Performance Assessment in Online Learning

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Assessment in Today’s Online Learning Environments

Even when colleges are working to implement learning-centered expectations and practices throughout the organization, they often throw these principles to the wind when they take on the challenges of online learning. The enormous effort of selecting and implementing a delivery platform, providing professional development on the technology, and supporting preparation of content for online deployment creates such clamor that educators find themselves giving minimal attention to the design of online learning and assessment. Commonly used online learning delivery platforms further undermine the application of performance-based assessment in online learning by providing easy-to-use tools that emphasize objective, paper/pencil type testing.

Authenticity – the level to which assignments relate to real-life application – should be a key factor in developing or adapting learning-centered courses for online delivery. When learners master skills or competencies through learning activities and assessment that relate closely to real life, learning is enriched because it relates more closely to the future needs of the learners. However, building authentic performance assessment into online courses presents challenges to educators.

Today’s online learning environments provide a unique opportunity to merge the convenience of distance education with the potential for dynamic learning communities that engage in extensive communication and collaboration. Communication tools that support engagement, such as threaded discussion, synchronous chat, email, and electronic bulletin boards, are common features of today’s online platforms. Online learning environments also provide wide electronic access to resources. In addition to access to information through the World Wide Web, many colleges and universities provide online learners with instant access to vast library resources through electronic catalogues, journal subscriptions and other means.

While tools for accessing resources and facilitating communication are well developed in today’s online learning environments, tools related to assessment are limited. In most online platforms “assessment” means a series of electronically generated and graded quizzes or tests, augmented by written papers and reports. Tools that support a more authentic, performance-based approach to assessment, such as interactive scoring guides, software for creating graphic representations, and even web pages for displaying student projects may not be readily available in many online learning environments. However, even with these limitations, there are many ways to increase the authenticity of performance assessment in online learning environments.

Strategies for Enhancing Online Learning Assessment

Strategy 1: Strive for Authenticity

As learning organizations decide which courses could or should be offered online, the degree of authenticity required for effective assessment of the learning outcomes becomes a crucial factor in
decisions about how each course should be structured and supported. The following “Levels of Authenticity” provide a guideline for describing how different assessment strategies require learners to apply what they have learned. All of the assessments described in the examples below can be defined as “performance assessments” in that they require the learner to apply knowledge to performance of a competency or other learning outcome. However, they differ in the extent to which they reflect an authentic work or personal life situation. While it is helpful to distinguish between these levels, it is important to remember that the levels represent a continuum with no clear dividing line between one level and another. For example, a Level 3 case study, with a few additional details and dimensions, could easily become a Level 4 simulation.

**Level 1: Non-authentic performance assessment task.** Requires the learner to reiterate information or answer theoretical or abstract questions or problems with little or no connection to authentic application in the world of work or life in general. Examples would be to solve a mathematical equation without context (i.e., |4x – 7| = |6 – 4x|) or to list the steps in a typical manufacturing production process.

**Level 2: Minimally authentic performance assessment task.** Requires the learner to answer questions or solve problems that reference realistic data or information, but do not reflect a cohesive work or personal life experience. An example would be an essay question exam that asks learners to respond to a variety of questions about the causes of World War II. The questions may demand the application of knowledge, but they do not reflect a comprehensive, authentic performance. Mathematical “story problems” would be another example of a Level 2 assessment. The questions or problems represent various aspects of a real-life experience, but no attempt is made to connect these bits and pieces into authentic responses to a complex situations. Level 1 and 2 assessments are typical of online courses that rely on the quiz/test features provided in commonly used online platforms.

**Level 3: Case study or scenario performance assessment task.** Presents a case study or scenario that requires learners to solve a complex, real-world problem given the kind of tools, data, and information that would be available in a real-life setting. It may also require the learners to use planning or conceptual tools, such as a flowcharts or spreadsheets, to perform higher-level cognitive tasks like analysis or evaluation. For example, an assessment in a quality assurance course requires learners to write a personal philosophy of quality. The scenario provided asks learners to imagine that they are new hires in a quality-focused manufacturing facility. Each member of the department team is being asked to write a personal philosophy of quality to share at the next department team meeting. From this the team will begin to develop a team philosophy of quality.

Requiring learners to respond to a case study or scenario is one way to take the typical report assignment (Write a 3-5 page paper on _____) and make it more authentic. Framing the assignment in terms of a case study or scenario calling for a report typically produced in the world outside the classroom, (e.g. proposals, project summaries, cost justifications, or product/process evaluation reports) increases the authenticity of a written report assignment.

**Level 4: Simulation/role play performance assessment task.** Requires learners to apply what they’ve learned in simulated work or personal life situations. Simulations that emphasize the interpersonal aspects of a performance can, with reasonable effort, be incorporated into an online course. Though it is desirable to avoid requiring online learners to come on site (to the classroom), online learners should not be limited to performing all assessments on the Internet, at their computers.

For example, in a career development class learners could be required to participate in mock interviews. Interviewers could be local employers with whom learners would be required to schedule an interview at an off-campus, business location or over the phone. Interviewer feedback and learner reflection could
provide the foundation for assessment. In some cases, simply requiring learners to perform under realistic deadlines and time pressures creates a realistic simulated environment.

A variety of strategies can be used to enhance the authenticity of a simulation or role-play online. Requiring learners to work in teams to accomplish authentic planning, problem-solving, or product development activities can produce a highly authentic situation. Teamwork at a distance using the Internet, email, online “virtual” meeting rooms, and other electronic means is becoming more prevalent in the modern workplace. Working in teams in an online course can offer a close approximation of these kinds of activities. Involving guest experts and mentors in the simulation or role-play further enhances the authenticity of these online assessment strategies.

