Creating a Culture of Assessment on Campus

How assessment is proving to be a powerful tool for helping faculty — and students — better navigate the learning process.

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How Assessment Data Can Help Faculty

While faculty are naturally avid about students performing as well as possible, assessment data can help support faculty—and students—throughout the entire learning process. With the right assessment tool—one that is easy to use, that integrates well with existing exam processes, that allows faculty to tie learning outcomes to assessment items, that produces outcomes in real time—instructors can further incorporate formative assessment into their teaching processes. The manner in which assessment data is now used raises the standard of assessment and accountability in higher education.

Educators and students increasingly ask how learning can be better measured, monitored, and proven. Using assessment data gathered throughout a student’s career, institutions can better tailor their programs, and can back-up student degrees and certificates with solid data on the learning process.

This paper presents five challenges faculty face with assessment and teaching, discusses how three schools are using assessment data to revamp their teaching and learning processes, and the results they are seeing in doing so.

Through the use of assessment data, students in an organic chemistry course at the University of North Texas are better able to see exactly what topics they are struggling with. Using ExamSoft, their professor has linked assessment items to specific learning outcomes, yielding dramatic improvements in student retention rates and performance.

Similarly, at New York Chiropractic College, ExamSoft is helping faculty monitor and measure key elements of student learning. Results on course assessments and their link to expected competencies are returned quickly, allowing for teaching materials and methods to be revamped on the fly as needed. The result: better formative assessments and data-driven decision making among the faculty.

Challenge No. 1: Tying Learning Outcomes and Assessments

Without a framework of learning outcomes that is specifically tied to assessment, it can be difficult to gauge student progress, especially throughout a course of study, rather than after the fact. That is one of the challenges facing Rob Petros, Assistant Professor at the University of North Texas (UNT), located in the Dallas/Ft. Worth area. He began administering all of his exams through ExamSoft last year. Dr. Petros’ efforts are a part of a long-term university-wide course overhaul UNT called NextGen, which aligns instructional assessments and learning objectives, among other things.

His organic chemistry course is now set up so assessment items are linked to specific learning outcomes. That change, Petros said, has made it much easier to track, in real-time, exactly what his students are mastering—or missing. “If they clearly don’t understand a specific topic, I know very quickly and am able to go back in and redesign the material so it reinforces that topic,” he said.
The real-time aspect of the feedback is important. “We used to get an item analysis [after an exam] and I’d go back in and find a question that most of the students missed,” Petros said. “But with [ExamSoft], it breaks it down into an easy-to-use method for me to know the topics [that need attention], without me having to go and look all that stuff up for every assessment.”

Petros has seen dramatic outcomes as a result of a number of changes he has made to his classroom. His first year with the NextGen-redesigned course yielded a 90 percent student retention rate, and a did-not-finish/withdrawal rate of just 10 percent, compared to a rate that was usually 30-35 percent. “So I was able to retain the students,” he said, “and they’re actually performing better than in previous years.” The combination of course redesign with UNT’s NextGen initiative, tying learning outcomes to assessment items, and using hard data from assessment results, has clearly yielded big results.

**Challenge No. 2: Moving Beyond Summative to Formative**

Summative assessment has long been used in education to mark and record student progress. Adding the use of formative assessment can be a powerful way to help faculty update their instructional methods mid-stream, according to Karen A. Bobak, Dean of Chiropractic Education at New York Chiropractic College (NYCC). Formative assessment can be used in several different ways, she said, and “is incredibly powerful on both sides—faculty and student—as well as for administrators looking on from the 30,000-foot level.”

NYCC is in its second year of using ExamSoft, part of a protracted, system-wide effort to support the Doctor of Chiropractic program and better align assessments and curricula.

By helping faculty members monitor and measure the impact of course content and delivery on student learning, formative assessment can be a powerful tool for curriculum planning and development. “A delivery method that may work really well for a basic science class may not work so well in a clinical science classroom,” Bobak pointed out. “Formative assessment helps the faculty member to know that the students really grasp what they just presented. Did they really understand the topic? It’s incredibly valuable.”

Formative assessment can be extremely useful for students as well as faculty members, Bobak said. It “can give students a quick window into, ‘I didn’t understand what you just said,’ or ‘I don’t have complete control of that topic,’ ” as well as helping faculty monitor and measure whether a lecture is reaching students.

Used on the fly, formative assessment can let faculty know when to update not just content, but delivery methods – to adjust the way information is being taught so that it better reaches students. “Maybe lecture isn’t the best way” to teach a particular topic, Bobak said, “and we need more group discussion instead.” That kind of insight can be uncovered using formative assessment.
Challenge No. 3: Collaboration

Instructional methods can benefit from shared best practices across different disciplines within a college or university. For harried faculty members who may welcome input, but have little time, aligning teaching efforts and sharing information can be a challenge.

Many assessment tools and techniques tend to be decentralized, according to Tim Noteboom, Assistant Dean in the School of Physical Therapy at Regis University in Denver. Assessments may “live on faculty computers and are accessed in a decentralized manner,” Noteboom says, “so we really don’t get a systematic look at a type of assessment…That means we don’t always get feedback to students—and really, to other groups as well—about those assessments.”

