How to Effectively Assess Student Learning Outcomes in Online and/or Hybrid Courses

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Abstract
This roundtable session explored and discussed experiences with various metrics that can be used in the assessment process. Examples included attrition rates, gpa, and the use of pretest to final grade range of improvement among others. Examples of current efforts and current research being conducted were shared among participants.

This session was attended by approximately thirty people representing a broad range of institutions. After initial introductions were made the presenters handed out a reference list of over forty topic areas that contained information related to the topic. The following questions were brought forward as a means of focusing the discussion in areas this group had an interest in exploring further. They were:

1. What does effective assessment mean in this context of student learning outcomes? Can we use the same approaches and tools across the three types of instruction delivery (face, hybrid, online)? or do we need different ones? if so why, how, etc.
2. If we don't have assessment specialists everywhere on our campuses and no money to hire them, how do we go about disseminating knowledge and practical assistance to faculty and/or ed tech staff who want to know more?
3. We've never focused before on learning outcomes at universities and things have been going really well by all measures. Why do we need to start now? Why can't we continue just to help faculty think about their teaching, help them find/create good materials and tools and leave it at that? In short, why bother?
4. Isn't the end-of-course teaching evaluation good enough?
5. Who is responsible for this on your campus and how does that work, for academic administrators who need evidence of learning when talking with their president, boards, CFOs, legislatures? for faculty, for students, for ed tech staff? for parents and prospective students? for high school superintendents and teachers?
6. Some accreditation boards now require assessment of learning. What is your institution doing to prepare for their next review?
7. How does the creation of alternative assessments (performance-based such as portfolios, learning contracts, self and peer-based assessments (360')) fit within the confines of the classroom? And can they be used within the broader category of a learning college independent of distance or classroom based?
8. Does the environment support a culture of assessment? If we agree that assessment is ongoing, involving all parties and is a part of a larger set of conditions that promote actions that result in desired changes then how do we (or you the individual instructor) create this type of active culture? Is the price too high (in terms of challenge to status quo, economics, system, etc.)?
Four primary themes were identified for in-depth discussion. Specifically:

- Dealing with accreditation (Q.6)
- Learning outcomes (Q. 1, 3, 4)
- Alternative assessments (Q. 7, 8)
- Disseminating assessment strategies with members of the instructional community (Q. 2, 3, 8)

The group tackled the challenge of **accreditation** first. One part of the discussion focused on the types of data required in the past but now seems to be changing. Several of the participants identified the need to include data that compared courses offered at a distance with their F2F equivalent looking at GPAs, retention and attrition rates, and the type of student needs being met by the institution. Several examples were identified ranging from disciplinary bodies, Engineering for example, to the different methods being suggested by the various accreditation groups. Participants identified that the different regions were handling this process in many different ways with the North Central Association of Colleges and Schools appearing to be the most active with its Academic Quality Improvement Project (AQIP) initiative. AQIP is an alternative accreditation process involving a lengthy self-study, and concluding with a formal visit and written evaluation by a team of academics from other institutions. Overall the consensus was that it was beneficial to gather as much data as early as possible and to stay as current as possible with the accreditation group that had oversight for the each participant’s institution.

The group moved on to **learning outcomes**. It was identified that the problem was the lack of clear objectives in courses and the biggest question the group raised was: “what can be done about this?” A spirited discussion followed with many examples and war stories were shared with the following action items identified as methods to increase the clear definition of learning outcomes by instructional teams:

- Use accreditation as driver.
- Use negative teaching evaluations as motivator.
- Use opportunity of course redesign for online instruction.
- Include as a requirement in instructor contracts.
- Use as aid for student learning.
- Link to obtaining grant funding.
- Use as tool in fixing problem of grade inflation.
- Include in all instructional design training & consulting.
- Use in structuring of curriculum flow between courses.
- Include in all aspects of development of a new course.
- Link to teaching awards.

For institutions that utilized graduate students in an active instructional role it was agreed that training these individuals, many of whom will become the next generation of instructors, was vital. They should be:

- Included in workshops on teaching and teaching with technology.
- Included in teaching portfolios.
- Included in teaching awards.
- associate grants for graduate students to training in the development of learning outcomes.

As the discussion continued it was a natural progression to examine accreditation and learning outcomes with alternative assessment strategies. One item that everyone seemed to agree on was that courses offered at a distance required alternative strategies in order to meet the varied learning styles of the students as well as to overcome the challenges imposed on student and instructor alike by the technology and distance/time issues. Several key items were identified with examples of success by the participants including:

- The structured use of chat to demonstrate learning objectives.
- Matching the mode of assessment to the mode of teaching. For example, using case studies as a test process if case studies were used as a mode of instruction delivery.
- Preparing for the diversity of aptitudes. For example, older students may not be as comfortable with synchronous tools and younger students may be more comfortable multitasking during a class session.
- Using clearly defined rubrics. This was based on having clearly defined learning objectives and outcomes. One theme that was raised by many of the participants was that students at a distance had a better chance of success if examples were included to demonstrate the expected outcome.
- Analyze the logs created by the learning management system to identify students who may be at risk. The follow up to this was to observe early in order to communicate with the student(s) who may not be participating and to reach out early.
- Be aware of whom the students are and their experiences may impact what will be shared with the class. For example it was discussed that students solve problems very differently from how experts solve problems; first year students solve problems very differently from how fourth year students solve problems and older students will bring life experiences into the process which may influence how case studies, group projects and discussions can be used to include knowledge from the peer groups as well as a process to be included in the assessment process.
- Using different formats and different questions from different modalities. This was described as an effort to reach different learning styles with different instructional methods ranging from text and graphical elements to streaming media and incorporating these different elements into testing strategies as well.

The final topic of the afternoon brought the participants into a more reflective mode as they shared concerns and desires on disseminating knowledge about assessment strategies. It was interesting to note the different challenges faced by faculty and from instructional support staff within the participant group. All agreed that sharing knowledge was vital but it was clear that this process involved changing more than just strategies; it involved changing how instruction was designed and delivered. Some examples which were identified by the participants as successful included:

- Faculty mentoring other faculty in workshops, in brown bag lunch events, and in specialized curriculum development projects.
- Using the FLASHLIGHT index which includes focusing on choices about learning and teaching made by students and educators on using technology in order to illuminate the relationship between investment in technological infrastructure and
improvement (or lack of improvement) in outcomes. This index also focuses on practices that lead to good learning instead of trying to measure changes in learning while the learning objectives are also changing.

- Using online communication tools to build community and enable peer-to-peer interaction and learning opportunities. Examples included small group assignments, active discussion lists that focus on specific topics and chat sessions that start and stop on different days and times.
- Creating special events that foster interaction and communication on strategies and ideas being used successfully and those that have not as well.
- Stealth strategies which include working ideas such as building learning outcomes and writing good objectives into every workshop, brown bag, or social interaction.
- Model good practice in the workshops being offered whether the topic is content, curriculum and/or teaching the technology and tools. Practice, present and then preach!
- Evangelize, or sing the praises of the successes being observed in the students taking courses at a distance. Examples included the level of satisfaction faculty participants expressed with the increased interaction with their students. While they acknowledged the increase in work, it was noted that they observed a higher level of interaction and enjoyment from the teaching process.

In summary it was clear that institutions of all sizes and constituencies have invested time, people, and budgets in expanding their computing, video and telecommunications capabilities. A large part of this effort is due to the changes that technology is having in the workplace as well as in the personal environment the students live in. Institutions are expanding the tools used in delivering instruction and the participants in this session are working towards approaches that will create positive changes in the instructional strategies and thus change the instructional outcomes to increase student success.