Using Universal Design for Learning to Create Effective Online Assessments

Melanie L. Shores

The University of Alabama Birmingham

ABSTRACT: *Universal Design for Learning (UDL) provides students with multiple means of accessing a course based on presentation, action and expression, and engagement and interaction. UDL promotes assessments by design which will ensure alignment of assessments to objectives/goals, provide authentic opportunities for assessment, assess engagement, offer frequent formative assessments, help eliminate unnecessary barriers, support learner variability, use of rubrics, learner involvement, reflection and building communities.*
KEYWORDS: *online learning, universal design for learning, UDL, online assessments*

I.   USING UNIVERSAL DESIGN FOR LEARNING TO CREATE EFFECTIVE ONLINE ASSESSMENTS

Design for Learning (UDL) provides students with multiple means of accessing a course based on presentation, action and expression, and engagement and interaction. UDL promotes assessments by design which will ensure alignment of assessments to objectives/goals, provide authentic opportunities for assessment, assess engagement, offer frequent formative assessments, help eliminate unnecessary barriers, support student variability, use of rubrics, student involvement, and reflection and building communities. UDL assessments allow all students to show what they really know about the content or skill.

Universal Design for Learning is a set of principles for curriculum development that focuses on providing equal learning opportunities for all individuals. UDL is based upon three main principles: representation, action and expression and engagement. Within representation, UDL recommends offering information in more than one format. For example, textbooks are primarily visual. However, providing text, audio, video and hands-on learning gives all kids a chance to access the material in whichever way is best suited to their learning strengths. Action andexpressionsuggests giving kids more than one way to interact with the material and to show what they have learned. For example, students might get to choose between taking a pencil-and-paper test, giving an oral presentation or doing a group project. Engagement encourages teachers to look for multiple ways to motivate students. Letting kids make choices and giving them assignments that feel relevant to their lives are some examples of how teachers can sustain students' interest. (www.uab.edu)

Thormann and Zimmerman (2012) report that the following instructional strategies should be included in every online classroom learning environment: learning progression, variety in assignments and activities, guided practice/coaching, real-world, authentic learning, learning communities, Skype communication, online collaboration (synchronous and ashynchronous), interactivity features and learning by doing, student choice, and tailoring assignments for diverse learners. Research by Boettcher (2006-2013) recommends that instructors be present at the course site; create a supportive online course community; share a set of very clear expectations for your students and for yourself as to (1) how you will communicate and (2) how much time students should be working on the course each week; use a variety of large group, small group, and individual work experiences; use both synchronous and asynchronous activities, early in the term - about week 3, ask for informal feedback on "How is the course going?" and "Do you have any suggestions?"; prepare discussion posts that invite questions, discussions, reflections and responses; focus on content resources and applications and links to current events and examples that are easily accessed from learner's computers; combine core concept learning with customized and personalized learning; and, plan a good closing and wrap activity for the course.

Hitchcock, Meyer, Rose and Jackson (2002) applied UDL to learning by devising an approach for curriculum reform that incorporates new media and technologies to achieve the three principles. For students with disabilities in higher education, UDL can also be applied in online courses, which has presented a unique set of opportunities and challenges for teaching and learning. The philosophy and principles of a UDL framework are similar to UD and are meant to provide pedagogical strategies for instructors to maximize learning opportunities for diverse groups of students including those with physical and/or learning disabilities (Bernacchio& Mullen, 2007; Rose & Mayer, 2008). All students can benefit from this approach. Furthermore,

while UDL can provide the greatest degree of support for the student, it also can continue to provide challenges to maximize online teaching and learning (Coombs, 2010; He, 2014; Lancaster, 2011).

Research by CAST Professional Learning (2019) suggests that using UDL principles will enhance the design and reflection upon assessments. They have compiled a list of 10 tips to use for online assessments. These tips include (1) align the assessments to your learning objectives, (2) provide authentic assessments, (3) include engagement as well as content knowledge in the assessments, (4) offer frequent formative assessments, (5) eliminate unnecessary barriers in assessments, (6) support student differences through flexible assessments, (7) use and provide rubrics for assessments to provide clarification, (8) involve students in the learning process through assessment results, (9) reflect on summative assessments to guide future lessons, and (10) build communities of practice that support curricular modifications. With the help from these tips, educators will be better able to provide assessment by design as recommended by UDL. UDL recommends that all educators think proactively about the needs of all students.

