Universal Design for Learning and Assessment

Annotated Bibliography

1. Universal design for learning: Reaching all, teaching all, paper by Paula Burdette, Ph.D, State improvement Grant Director at Delaware Department of Education, P.O. Box 1402, Towsand Buildning, Dover, DE 19903-1402, https://files.eric.ed.gov/fulltext/ED485470.pdf

Burdette's paper may be of particular interest for new beginners in the field of UDL as it provides an overview over central topics related to UDL such as benefits of UD, implications for teachers, implementation of UDL, UDL and the link to brain research. Particularly useful for new beginners within the field of UDL may be the topic of what UDL is and is not, offered at the very beginning of the paper. Understanding the link to brain research is an important precondition to understanding the very principles of UDL and this link is also elaborated on in the paper. In addition to a section about the benefits of UDL, the author offers information about what implications UDL may have for teachers and how the roles of teachers may change as they use more and more UDL principles. In the section that discusses the implementation of UDL, the author offers and example of what UDL implementation is and is not. The paper offers a number of useful resources in UDL literature and UDL tools.

2. Fornauf, Beth S., Higginbotham, Thomas, Mascio, Bryan, McCurdy, Kathryn, Reagan, Emilie M. (2020). Analyzing Barriers, Innovating Pedagogy: Applying Universal Design for Learning in a Teacher Residency. *The Teacher Educator,* 56(2): 153-170.

Fornauf et al. (2020) explore how teacher educators apply concepts of UDL in their own pedagogy and practice. The article describes the process of applying UDL as a pedagogical innovation in a teacher residency (preparation) program. The starting point of the exploration is an observation that the fields of education, and teacher education specifically, have shown particular interest in the UDL framework and that educators are encouraged to incorporate UDL in their curriculum. Still, there are limited descriptions in the literature of how teacher educators apply UDL in their practice. The authors describe the application of UDL as a pedagogical framework in the particular teacher residency (preparation) program they were teaching. Methodologically, the article builds on the authors' own reflections on how they – being teacher educators themselves, apply the principles of UDL in their practice. The article offers examples of the authors' work on revising curricula, re-thinking their own teaching practice, re-designing assignments and assessment with the purpose of incorporating the principles of UDL. Based on individual analyses of own teaching practice, followed up by biweekly team meetings where

individual analyses were discussed, the authors identified barriers to application of UDL that they did not identify individually. This barrier-analysis was purposively used to identify areas, structures and systems that needed to be revised. The authors describe this as an ongoing and iterative work. Fornauf et al. (2020) show how the process of turning the spotlight on own practice forces teacher educators to confront own assumptions and biases about instruction and curriculum development.

3. Schreiber, J.L. (2017). Universal Design for Learning: A Student-Centered Curriculum Perspective. *Curriculum and teaching, 32*, 89-98.

Jennifer Screiber's (2017) "Universal Design for Learning: A Student-Centered Curriculum Perspective" discusses the concept of UDL from a student-centered perspective and emphasizes the importance of designing curricula with students at the center. Screiber's (2017) article explores how UDL differentiates instruction, delivery methods, practice activities, and assessment approaches to meet the needs of all learners. The article emphasizes that UDL could have potential benefits for all learners, not only for students with identified learning disabilities, but also the general population. This is because UDL promotes engagement, motivation and achievement. Screiber (2017) argues that UDL is relevant at all educational levels, from elementary through postsecondary education.

4. Ismailov, Murod & Chiu Thomas K. F. (2022). Catering to Inclusion and Diversity with Universal Design for Learning in Asynchronous Online Education: A Self-Determination Theory Perspective. *Frontiers in Psychology,* 13:819884. https://doi.org/10.3389/fpsyg.2022.819884

The authors Murod Ismailov at the Faculty of Humanities and Social Sciences, Centre for Education of Global communication at the University of Tsukuba, Japan and Thomas F.K. Chiu at the Department of Curriculum and Instruction at the Chinese University of Hong Kong discuss how UDL is applied to asynchronous university courses from the needs satisfaction perspective in self-determination theory (SDT). SDT is a suitable psychological framework to assess how UDL-based teaching design caters to learner inclusion and diversity, and to examine engagement in asynchronous online courses. The theory focuses on social-contextual factors that foster or hinder students' thriving through the satisfaction of their basic psychological needs for autonomy, competence and relatedness. When pedagogical designs effectively satisfy these needs, students are more likely to be motivated to engage in learning tasks. To explore the application of UDL-principles to asynchronous university courses, the researchers designed and implemented two 15-week asynchronous online courses based on UDL. The researchers then tested their effectiveness with college freshmen (N=225) by adopting a sequential explanatory mixed method. The study aimed to examine 1) whether asynchronous instruction based on UDL catered to inclusion and diversity across gender and academic background, and 2) whether the instructional design supported learner engagement and needs satisfaction. The findings show that both male and female students as well as Arts and Science

students equally engaged in courses and perceived the needs support from the course design. However, the study also found that although UD supported autonomy and competence, it nonetheless failed to fully satisfy learners' relatedness needs. The results of the study can inform teachers and curriculum professionals about the effectiveness of universal design in constructing inclusive asynchronous online courses.

5. Edyburn, D. L. (2020). Universal usability and universal design for learning. *Interv. Sch. Clin. 56*, 310–315. doi: 10.1177/1053451220963082

In his article "Universal usability and universal design for learning", Dave L. Edyburn at College of Community Innovation and Education, University of Central Forida, Orlando, USA discusses what UDL looks like in the classroom. The starting point for the discussion is an observation that UDL holds a considerable promise to create inclusive educational environments, but that there is little agreement about what UDL looks like. The purpose of the article is to assist students, educators and parents in identifying universal suability designs, behaviors, and tools to reflect the practice of UDL in the classroom. The article highlights three types of exemplars: Platform tools, web-based curricula and embedded supports. The article will be useful for new beginners within UDL as it provides a number of examples of how to apply UDL to teaching and learning. Edyburn (2020) argues that knowing what UDL looks like is an essential step in measuring the outcomes of UDL.

6. Hurst, P., & Mona, A. (2021). How do students experience inclusive assessment? A critical review of contemporary literature. *Assessment & Evaluation in Higher Education*, *47*(5), 674-688. https://doi.org/10.1080/13603116.2021.2011441

Hurst and Mona (2021) conducted a critical review of 13 research papers published between 2015 and 2020 on outcomes of inclusive assessment. In the introductory sections of the paper authors set the context for their study that is characterized by paucity of research on inclusive assessment, a lack of application of clear UDL principles to assessment, widening participation and diversity in terms of participation of both disability and social equity seeking groups in higher education that is under fiscal pressures. The critical review included studies that reported on outcomes of inclusive assessment for students with disabilities, international and linguistically diverse students and one study on effects of inclusive assessment on students' learning. Key findings show that while efforts to enhance inclusivity, such as offering students choices in assessments and utilizing programmatic assessment approaches, co-design of assessment and policies — are noted, the implementation of UDL principles in assessment remains limited. Authors indicate that this might be due to limited theorization and operationalization of UDL as cognitive and materialist approach to inclusive assessment that might be useful when for disability inclusion but does not fully account for a widening student diversity. Reviewed studies included several recommendations: ensuring validity of assessment tasks to

measure learning outcomes, using other learning activities, role modeling and rubrics to scaffold assessments and ensure constructive alignment, using a programmatic approach to assessment and applying systematically UDL principles, fostering collaboration among students, teachers and support staff, providing choices for students to address diverse needs but avoiding superficial changes without addressing deeper inclusivity issues, monitoring closely adjustments to assessment, creating supportive environments for students, increasing staff awareness and knowledge and addressing policy to practice disconnect. While there is limited evidence on inclusive assessment this review reported largely positive student and staff perceptions. The review calls for a more nuanced understanding of diversity and an intersectional approach to challenge the traditional norms and explore the immediate and long-term impacts of inclusive assessment on various equity groups and within various disciplinary and institutional contexts.

7. Donnelly, R., & Ó Murchú, D. (2020). A critical evaluation of the integration of a universal design for learning approach into a module using an ePortfolio: A student perspective. *Assistive Technology, 32*(4), 193-203. https://doi.org/10.1080/10400435.2019.1573078

In this responsive mix method case study Donnelly and Ó Murchú (2020) critically document the application of UDL principles to ePortfolio in a brand management course at an Irish higher education institution and bring forward students' perspectives. They focus on two UDL principles, multiple means of engagement and multiple means of action and expression and explore how students perceive their effective integration into ePorftolio assessment. ePortfolio consisted of three individual tasks (biography, social media discussion about an independently identified article, and portfolio presentation) and two group tasks (interview and brand audit). It offered multiple opportunities and means for engagement and expression by providing flexibility, choice, integration of real-world experiences, working with peers and wider community, peer assessment and self-reflection. Findings indicate positive student perceptions of the ePortfolio designed on UDL principles, its flexibility, authentic tasks and choices to learn in their unique ways individually and with their peers were appreciated. While this study is not generalizable, it provides an excellent example of how UDL can be applied to learning assessment at the university level.