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MAKING INFORMATION LITERACY MORE ACCESSIBLE THROUGH UNIVERSAL DESIGN FOR LEARNING

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INTRODUCTION

Universal Design for Learning (UDL) can make information literacy more accessible for diverse learners through inclusive instructional design. This interactive workshop at LOEX 2017 focused on applying UDL to information literacy instruction. The presenters began with a brief introduction to the background on accessibility and UDL. Participants then redesigned common information literacy instruction scenarios to incorporate the UDL guidelines. The examples shared by the participants and presenters illustrate how librarians can use UDL to further empower students of all abilities.

BACKGROUND

Awareness of the need for accessibility is tied to the Disability Rights Movement of the mid-20th century. The movement culminated in the passage of the Americans with Disabilities Act (ADA) in 1990, which required public buildings to be accessible to people with disabilities. As ADA was implemented, buildings had to be retrofitted to meet the law. This reactive process proved to be challenging and expensive, especially for updating historical buildings. The manifestation of this act is often seen in the form of ramps, elevators, and more accessible entry points. Entrances may have wider doorways, automatic doors plates, and push or lever handles to increase ease of access. ADA has become shorthand for the "reasonable accommodations" that are legally required for people with disabilities. Hence, in the library, service points that are at a sitting-level height are often called "ADA desks."

Universal design considers accessibility from the start. It is much easier to design for accessibility than it is to redesign for accessibility. The concept of universal design is attributed to the architect Ronald Mace in the late 1990s. Universally designed buildings incorporate accessibility into the blueprints of the construction project to anticipate accommodations rather than retrofitting for them. Now, more generally, universal design refers to creating environments that are accessible to the greatest extent possible for all people without the need of adaptations. Curb cuts are helpful for people with shopping carts and strollers, in addition to people who use wheelchairs. Signage with large font, graphical representations, and braille is easier to understand for a variety of people. Environments that are universally designed benefit everyone.

UNIVERSAL DESIGN FOR LEARNING

Universal design has been adapted to learning environments. CAST (Center for Applied Special Technology) is a non-profit educational organization that has developed and continuously refined the application of universal design to pedagogy (CAST, 2017). CAST originally focused on making learning more accessible through assistive technology. They now more broadly consider how variations in teaching impact a broad spectrum of learners. This shift represents a change from a disability and accessibility approach to a more intersectional and inclusive approach. UDL is a framework by CAST for optimizing teaching and learning for all teachers and students.

UDL serves as a practical model of instructional design for educators to anticipate diverse learners and design for inclusiveness. The learning guidelines for UDL are multiple means of representation, action and expression, and engagement (CAST, 2014). These guidelines respectively represent the what, how, and why of learning. The guideline of representation can be

accomplished by providing several options for perception and comprehension (CAST, 2011). Concepts can be more easily understood when they are conveyed through a variety depictions. Using a combination of written, auditory, visual, and kinesthetic interpretations addresses multiple learning styles or preferences. Librarian Ying Zhong (2012) created a UDL lesson plan for teaching Boolean operators that included written, graphical, and physical representations of the concept. In the online environment, librarians Katy Kavanagh Webb and Jeanne Hoover (2015) designed a tutorial for biology students to be more accessible by incorporating audio, images, and interactive elements. The next guideline, action and expression, involves multiple options for communication and activity (CAST, 2011). Students have multiple options for learning and are guided through the learning process. Instructors can combine lecture, individual and group work, and other methods to vary their teaching approaches. Chunking and scaffolding activities creates opportunities for instructors to offer students feedback. In one-shot information literacy instructions sessions, librarians can use classroom assessment techniques, such as muddiest point and one-sentence summary, to gauge progress. Lastly, the guideline of engagement provides students with multiple options for application and reflection (CAST, 2011). Sharing learning goals with students and allowing more than one way for students to realize and reflect on those goals can increase engagement. Rubrics are a helpful tool for emphasizing learning outcomes, especially when they can be applied to multiple deliverables. For example, students could opt to design websites or creative works instead of writing the traditional academic paper. This flexibility allows students to choose the format of their assignment while realizing the same learning outcomes. Reflective practices can further engage students in the learning process. Journaling, or even reflecting about their experiences in one-minute papers in a one-shot information literacy session, can get students thinking about their learning.

APPLICATION

Following the informational overview, the presenters facilitated a brainstorming session of the participants to generate ideas about the application of UDL to information literacy instruction. A handout describing the UDL guidelines was distributed to participants for reference (CAST, 2011). Approximately 50 attendees were seated at tables of small groups. One of three different scenarios common to information literacy instruction were distributed across the groups, and some groups had the same scenarios as other groups. The scenarios are:

- Scenario 1: A one-shot information literacy session for an introductory general education course on using library resources.
- Scenario 2: An asynchronous online module on evaluating information.
- Scenario 3: A final assignment for a one-credit information literacy course.