Educators need to always make certain they establish clear outcomes, anticipate student needs, have measurable outcomes and an assessment plan, establish an instructional sequence of events, and reflect on new understandings (Lawrence, 2011). The assessments that are provided should offer information related to accountability, student progress and instruction. Assessments should also be designed to measure knowledge, skills and abilities. Educators need to pay close attention to not include construct-irrelevant features on assessments as these features can cause barriers for some students and in turn effect the validity and reliability of the assessments (Rose et. al., 2008). Rubrics are effective in making the goals and expectations of assessments clear. They inform the student of what is expected of them and how exactly they will be graded. The rubrics also ensure that the skills and/or knowledge is aligned with the assessment. Rubrics can serve as a "checks and balance" process to ensure that non-related skills and/or knowledge have been removed form the assessments (CAST, 2019). When possible, remove any barriers that do not relate to the learning goals/objectives you are wanting to measure.

An overarching goal for UDL is making sure educators are providing the most valid assessment possible for the largest number of students. Not only is it important to include UDL at the beginning of assessment development, the continual refinement and improvement of assessments is essential. UDL assessments should include and ensure that intended constructs are measured, respect for the diversity of the assessment population, concise and readable text, clear format, clear visuals and changes allowed to format without changing the meaning or difficulty (Johnstone, Altman &Thurlow, 2006). UDL assessments are intended to increase access without changing the standard of performance. They are not designed to replace accommodations or alternative assessments. However, UDL assessments should plan for common accommodations needed and the assessments should allow for these accommodations in the assessments process (Johnstone, Altman &Thurlow, 2006).

Because we know that all students learn in a variety of ways, it is important for educators to embrace the principles of UDL. Ongoing assessment in an essential part of any course. Students need to be allowed to demonstrate their learning in ways that are most representative of the ways they learn. There should be no surprises when it comes to assessments. Students should know exactly how they will be assessed, what knowledge and/or skills will be on the assessment, how they will be graded and how their progress will be communicated regarding mastery of the content. Providing these details regarding assessments to students will increase the overall learning outcome and will reduce stress and test anxiety. Teachers and students will better be able to observe and measure whether students have achieved the intended goals.

REFERENCES

[1]. Bernacchio, C. & Mullen, M. (2007). Universal design for learning. Psychiatric Rehabilitation Journal 31(2), 167-169.
[2]. Boettcher, J. V. 2006-2013. Ten best practices for teaching online; Quick guide for new online faculty.Designing for Learning.
[3]. CAST Professional Learning. (2019). Top 10 UDL tips for assessment.castprofessionallearning.org
[4]. Coombs, N. (2010). Making online teaching accessible: Inclusive course design for students with disabilities. San Francisco, CA: Jossey Bass.
[5]. Hitchcock, C., Meyer, A., Rose, D., & Jackson, R. (2002). Providing new access to the general curriculum: Universal design for learning. Council for Exceptional Children 35(2), 8-17.
[6]. Johnstone, C., Altman, J., &Thurlow, M. (2006). A state guide to the development of university designed assessments. National Center on Educational Outcomes.
[7]. Lawrence, K. S. (2011). UDL instructional planning process.http://udl-iron.org/
[8]. Rose, D. H., Hall, T. E., & Murray, E. (2008). Accurate for all: Universal design for learning and theassessments of students with learning disabilities. Perspectives on Language and Literacy, 23-28.
[9]. Rubin, B., &Fernandes, R. (2013). Measuring the community in online classes.Journal of Asynchronous Learning Networks, 17(3), 115—136. Retrieved from http://sloanconsortium.org/publicatons/jaln_main
[10]. Suanpang, P. &Kalceff, W. 2003. Instructional design and features of an online business statistics course, Thailand. Paper presented at the 29th Congress o-n Science andTechnology of Thailand (STT). KhonKean, Thailand.
[11]. Thormann, J. & Zimmerman, I. K. 2012. The complete step-by-step guide to designing andteaching online courses. Teachers College Press.
[12]. The University of Alabama Birmingham. 2019. www.uab.edu