Most K-12 online learning content does not meet needs of students with disabilities

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Online education is growing rapidly, reaching millions of students every day. However, a Center on Online Learning and Students with Disabilities at the University of Kansas study has found the majority of online educational products are not designed to meet the needs of students with disabilities and struggling learners.

Sean J. Smith, professor of special education and a co-principal investigator with the center, has authored "Invited In: Measuring UDL in Online Learning." The report analyzes how six popular vendors of online learning products meet the principles of Universal Design for Learning, or UDL, the concept that education should be designed to meet the needs of all students. It also provides a tool that K-12 school districts across the country can use to evaluate online education programs they are using or considering for their students.

"When it comes to determining how appropriate online learning is for our audience, we needed to investigate if it's accessible," Smith said. "We found the majority of accessibility is focused only on physical and sensory disabilities. Those are important areas to address, but the majority of individuals with disabilities have learning, attention and behavioral needs that accessibility measures often ignore."

The concern then is that the majority of K-12 online learning in the United States might not consider the needs of students with cognitive or learning disabilities, as well as struggling learners. "Invited In" sampled more than 1,000 online lessons from six major online learning vendors

that cover more than 50 percent of the nation's K-12 online market. The lessons, which spanned multiple subject matters and grade levels, scored low in meeting the principles and guidelines of UDL. For example, when determining alignment to the first three UDL principles, the highest possible score was 36, yet only one of the six vendors scored a 7 or better.

"Online content, as is, is very poorly aligned with the principles of Universal Design for Learning," Smith said. "For an individual with reading, processing, comprehension or other challenges, or individuals with disabilities, with auditory, processing or a number of other issues, they are going to have challenges with this content."

The lack of alignment to learning demands of all students is problematic given the nature of online learning. With traditional instruction from a book, a teacher starts with the content in the text and guides the lesson from there. With online learning, the module is the provider of the content and is often the only guidance a student has.

The report examined whether the online vendors met the three guidelines of UDL: providing multiple means of representation, multiple means of action and expression, and multiple means of engagement. It also measured the products on nine guidelines and various checkpoints for each principle. Invited In shows not only how the vendors scored, but also what they had an opportunity to do to make their products appropriate to the needs of struggling learners and those with disabilities.

The report includes a tool that schools, teachers and vendors can use to determine how well an online learning vendor's lessons are designed for such students. The UDL Scan Tool is available online.

"It doesn't hurt to say, 'Maybe I should check under the hood' before deciding to use an online lesson," Smith said. "Whether that's by using

the UDL Scan Tool, testing a lesson with some of the school's students or other means, it can only help."

The tool provides a means to evaluate online learning as well as an Excel template that automatically enters the scores of vendors. Instructional videos illustrate how to use the tool and suggest ways to analyze the subsequent data. The tool asks 36 initial questions and intuitively branches users to specific questions needed to provide a complete understanding of the product they are evaluating. The UDL Scan Tool has been validated and tested on more than 1,000 individual pieces of product content. The goal is providing a deeper understanding of online education products, their capabilities, strengths, weaknesses and whether they are appropriate before a school commits to their use.

"The reason we created this report was to provide initial analysis on how well online learning serves students with disabilities and struggling learners," Smith said. "We want the tool to reach the masses so schools can better understand the online learning products they are using. Each learning product developed has specific features, advantages and disadvantages that influence personalized learning experiences. The structure of the lessons is critical to meeting user expectations and fulfilling their individual needs within the learning experience. Understanding both the learners' needs and the products' potential to provide accessibility and personalization options for all learners plays a critical role in selecting the best product for all learners."

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