Participants began by individually reviewing the scenario prompts and writing down their initial thoughts for applying multiple means of representation, action and expression, and engagement to the scenario. Next, group members discussed their ideas. The groups graciously recorded their examples in anticipation of incorporation into this paper. Finally, the small groups shared a few of their top takeaways with the entire audience. The results of this collective work have been synthesized and edited by the presenters in the Appendix of this paper.

CONCLUSION

This interactive session concluded with further discussion of UDL and information literacy. The presenters encouraged the attendees to also consider other instructional practices, such as critical pedagogy, in addition to UDL. The intentional application of UDL by librarians can make information literacy more accessible and inclusive for our diverse learners.

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APPENDIX

RESULTS FROM SCENARIO 1: A ONE-SHOT INFORMATION LITERACY INSTRUCTION SESSION FOR AN INTRODUCTORY GENERAL EDUCATION COURSE ON USING LIBRARY RESOURCES.

Representation

- Use a variety of methods for presenting information.
- Combine auditory instructions with a PowerPoint slide show or demonstration.
- Translate library specific jargon for students.
- Utilize analogies and metaphors to draw comparisons to activities where students are already engaged.
- Draw connections between databases and other similar services, such as Amazon's bookstore.
- Create online and physical handouts with screenshots (pictures) of a database at various points in the search process.
- Record a video of a database demonstration that includes audio, captions, and possibly a transcript.
- Ask students what database tools they use during searching.
- Develop a glossary of important terms and make it available to students.

Action and Expression

- Provide lots of time for hands-on practice by limiting lectures and demonstrations to the most important and relevant information.
- Combine individual work and group work.
- Give opportunities for peer learning.
- Have students in a group explore different databases and teach the other group members.
- Have students in a group explore one database and then teach the entire class.
- Use think/pair/share-style activities.
- Engage in the Socratic method to guide student understanding.
- Have students explore multiple tools and technologies for completing research.
- Create shared Google Docs for group notetaking and sharing.
- Develop polls to use for formative assessment.

Engagement

- Work with a faculty member to conceptualize instruction so it is relevant to students' needs.
- Facilitate an in-class discussion about the learning goals for an instruction session.
- Invite students to suggest topics during database demonstration.
- Provide opportunities to create concept maps.
- Have students complete a one-minute paper, self-assessment, or end-of-class reflection.

RESULTS FROM SCENARIO 2: AN ASYNCHRONOUS ONLINE MODULE ON EVALUATING INFORMATION.

Representation

- In addition to written text, provide infographics and other visual elements for understanding concepts explored in the tutorial.
- Make the module "buffet style" so students can easily return to different concepts for clarification.
- For video tutorials, use closed captioning and include a downloadable transcript.
- Create a Buzzfeed-style quiz for evaluating sources.
- Design the tutorial with responsive web design so students can access it on multiple devices, such as a phone, tablet, or computer.

Action and Expression

- Let students complete the module in a self-guided manner.

- Give students the opportunity to complete the tutorial at their own pace in any order they choose using their preferred learning method.
- Outline expectations, but allow students to choose how and when they meet expectations.

Engagement

- Offer multiple points of assistance, such as chat or email support.
- If there is an assignment attached to the tutorial, allow multiple options for the final product.
- Give students the option to create a video, write a paper, or design an infographic on evaluating a source.
- Have students reflect on the process of evaluating a source.
- Tie information evaluation to current events, such as fake news.

RESULTS FROM SCENARIO 3: A FINAL ASSIGNMENT FOR A ONE-CREDIT INFORMATION LITERACY COURSE.

Representation

- Format syllabus and assignment guidelines using best practices for accessibility.
- Use headings to make documents friendlier for use with screen readers.
- Provide examples of successful assignments for extra guidance.

Action and Expression

- Provide students with multiple options for interaction and communication throughout the semester.
- Use varying methods such as discussion board posts, web conferencing, student-moderated discussions, and small group work.

Engagement

- Give students the option to choose their own topics of study.
- Give students many options for deliverables such as essays, presentations, digital storytelling, and infographics.
- Focus on process throughout the course with regular, low-stakes check-ins.
- Connect assignment to work being done in other courses.
- Provide opportunities for reflection.
- Lead a question and answer session with other students at the end of the course.
- Use rubrics to create clear criteria for grading.