With better collaboration, along with assessment review and quality control of questions in place, Noteboom would like to be able to take data from the assessment items across the program, and use it for both internal purposes and student learning. He imagines a student advising session when the instructor has that sort of data at hand. “We could go from less of an anecdotal ‘How are you doing with your courses?’ to a much more focused conversation about specific feedback on student performance, broken down by Bloom’s taxonomy,” he said. An instructor with good assessment data in hand could say, “You did well on memorization questions, but you scored less than 50 percent on questions requiring synthesis, so that’s really where you need to focus, maybe get out in the clinic and practice.”

With the right tool and shared data, faculty decision-making can be much more specific. “Now you really have data-driven decision making happening on a curriculum committee or an outcomes committee,” Noteboom said. Instead of looking at percentage of scores on exams, programs can look at student performance on a much more granular level.

From her perspective at NYCC, Bobak concurred. “One of the tasks that we’re working on right now is verifying the alignment of all of our efforts and doing a better job of documenting processes that already exist.” Shared assessment data can help give faculty members a big-picture look across the curriculum, helping them to trust that topics they touch on early in a program will be covered in adequate depth by colleagues later on. “You really need that reflective look back at a curriculum,” Bobak said, “so you can say together, ‘are we covering a subject in too much depth? Are we skimming past it?’"
Assessment data can help faculty quantify that, while communicating with peers through a tool that reaches across courses and departments, it can help them make sure they are covering things in the correct depth relative to others. “Faculty need to be able to trust the process,” Bobak said, “and to understand that an item really will be covered in more depth later in the program, and the curriculum really is doing what it is designed to do.”

**Challenge No. 4: Getting Feedback to Students**

By asking the right kinds of questions at the right point in a course, a good assessment can send up warning flags early in a program. According to Noteboom, quizzes or “low-stakes self-examination” can be given at numerous points during a course for that purpose. “If they’re sprinkled with just the right amount of higher-level questions that move beyond fact memorization and require some analysis and synthesis,” he said, “we can then start to see the types of areas where students are struggling a bit.” Those can be warning signs that suggest an instructor needs to take preemptive steps to address problem areas for a specific student, such as setting up meetings with a tutor or suggesting additional resources outside the classroom. In that way, assessments can be used to monitor a very granular learning progression—that of a student “who can regurgitate information, to someone who can apply it in a specific way,” Noteboom said.

There is ample data to show that student performance “will always be better,” Noteboom says, “if students are getting timely, appropriate feedback from a formative perspective.”

An effective feedback loop using assessment needs to be almost constant, according to Bobak. The student learning process is immeasurably strengthened when students know what they are supposed to be learning at a given point, and what application it has to their future career. “They need to be able to see where their strengths and weaknesses are,” Bobak said.

For that reason, sharing assessment data with students is an invaluable part of the learning process, and can help students focus their studies in particular areas. By viewing the assessment data, students can find out not just that they received a B on an exam, but that they did well on particular topics, and /or not as well on others. “When it comes to their board exams,” Bobak said, “they can then spend their time focusing on areas of weakness, as opposed to just studying areas that they know really well.”

“With ExamSoft,” she said “we’re able to capture data for review from an administrative perspective and from a faculty perspective in order to look at alignments and see that our ultimate program goals and objectives are being met. It also gives students access to very granular levels of data that can really help each individual.”
Challenge No. 5: Moving to Data-Driven Decisions

A large part of the point of feedback from formative assessment, of course, is that it can help instructors write better questions and better target their curricula. “The feedback loop needs to be closed on the faculty side just as much as it needs to be on the student side,” Noteboom pointed out. “Faculty are always learning too. Faculty wants to do better and get better.”

In fact, he says that the use of ExamSoft as an assessment tool in his department “has started a conversation among our faculty” about the current quality of our assessment. Instructors have been very open to the possibility that they can do better. “That’s a conversation that you really want and need to have, from a faculty development perspective,” he said. A tool like ExamSoft can thus help faculty in making data-driven decisions about the curriculum, he said, “not emotional decisions. You want to be able to support student learning, and support faculty, with the best possible information, using the data that you have.”

Data generated by ExamSoft has proven invaluable in making fact-based changes to his curriculum, according to Petros. “I’m a scientist, so I like data of any kind, and this is generating a ton of data that I can look at.” Using the data, he said, “I can make a change to my curriculum, and I can see whether or not it’s helping or hurting the students. That’s how I do things in the lab—I do an experiment, collect the data, and then see what happens. And this provides a framework for me to be able to do that in my classroom as well.”

About Exam Soft

ExamSoft offers a market-leading assessment-management solution that supports the entire testing process, including exam creation, administration, delivery, scoring, and analysis. Our mission is to meet real-world needs of administrators and exam takers, alike. We strive to continually create customizable and robust assessment management and analysis solutions, which are delivered in an easy, secure, and reliable format. The software delivers powerful, actionable data to assess learning outcomes, and is backed by a world-class team. More importantly, we are committed to helping clients solve problems and achieve institutional objectives, such as improving student learning, engagement, and retention, as well as curricular design, test design, and accreditation compliance.