manner to address a particular program outcome?

4. Do students have the opportunity to have their learning outcomes assessed?

5. Do individual courses provide students with opportunities to integrate multiple program learning outcomes?
Analysis of Curriculum Maps: Syllabus Guidance

• Do students receive appropriate syllabus guidance?

For example,

– Outcomes 2 and 3 are not mentioned either explicitly or implicitly in the syllabus of 8 courses (although they were addressed in those courses)
Analysis of Curriculum Maps: Complexity

• Do students have opportunities to develop program outcomes?
  – Program Outcome Saturation or number of courses addressing a particular outcome.

For example,
• Outcome 1 is addressed in 4 out of 12 courses
• Outcome 6 is addressed in 5 out of 12 courses
• Outcomes 2 & 3 are addressed in all 12 courses
Analysis of Curriculum Maps: **Complexity** (Cont’d)

• Do students have opportunities to develop program outcomes? (cont’d)
  – Program Outcome Variability or the combination of ‘levels of content delivery’ (I, E, R, A) of a particular outcome as addressed by courses in a program of study.

For example,
• Outcomes 1, 2, 4, 5 are missing application level
• Outcomes 1 & 3 are emphasized only once, outcome 6 is not emphasized
Analysis of Curriculum Maps: Structure of Course Sequence

• Are levels of content delivery (I, E, R, A) organized in a logical manner to address a particular program outcome?

For example,

– MCM 445 introduces outcome 2 after it was introduced in 4 previous courses, reinforced in 3 courses, and emphasized in 2 courses
– Outcome 5 is reinforced in 6 out of 12 courses
Analysis of Curriculum Maps: Linkage

• Do individual courses provide students with opportunities to integrate multiple program learning outcomes?

For example,
– 11 out of 12 courses address at least 4 different outcomes
Analysis of Curriculum Maps: Assessment

- Do students have the opportunity to have their learning assessed?

For example,
- Students are provided with feedback on their performance on outcome 2 in only 3 out of 12 courses
III. ASSESSMENT
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Outcomes Assessment

• SACS Accreditation
  – The institution identifies expected outcomes, assesses the extent to which it achieves these outcomes, and provides evidence of improvement based on analysis of the results in each of the following areas:
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Outcomes Assessment

• SACS Accreditation
  – The institution identifies college-level general education competencies and \textbf{the extent to which graduates have attained them} (CS 3.5.1)
Program Outcomes Assessment

• Program outcomes assessment is
  – the intentional and deliberative process of gathering, analyzing and interpreting information from multiple and diverse sources in order to
  – develop a deep understanding of what students know, understand, value and can do with their knowledge and skills (outcomes) as a result of their educational experiences in the program;
  – the process culminates when study results are used to improve subsequent learning ("closing the loop")
Program Outcomes Assessment: What Has Been Learned from SACS Commonly Cited Issues?

- “Importantly, evaluative methods are specified for use in assessing the effectiveness of the general education program. However, no evidence is provided to show that assessments have occurred and students achieve these college-level competencies.”

- “The Committee could not locate an appropriate number of completed assessment documents to determine overall institutional compliance with the recently enacted system-wide unit-based assessment process.” (SACS reviewers’ comments)
Program Outcomes Assessment: What Has Been Learned from SACS Commonly Cited Issues?

– “The On-Site Committee should look for direct measures of general education competencies to substantiate that graduates have obtained these competencies.”

– “Other than course completion, no evidence is presented that graduates have attained the College-level competencies. The on-site committee should seek further evidence that graduates have attained these competencies.”

(SACS reviewers’ comments)
Program Outcomes Assessment:
What Has Been Learned from SACS Commonly Cited Issues?

- “Increasing credit hour production is not a student learning outcome, nor is course completion. The evidence provided on course completion demonstrates achievement of multiple learning outcomes and objectives, but the assessment of student mastery of a particular outcome is not provided.”

– “For example, in the Natural Sciences plan, course grades are identified as the tool for the assessment. The course grades do not provide information about a specific outcome.”

(SACS reviewers’ comments)
Program Outcomes Assessment:
What Has Been Learned from SACS Commonly Cited Issues?

– “There is no immediately obvious linkage between a particular goal, an assessment method, specific criteria for success, and actions taken to improve. The extensive assessment reports from all the units on campus contain a wealth of specific indicators of success and a lot of raw data, but there appears to be no attempts to interpret the meaning of the data and link them to actions in a way that closes the assessment loop.”

