Improving Equity, Access, and Inclusion in Online Courses with Universal Design for Learning

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The Need for Inclusive Instruction

Enduring and situational barriers to learning are well-documented throughout the literature (Fenrich et al., 2018), including academic, cultural, financial, technological, instructional, and institutional barriers (Novak & Thibodeau, 2016). Recent research has shown that these barriers may be more prevalent in online courses (Rao et al., 2015), and encountered more often by students with disabilities (Seok et al., 2018), first-generation college students (Tobin & Behling, 2015), and students from marginalized backgrounds (Rickerson & Dietz, 2003). As OT programs recruit and admit students from diverse backgrounds, faculty must be prepared to examine and critique their instructional design in the spirit of equity. Minimizing the barriers that students face in our curricula and meeting a variety of learning needs contributes to necessary equity, access, and inclusion within the profession. In addition, providing full access to education without disadvantaging any students is consistent with OT's values (Rickerson & Dietz, 2003), supports pursuit of occupational and social justice, and models for students practices that they can use to provide inclusive education to others in their future careers (Rickerson & Dietz, 2003).

Universal Design for Learning

Universal Design for Learning (UDL) offers principles and practices that allow all learners to access rigorous coursework by making instruction accessible, flexible, and equitable. According to Hall et al. (2004, p. 7),

*"a UDL curriculum takes on the burden of adaptation so that the student doesn't have to, **minimizing barriers** and **maximizing access** to both information and learning."*

UDL moves instruction away from the traditional approach involving lecture and reading to an approach grounded in neuroscience and insights into how humans learn (Meyer et al., 2014). According to Meyer et al., (2014), this involves three learning networks, each with a related instructional method:
- the recognition learning network, requiring multiple, flexible methods of presentation or representation
- the affective learning network, requiring multiple, flexible options for engagement
- the strategic learning network, requiring multiple, flexible methods of action and expression

Equity, Access, and Inclusion

Research suggests that the use of UDL in course design can result in improved equity, access, and inclusion for students experiencing a variety of barriers to learning (Kennette & Wilson, 2019; Rao et al., 2015). In a systematic review of literature involving UDL in a postsecondary educational setting, Seok et al. (2018) found that of the 17 studies examined, 15 found that principles of UDL enhance access to knowledge for students with and without disabilities. In addition, multiple authors have argued that UDL meets the needs of diverse learners (Novak & Tucker, 2021; Novak & Thibodeau, 2016), including students of varying cultures and races (Fritzgerald, 2020), and those who access their learning on mobile devices and/or from a variety of remote locations (Tobin & Behling, 2018).

Application of UDL Principles in OTD715: Examples, Student Perspectives, and Instructor Suggestions

UDL Principle	General Application of the Principle	Examples of the Principle in OTD715	Student Perspectives	Instructor Suggestions
Multiple Means of Representation (the "WHAT" of Learning) Offering information and content in more than one format	• Alternatives for audio and visual info • Use multiple media • Activate background knowledge • Highlight patterns and relationships	• Multiple types of resources • Video transcripts and captions • Images and graphic organizers/infographics in syllabus and materials • Image descriptions and alt-text • Weekly introductions and use of modules	• Allowed individualization • Helped with focus and engagement • Modeled how information could be presented to clients with varying learning needs • Supported understanding and retention of information • Choice could be overwhelming	• Collect multiple resources and organize by objective for students to access • Write scripts for videos, then use them to create captions • Clearly organize resources and make clear that not all are required • Don't try to do everything at once
Multiple Means of Engagement (the "WHY" of Learning) Promoting various ways of engaging with material	• Offer autonomy and choice • Minimize distractions • Identify clear objectives • Foster collaboration and community • Provide mastery-oriented feedback • Develop self-assessment and reflection	• Discussions on Zoom or LMS forum • Choice of topic for primary assignment • Weekly objectives identified • Peer review in small groups • Frequent and specific instructor feedback • Prompt student use of rubric • Midterm feedback on course	• Learning felt more purposeful and intentional • Collaboration and feedback improved confidence • Allowed for exploration of learning preferences • Choice of topic made room for curiosity and passion • Consistent and constructive feedback reduced anxiety	• Develop weekly objectives • Provide peer-to-peer interactions and clear guidelines and support for collaboration • Target feedback toward objectives, point toward resources, ask questions • Build in reflection and explain its importance
Multiple Means of Action/Expression (the "HOW" of Learning) Giving students more than one way to demonstrate their learning	• Use multiple tools for activities and assignments • Scaffold support • Provide low-stakes opportunities for practice • Support planning and strategy development • Enhance own progress-monitoring	• Choice of video, audio, artwork, infographic, Sketchnotes, mind map, etc. • Scaffolded completion of written assignment • Rubrics and formative assessment • Frequent low-stakes assignments • Reflection activities	• More excited and passionate about project and learning • Room for creativity and complexity of thinking and expression • "Fun to switch it up" • Prompts self-monitoring and investment in learning • Planning and progress-monitoring can seem tedious	• Student choice makes review/grading more engaging • Make rubrics general enough to account for various formats • Some students don't see value in self-monitoring, so be transparent about its purpose and goals