Orchestral Maneuvers for Assessment in CMSs
Putting together harmonic ensembles of tools to measure short and long term learning

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Session Outcomes

- Understand how assessment tools in CMS environments map to established theories of learning and assessment in order to select appropriate measurement tools.

- Explore ways to diversify assessment tools to achieve assessment objectives that align with course objectives.
In “Becoming part of the course”, *College and Research Library News* (2002), Christopher Cox offers suggestions on using Blackboard to extend one-shot library instruction. Five years later, in “Integrating Information Literacy into Blackboard”, Pamela Jackson concluded that “better integration of library resources and services into learning management systems is needed” (*Journal of Academic Librarianship*, July 2007). A recent literature search seems to confirm this. While much has been written about the use of Blackboard and other instructional technology, most of the publications focus on its implementation, not assessment, and in context outside of information literacy. More importantly, of the few that address assessment techniques, non to date place it in the context of cognitive hierarchies identified in Bloom’s Taxonomy of Education Objectives (published in 1956 and revised in 2001). Furthermore, McNeill et al confirm that assessment using technology is primarily limited to lower order learning. Almost 16 years since the inception of Blackboard, it seems that a gap remains unfulfilled.

This is a critical point considering that more than 90% of colleges and universities use Course/Learning Management systems (C/LMS) and 74% of them state that their top priority is assisting faculty with IT integration into instruction (Green Campus Computing, Computing Project). The survey lists Blackboard, Moodle, and Desire2Learn as the major market shareholders (45%, 20%, and 11% respectively).
Bloom’s taxonomy is designed as levels; each required before moving on to the next. McNeill et al argue that online assessment seems to be lacking.
Lorin Anderson, a former student of Bloom, revisited the cognitive domain in the learning taxonomy in the mid-nineties and made some changes, with perhaps the two most prominent ones being, 1) changing the names in the six categories from noun to verb forms, and 2) slightly rearranging them [Pohl, M. (2000). *Learning to Think, Thinking to Learn: Models and Strategies to Develop a Classroom Culture of Thinking*. Cheltenham, Vic.: Hawker Brownlow.]

Already familiar with the formula used to create learning objectives when teaching. The difficulty is mapping Bloom’s Taxonomy when creating assessments. Where does this difficulty lie?
Perhaps the answer can be found in understanding assessment. Summative assessment evaluates knowledge at one point in time; for example, an address of a location. Formative assessment is an evaluative process that changes based on learning needs; for example, how to get from point A to point B.
Both lower and higher orders of learning require different forms of assessment, but both are important for a holistic approach of learning and assessment. While online instruction employs higher and lower order aspects of learning, online assessment seems to be limited to lower order (McNeill) or summative approaches.
How do assessment tools in a CMS environment map to Bloom’s taxonomy? Summative assessment is content focused. It is easier to grade because it evaluates single answers, based on facts. On the other hand, formative assessment evaluates a process, which changes, and requires judgment. It makes sense then that technology features that make assessment easier (i.e. automated) would be more popular. Thus, tools requiring selected responses map to lower order learning; whereas tools that use open-ended prompts are formative in nature.
Let’s take a look at examples of online assessment in Blackboard.
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Examples: multiple-choice

Traditional (single response):

Alternative Approach (single response, but requires investigation, rather than memorization):

Students click on the website to evaluate it before providing an answer.

Let’s take a look at examples of online assessment in Blackboard.
Examples: multiple-choice

Here's another example.
An assessment system provides a holistic way of evaluating student learning; one that can be better aligned with overall course objectives. Ultimately, the key to assessment is variety. Of course, this process is complex and there are issues to consider.
Some Considerations for Librarians

- Is the class credit-bearing or one-shot?
  - Credit → flexible
  - One-Shot → limited

- What is my role: Observer, Guest, TA, Co-instructor, other?
  Determines level of participation & ability to create assessment.

- 2 grade or not 2 grade, is that a question?

- Is participation feasible/realistic? Time, workload, etc.

- How do I get faculty/instructor buy-in?
  - Spend time investigating: 5W&H applies to us as well
  - Tie it with their own (and department’s) outcomes
  - Invite them to be a part of the process: Share observations/results; offer training;
  - Create ready-to-use materials and explain integration
Summary

Assessment in CMS environment has been largely limited to lower learning order.

Bloom’s Taxonomy should be considered when deciding on assessment tools.

Creating an assessment system that targets both lower and higher order learning requires the use of various tools.

The choice of assessment tools must be considered within the context of instructional roles.
Works Cited


Works Cited (cont’d)


DISCUSSION/QUESTIONS

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