

Brochure Writeup: Improving Student Learning Through Universal Design for Learning (UDL)

Introduction

The purpose of our deliverable is to communicate to professors at the University of Central Florida (UCF) the potential improvements in student perception and performance in their classes that would arise through the adoption of concepts described by the Universal Design for Learning (UDL) guidelines. In particular, we intend to show that there are demonstrable positive outcomes accompanied by the integration of multiple forms of media for learning in order to accommodate different learning styles and to allow disadvantaged and disabled students to participate in classes more effectively. Our argument is supported by results from a survey we authored, three student interviews, and several peer-reviewed research articles, whose implications are similar to ours, which helps us demonstrate the importance of UDL in the classroom.

Definition

Universal Design for Learning (UDL) is an educational framework aimed at creating accessible learning environments for all students. It is derived from the concept of universal design which is often aimed at making life more accessible for people with disabilities but tends to make everyone's lives more convenient. A modern example of universal design is closed captioning, which, as Morin notes, is used in noisy environments like restaurants and airports to help everyone follow what is being said on TV, not just those who are deaf or hard of hearing. Even though closed captions are an accessibility tool to help those who are deaf, they come in very handy in loud or crowded spaces where listening to audio isn't always the easiest or most polite thing to do. This tool is also helpful in cases where the audio you are watching is in another language or is hard to understand.

Universal Design for Learning applies these same principles specifically to education, encouraging instructors to design courses that are accessible to all students. It incentivizes teachers, instructors, and educators to design their classroom and courses around their students and not the curriculum, allowing students to choose how they learn the course material and demonstrate their understanding of it. According to Morin, UDL consists of three main principles: engagement, repetition, and action and expression. Engagement focuses on making students motivated to learn and keeping them interested in learning by giving them choices and making lessons that feel relevant to their lives. Representation involves providing information in multiple formats like video, audio explanations, written resources, and even hands-on demonstrations and models, allowing students to use the tools that work best for them. Finally, action and expression encourages educators to provide different ways to demonstrate their

understanding of the course content with formats such as written tests, oral presentations, creating a video, or something more creative like drawing a comic strip.

Rationale

With recent increasing diversity in higher education and a volatile economy, it can be difficult for many students to strike a balance between their personal lives, responsibilities such as work, and education. UDL was developed in the 1980s to specially accommodate students with disabilities in the classroom, but today addresses faults in teaching practices to help all students, including those with disabilities (Altowairiki). The burden education has on students can be partially relieved by incorporating modern ideas of UDL. This may include an offering of multiple types of accessible classroom materials to accommodate students with disabilities and students with different preferred learning styles as well as prioritizing easier access to resources that won't further place financial stress on economically disadvantaged students. Therefore, we focus specifically on promoting access to multiple formats of class resources, ensuring class resources are accessible to all students regardless of disabilities. Additionally, we consider ease-of-access and affordability of class materials to include students who are financially struggling.

Deliverable

We created a brochure targeting professors at UCF that outlines the concept of UDL and argues that it would be beneficial to students if UDL principles were incorporated in classes. The brochure uses UCF branding to emphasize that it was designed in consideration solely for adoption of UDL practices at UCF, as survey participants and interviewees who assisted in the collection of data were limited to students attending UCF. The brochure was created using Canva, as it required little setup and allowed each team member to contribute to the document asynchronously.

The brochure is intended to be received primarily by professors who teach at UCF. This is because professors often have the ability to modify how they teach their classes, and showing professors how adoption of UDL for their classes can benefit their students may motivate professors to adopt UDL practices in their class plans.

Data

For the research which involved distributing a survey among UCF students we collected 15 responses and interviewed 3 different participants. Among the questions asked in the survey they varied from being asked "How important is it to you that teachers provide several ways to learn?" to "Teachers should receive more training on inclusive teaching practices like UDL.". The outcome of the data was heavily swayed towards more support of UDL principles with professors in classrooms, the data that we have collected and that will be shown on the brochure provide relevant ways professors can support their students on the basis of student opinion as the responses come from full time UCF students. For instance the last question listed above ended with a result of 60% on a 1-5 scale choosing 5 as being very important for teachers to receive more training in UDL principles, which shows the importance of the concept of UDL in

classroom settings as students have found out that they prefer when professors give them options and different accessibility features in and outside the classroom. Since it doesn't just benefit them by being able to grade assignments remotely outside of their work hours but also students by giving them work and submitting material from anywhere, being one of the examples. Overall the data we collected from UCF students with the intention of distributing our brochure among UCF professors, is in favor of more support of UDL principles and specifically in support of the accessibility and providing more options for class material as from student opinion is more admired as it gives the student and professor more opportunities to succeed in the class and future classes.

