Aligning Course Outcomes, Instructional Strategies, and Assessments

February 2016
Aligning Course Outcomes, Strategies, and Assessments

Workshop Plan:
1. Assessment primer (key terms)
2. Alignment model
3. Sample course planning grids
4. Work in teams to “grid” your own course
5. Questions and answers
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• **Course Objectives**: describe what will be covered by the course:
  • The “means to the end”

**Example:**
• Students will study names, formulas, and structures of organic chemical compounds.
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- **Course Learning Outcomes**: the “end” rather than the “means”

- Describe expected outcomes for students related to:
  - Knowledge, Skills, and Attitudes

**Example:**
- Students should be able to use instrumentation for identification and characterization of organic compounds.
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- Course Learning Outcomes complement program-level student learning outcomes

Prior Example:
- Students should be able to use instrumentation for identification and characterization of organic compounds.

“Maps” to Program Outcome:
- Students should be able to design, carry out, record and analyze the results of chemical experiments.
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• **Course Instructional Strategies**: the structured ways by which the course promotes learning

Examples:
• Class discussions, readings, lectures, problem sets, papers, projects, lab assignments
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- **Course Assessments**: the ways by which learning will be assessed in the course

  **Examples:**
  - Laboratory report grading rubric includes a dimension for identifying and characterizing organic compounds.
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• **Course Alignment**: the alignment of course outcomes, instructional strategies, and assessments
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- **Course Alignment**: requires "a strong link" between outcomes and assessments, between outcomes and instructional strategies, and between assessments and instructional strategies (Anderson, 2002)
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- **Lack of Opportunity to Learn:**
  - A particular outcome is assessed but there is either no instructional strategy or a mismatched strategy
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- **Assessment Validity Issues:**
  - Assessment does not reflect outcome in question (e.g., students are expected to apply course concepts but are given an exam that only reflects factual recall)
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#### EXAMPLE Course Planning Grid for One Outcome

<table>
<thead>
<tr>
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<th>Strategies</th>
<th>Assessments</th>
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<tbody>
<tr>
<td>Students should be able to use instrumentation for identification and characterization of organic compounds.</td>
<td>Working with a lab partner, students will separate a mixture of two organic compounds, purify them, and then characterize them from their melting points. The purity of the isolated compounds will be assessed by TLC (Thin Layer Chromatography). Each compound will be identified as one of 8 possible unknowns by mixed-melting point. Each student will produce a report of their findings.</td>
<td>Laboratory report grading rubric includes a dimension for identifying and characterizing organic compounds.</td>
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Example adapted from: http://www.foothill.edu/psme/armstrong/project2.shtml
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<td>When they complete this finance course, students should be able to interpret and analyze financial statements effectively.</td>
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<td>When they complete this finance course, students should be able to interpret and analyze financial statements effectively.</td>
<td>Homework problem sets dealing with the interpretation of balance sheets, income statements, etc.</td>
<td>?</td>
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<td>Students will divide themselves into groups of 4 or 5 to conduct a financial statement analysis of Amazon vs. Wal-Mart (Revenues and Profits 1995-2014). Each group will focus on a particular assigned module and present their findings in class.</td>
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<td>and analyze financial statements effectively.</td>
<td>statements, etc.</td>
<td>Grading rubric for problem sets includes a dimension on interpretation.</td>
</tr>
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<td>Students will divide themselves into groups of 4 or 5 to conduct a financial</td>
<td>Grading rubric for the group presentation includes a dimension on analysis.</td>
</tr>
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<td>statement analysis of Amazon vs. Wal-Mart (Revenues and Profits 1995-2014). Each group will focus on a particular assigned module and present their findings in class.</td>
<td>Final exam includes questions on students’ correct interpretation of elements of an actual financial statement.</td>
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- Homework problem sets dealing with the interpretation of balance sheets, income statements, etc.
- Students will divide themselves into groups of 4 or 5 to conduct a financial statement analysis of Amazon vs. Wal-Mart (Revenues and Profits 1995-2014). Each group will focus on a particular assigned module and present their findings in class.
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<td>Students should be able to write research reports in APA style.</td>
<td>Students will work in groups to apply the APA style manual to a set of simulated research report sections created to include APA style violations. Whole-class discussion will ensure that all violations have been identified.</td>
<td>Objective exam questions on the second quiz and the final will examine student knowledge of APA style guidelines.</td>
</tr>
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<td>Students will conduct a research project and will iterate drafts of the sections of their research reports, based on peer feedback collected on checklists specifying APA style requirements.</td>
<td>The grading rubric for student research reports will include a measurement of conformity to APA style.</td>
</tr>
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*Adapted from: Allen (2004)*
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- “Grid” your own course!
- Work in teams led by a fellow faculty member to develop your own course planning grid
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Questions?

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References:
