CIDDL Research and Practice Brief 3: Using UDL and Technology for Enhancing Instruction

AUTHOR
Nicholas Hoekstra
The CIDD Team

PUBLISHED
June 15, 2021

Suggested Citation:

OUR COLLECTIVE WHY 🙲

Dear stakeholder,

Thank you for engaging with the Center for Innovation, Design, and Digital Learning (CIDDL). The work that you are about to access is supported with funding from the Office of Special Education Programs at the U.S. Department of Education.

The CIDDL Center is striving to impact the use of educational technologies into preparation programs, including special education, early intervention, and related services personnel preparation and leadership personnel preparation programs that prepare professionals serving students with disabilities.

CIDDL Research and Practice Briefs

CIDDL Research and Practice Briefs is a series of reports on research and practices regarding the innovative use of technology in special education, early childhood, related services personnel preparation and leadership personnel preparation programs as well as K-12 educational settings. For each brief, an expert or practitioner in the field is invited to discuss their research and practices. In addition, experts and practitioners will share their insights into opportunities and challenges about applying their research and practices to professional preparation programs.

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Dr. Loui Lord Nelson is an author, UDL consultant, and host of the popular podcast "UDL in 15 Minutes." Dr. Nelson was the UDL coordinator for the Bartholomew Consolidated School Corporation from 2008-2012 and has worked on the design and implementation of UDL in a wide range of contexts, from Uganda and Malawi to Singapore and across the United States. Her books include *Design and Deliver: Planning and Teaching Using Universal Design for Learning* and *Culturally Responsive Design for English Learners* with Dr. Patricia Kelly Ralabate, both published by CAST Professional Publishing.

Topic: Using UDL and Technology to Enhance Learning for All

What will you learn from this Brief?

In this brief, Dr. Nelson discusses how UDL as an educational framework helps ensure every learner, including students with and without disabilities, can gain access to the curriculum and grow toward becoming an expert learner. Dr. Nelson also discusses the important role of technology as a tool that can provide students alternative means for accessing, engaging with, and expressing their understanding of the curriculum. Technology is not the driver of education; however, as Nelson points out in her work, it is a tool that can enhance a well-designed lesson.

Context

The Higher Education Opportunity Act of 2008 (HEOA) endorses Universal Design for Learning (UDL) as a scientifically valid framework that reduces barriers in instruction, provides appropriate accommodations and supports, while maintaining high achievement expectations for all students. Another federal law, the Every Student Succeeds Act (ESSA) of 2015 also indicates that states should

provide funds to support local education agencies in improving the use of technology, consistent with the principles of UDL, to support the learning needs of all students, including children with disabilities and English language learners.

The [2018 Strengthening Career and Technical Education for the 21st Century Act](#) goes on to call for State leadership activities to include training and professional development that prepares career and technical education teachers, faculty, specialized instructional support personnel, and paraprofessionals to provide appropriate accommodations including through the use of principles of UDL.

UDL is distinct from a "strategy" or "intervention". Instead, it is an educational design framework. As such, UDL guides the design of all aspects of the learning environment including curriculum, materials, instruction and assessment (Nelson & Basham, 2014). This also means that UDL is not dependent solely upon the work of teachers. The implementation of UDL at the classroom level is influenced by both school and district level supports. Nelson and Basham (2014) provided a blueprint for how investments at different levels within the education system can help support UDL implementation.

There is also an assumption that because technology can support students in gaining access to the educational environment, using technology equates to implementing UDL. However, technology is only as effective as the curriculum to which it provides access. In this brief, Dr. Nelson discusses her work around the implementation of UDL and use of podcasting as a tool to support understandings of UDL application and research.

Key Insights

Research into the brain continues to demonstrate the great diversity with which each individual processes information (CAST, 2018). These insights into learning have led us to be more proactive in how we design learning environments to better meet the needs of every student (Meyer et al., 2014). To achieve this level of

support requires system-level and teacher-level changes to be effectively and sustainably implemented (Nelson & Basham, 2014).

> Dr. Nelson: "I always knew I wanted to influence general educators to see inclusion more broadly. we have students with needs that don't necessarily have a label. UDL provided that framework. It doesn't matter if you are working in low or high resource areas, the message remains the same: it's about helping every student grow to become an expert learner."

For people to really start designing UDL environments, they will have to understand how the parts fit together: establishing goals, planning for learner variability, using flexible methods and materials, and monitoring progress (Nelson & Basham, 2014). Once teachers and administrators begin to understand the framework, a shift in mindsets may occur. Inclusion has more to do with that mindset – from where teachers and administrators are coming and how they are designing environments – than it does with any resource.

> Dr. Nelson: "We are all familiar with the UDL graphic organizer, but the danger lies in teachers and administrators learning UDL in parts."

When people understand the UDL framework, the ways in which they use technology changes. Technology is not the driver of instruction; it enhances instruction. Technology has the potential to help students engage with their learning and really demonstrate what they know. Dr. Nelson's UDL podcasts shows a powerful way of leveraging the technology to showcase UDL practices and research in multiple modalities. Additionally, these podcasts provide a space where in-service teachers who are implementing UDL can share their experiences with others and demonstrate what UDL looks like in action. It's another avenue for preservice educators to get a glimpse of what it takes to really design a UDL environment.

> Dr. Nelson: "When people think of podcasts, they think of this audio piece, but when I designed my podcast, I knew it needed to be accessible. So, I create a YouTube clip with photos, audio narration, and transcripts.

Then I also include a related blog that dives deeper on some aspect of the topic to take it in a little different direction.

Resources

Dr. Nelson's podcasts can be found at:
- UDL in 15 Minutes
- UDL Research in 15 Minutes

Link to Video

This Research and Practice Brief can be viewed on video online at
https://tinyurl.com/jzpvzb2n

Suggested Readings

CAST. (2018). Universal Design for Learning Guidelines version 2.2.
http://udlguidelines.cast.org

Meyer, A., Rose, D. H., & Gordon, D. T. (2014). *Universal design for learning: Theory and practice.* CAST Professional Publishing.

Nelson, L. L., Arthur, E. J., Jensen, W. R., & Horn, G. V. (2011). *Trading textbooks for technology: New opportunities for learning.* Phi Delta Kappan, 92(7), 46-50.

Nelson, L. L. & Basham, J. D. (2014). A blueprint for UDL: Considering the design of implementation. Lawrence, KS: UDL-IRN.

Transcription of Interview

Transcription of the interview can be found at https://ciddl.org/brief3-interview-transcript/

For More Information

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Center for Innovation, Design, and Digital Learning
University of Kansas
Joseph R. Pearson Hall
1122 West Campus Rd.
Lawrence, KS 66045-3101
info@ciddl.org