(SACS reviewers’ comments)
Program Outcomes Assessment: What Has Been Learned from SACS Commonly Cited Issues?

– “The documentation of the assessment plan suggests that assessments of student outcomes occur yearly, but no evidence is provided in the documentation associated with this standard to establish that assessments are actually occurring and being integrated into an ongoing assessment/improvement process.”

– “Some departments lack clearly specified outcomes, and there is not consistent or solid evidence of improvement across all departments based on use of assessment results.” (SACS reviewers’ comments)
Program Outcomes Assessment: What Has Been Learned from SACS Commonly Cited Issues?

- “The Off-Site Committee could not determine connections between assessment results and changes made. The two examples provided indicate assessment and changes, but the changes are unrelated to the assessment findings.”

  (SACS reviewers’ comments)
Program Outcomes Assessment: Practices

- Bad Practices

- Good Practices

(Adapted from Jackson & Johnson, 2007)
Program Outcomes Assessment: Bad Practice 1

• Program assessment is driven primarily by SACS reaffirmation of accreditation
  – Assessment reports titled “SACS Report”
  – Identical wording year after year // structure is more important than content
  – No feedback on assessment reports provided

• Emphasize institutionalization and sustainability of outcomes assessment on your campus
Program Outcomes Assessment: Bad Practice 2

• *Program assessment is done primarily by department heads and deans*
  – No evidence of broad faculty involvement in program outcomes assessment
  – No linkage of course content to program goals
  – No evidence of activities to develop faculty expertise in program assessment

• Ensure, describe, and document faculty involvement in
  – Developing statements of intended outcomes
  – Aligning program and course goals (curriculum mapping)
  – Identifying assessment methods
  – Analyzing / interpreting / and acting upon assessment results
Program Outcomes Assessment: Bad Practice 3

• *Program assessment is based on course completion / course grades information*
  – Course completion/grade is a factor of multiple variables
  – Course completion/grade does not provide evidence of students’ mastery of specific program learning outcomes

• Program outcomes assessment can be course-embedded (in fact, this is the most efficient way of doing program assessment)
  – Clearly identify course(s) to embed program assessment
  – Describe assessment design (activities/assignments, evaluation criteria, assessment instrument)
Program Outcomes Assessment: Bad Practice 4

- Assessment designs/tools are misaligned with intended outcomes
  - Assessment instruments (esp., standardized tests) are not aligned with specified program outcomes
  - Assessment reports describe exams, but results are not provided
  - Analysis of results are not done in the context of specified program outcomes
  - Improvement plans are not directly related to the assessment results
- Use templates / matrices to ensure alignment (but don’t let the structure drive the content)
Program Outcomes Assessment: Good Practice 1

• Administrative / institutional support is essential
  – Provide feedback
  – Provide training
  – Recognize success
Program Outcomes Assessment: Good Practice 2

• Start with things that clearly work
  – Curriculum maps
  – Capstone courses
  – Course-embedded assessments
Program Outcomes Assessment: Good Practice 3

• Emphasize keys of Institutional Effectiveness

  – Use multiple measures and approaches
    • Direct / Indirect
    • Stand alone / Portfolio / Course-embedded
    • Selected response / Constructed response
    • Local / National
    • Diagnostic, competency, value-added
Program Outcomes Assessment: Good Practice 3

• Emphasize keys of Institutional Effectiveness
  – Seek external validity
    • Instrument / results review by external experts
    • Comparisons with peer institutions on standardized national instruments
    • Internship evaluations
    • Employer/alumni surveys
    • Graduate school exam scores
Sample Components of Annual Assessment Report
Handout

- School/College/Division Assessment Summary
- Program Description
- Program Curriculum Map
- Program Assessment Process Description
- Program Assessment Summary Matrix
- Placement Summary Matrix
- Assessment Instruments
The Habits of Highly Effective Assessment Systems
(adapted from Jackson & Johnson, 2007)

• Shared, believable learning goals and outcomes communicated to students and integrated throughout the program curriculum
• Multiple assessment designs, approaches, and measures
• Organized feedback system
• Broad based involvement in assessment program design and assessment data interpretation
The Habits of Highly Effective Assessment Systems
(adapted from Jackson & Johnson, 2007)

• Thoughtful, contextualized analysis of data
• Open sharing and communication of results – dialogue with spirit of inquiry not culture of fear
• Specific, documented changes and improvements resulting from the analysis of specific assessment results
Questions and Discussion