Interviews

At the end of the survey we asked respondents if they would be willing to do an interview so they could share their personal thoughts and experiences on Universal Design for Learning. We were able to get interviews from three students. Both student 1 and student 2 were in support of greater use of UDL principles in classes. Since some of the questions being asked involved discussing mainly digital class material accessibility and options, both had their own pros and cons when dealing with accessibility and options of digital material among their classes. For instance with question 1 which outlined when digital resources have helped them, they both mentioned how they prefer when professors offer digital accessibility features on canvas for materials like homework or notes; As it offers them more ways of accessing material in and out of class as most classes are only offered 2 to 3 days during the week. Being able to access course material outside of the classroom is beneficial to students and offers them to learn it in their own ways, since unfortunately not all professors' teaching styles benefit every student, and also the professor as it solidifies the scheduling of material given for the class. The interviews conducted offer real world accounts of what students find beneficial from UDL principles within class materials, which given to a professor can only make a positive impact as it aims towards professors learning UDL principles or applying more of it in class that students prefer. Overall, with the use of the interviews professors can hear first hand accounts of what students prefer and don't prefer, and with that information we hope for professors to possibly learn more or adopt UDL principles which give students the accessibility and options they want.

Analysis

The survey and interview responses collected from UCF students support many of the principles described by Universal Design for Learning (UDL). Both the student feedback and academic research suggest that providing multiple ways to access course materials and demonstrate knowledge can improve accessibility and engagement for students with different learning preferences. UDL is built on the idea that learners are not identical and that educational environments should be designed to accommodate this variability. The CAST UDL Guidelines emphasize that effective instruction should provide "multiple means of engagement, representation, and action and expression" in order to reduce barriers to learning and support diverse student needs (CAST).

One major theme that appeared in the interviews was the importance of offering course materials in multiple formats. Students described how having access to videos, slides, and written materials helped them better understand course concepts. Garcia explained that combining visual and auditory material made learning easier, stating that “pairing the auditory and visual text helps me conceptualize it better.” This observation reflects a core idea of UDL, which promotes presenting information through different forms of media to accommodate diverse learners. When instructors provide multiple formats for course materials, students are able to select the format that best matches their learning preferences, allowing them to engage with content more effectively and retain information more successfully.

Accessibility features were also identified as valuable tools for improving the learning experience. Students emphasized that features such as captions allow them to follow along with course materials in different environments. Boral noted that captions allow them to “still watch a video and understand the material” even without audio. While these tools are often designed to assist students with disabilities, they can also benefit many other students who may be studying in public or shared spaces, commuting between classes, or balancing schoolwork with employment and other responsibilities. This demonstrates how accessibility features can benefit the entire student population rather than only those with documented disabilities.

Another theme that emerged from the interviews was the importance of flexibility in accessing course materials outside of scheduled class time. Students frequently rely on digital platforms such as Canvas to review lecture materials, check assignments, and revisit course content. Having access to these resources outside of class allows students to review difficult concepts at their own pace and return to materials when preparing for exams or completing assignments. This flexibility can be especially helpful for students who have work schedules or other responsibilities that make it difficult to attend every class session.

Research on UDL and learning analytics supports these findings. Roski et al. explain that analyzing how students interact with digital course materials can help instructors identify patterns of engagement and adjust instructional design accordingly. Their research suggests that data-driven approaches to course design can help educators create “more flexible and accessible learning experiences for students with diverse needs” (Roski et al.). By incorporating UDL principles such as multiple learning formats, accessible digital materials, and flexible access to resources, professors at UCF can create more inclusive classroom environments that better support student engagement and academic success.

Overall, the survey responses, student interviews, and academic research discussed in this document all support the potential benefits of incorporating Universal Design for Learning into university classrooms. The data collected directly from students show that students value having multiple ways of accessing course materials and want different options in how they demonstrate their understanding of that course material. The data collected from secondary sources also supports the results from the survey and interviews. With these findings, creating the brochure can help introduce professors to Universal Design for Learning and how adopting UDL principles could improve accessibility, engagement, and the overall learning experience of their students.

Works Cited

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