Using technology to re-create a physical environment in which a performance takes place, though costly, is no longer novel. Examples include flight simulators, virtual golf, simulated welding, or electronic shooting ranges. Though the technology required to make high-quality virtual experiences available to online learners is emerging, currently it is not readily available or affordable for education. However, there are alternatives to high tech simulations. Ironically, one alternative is to step up to Level 5 and combine hands-on performance with reflection and expert feedback.

**Level 5: Authentic performance assessment task.** Requires learners to perform required competencies in an authentic setting. Pilots are assessed on flying an airplane, speakers are assessed on speeches given to city councils, and designers are assessed on designs developed for actual clients. Clinical experiences, internships, and on-site business ventures provide additional examples of Level 5 authentic assessments. In some cases, learners can be expected to arrange their own authentic environment in which to demonstrate performance. For example, a learner in a marketing course could arrange to develop a marketing plan for a local business or not-for-profit organization.

Level 5 authentic assessment provides a rich experience for learners and offers the opportunity to achieve mastery in a work or personal life setting. When learners are given these types of opportunities to practice the transfer of learning in varied situations, they are more likely to apply their learning in the world outside the classroom (virtual or physical).

Level 5 authentic assessments pose challenges for online learning. For example, how can an instructor watch and evaluate an authentic performance without actually being there? One alternative for those Level 5 assessments that must take place in an authentic environment off-line and off-campus, is to ask learners to video tape their performances and submit the tape for evaluation. On the other hand, learners can be asked to arrange for a qualified individual to observe and rate their performance using a predefined rubric or scoring guide. When learners combine feedback from an individual from an authentic setting with personal reflection, their learning goes beyond performance to self-evaluation and continual self-improvement.

**Strategy 2: Provide Learners With the Tools and Information They Need**

In general, to accomplish performance assessment tasks successfully, learners need:
- clear directions describing the product/performance that they are to accomplish
- a scoring guide (checklist or rubric) that communicates the criteria for effective performance
- access to the tools, information, and materials required to accomplish the performance assessment
- access to samples or examples of completed products or performances
- a vehicle for submitting/presenting the product or performance
- tools to facilitate the collaborative development of products and performances
- a system for giving and receiving feedback using scoring guides throughout the learning process
While most online platforms do not provide tools for creating rubrics and other documents needed to facilitate assessment, these can be developed offline and posted in an online course for learners to access. One tool that can help is WIDS Performance Assessment Task Library that provides 50 model assessment tasks that can be customized to meet the needs of a varied disciplines, outcomes, and learning environments. When developing courses for online delivery, instructors can insert and customize an assessment task from the WIDS library that is appropriate for assessing a particular competency.

**Strategy 3: Create an Online Environment That Supports Authentic Assessment**

The communication tools available in most online platforms can become the vehicle for effectively facilitating performance assessments through debates, scenarios, role-plays, simulations, and other interactive performances. Online communication tools such as threaded discussion, group space, white boards, email and chat can also play an important supportive role to performance assessment in online courses by providing vehicles for collaboratively planning group projects, participating in teams, and giving/receiving feedback.

One way to increase the authenticity of assessments is to create “virtual environments” that simulate a work or personal life environment. Dr. Paul Resta of the University of Texas – Austin directs learners to collaboratively develop a technology plan for a “mythical” school district – Mustang ISD - as part of a graduate-level Technology Planning and Management course. Learners take on the role of a technology planning team in work group discussion, and role-play planning meetings among parents, community leaders, and educators. The groups are provided with enrollment and facility data along with a profile of the imaginary school district. Criteria that will be used to evaluate the technology plans is provided up front and comes directly from actual criteria used to evaluate technology proposals for funding. The online environment even includes the mythical school district logo on most online course pages, an online school “handbook” and school building floor plans and diagrams.

Another way to support authentic assessment is to provide tools for the development of graphic representations of complex concepts and processes such as flowcharts and concept maps. Unfortunately, online platforms typically do not yet include such tools. While “white boards” may be available to support synchronous chat sessions, the graphic capability is often limited, and may not be savable to a permanent electronic file suitable for assessment purposes. However, some kinds of charts and graphs can be created using readily available software such as MS Excel, Access, or PowerPoint. Educators who are reluctant to require learners to have this specialized software for online courses may incorporate software that learners can access online for a reasonable cost, or even at no cost. An example is Mindjet Mapping software that learners can download free for limited use to create an electronic concept map. The website for Mindjet [http://www.mindjet.com/index.shtml](http://www.mindjet.com/index.shtml) reinforces the authenticity of the tool by noting that this type of tool is frequently used in strategic planning, project development, and other kinds of planning processes in business and industry.

**Strategy 4: Provide Opportunities for Practice and Feedback.**

Once the details of the authentic assessment have been developed, educators must ensure that opportunities for learner practice and feedback are incorporated into the learning process. Practice opportunities and feedback on performance are critical to learner success, particularly in extensive, comprehensive, authentic assessment. In addition, those assessments that require collaboration must include adequate opportunities and an appropriate time frame for teambuilding, cooperative planning, and dialog.
If learners, through a reasonable amount of effort, are able to meet the performance expectations detailed in the scoring guide for the assessment, the learning process is effective. If learners struggle to meet the required performance expectations, additional learning and practice opportunities may need to be incorporated into the learning process, and/or the performance expectations may need to be more clearly defined.

**Conclusion**

Authentic performance assessment is a critical component to effective, learner-focused online learning. Performance assessment in an authentic context adds relevance for learners by connecting learning to tasks that are meaningful both inside and outside the world of the education. Effective performance assessment, with a relatively high level of authenticity, is desirable, possible, and is already happening. The long-term effectiveness of online learning initiatives will demand that effective, authentic performance assessment become an integral part of the online learning environment.

**Biographical Sketches**

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