# Using LMS to Improve the Access, Equity, and Quality of Information Literacy Education: A Collaborative Strategy

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#### **Abstract**

Students are unique individuals with different abilities, backgrounds, and learning preferences. Any attempt at student-centered instruction must consider these various facets. However, creating individualized instruction is not only overwhelming but impossible especially considering the nature of most instruction done by academic librarians. How then does one create meaningful inclusive learning experiences? Universal Design for Learning is an approach to instruction that moves beyond accessibility and seeks to create inclusive learning experiences for all learners. By applying the three major guidelines of Universal Design for Learning and examining best practices for accessibility, the authors attempt to delineate best practices for creating equitable learning experiences in a Learning Management System.

## **Summary**

## Introduction

Our library LMS (learning management system) team is reframing our migration from Moodle to Canvas as an opportunity to completely transform a seldom used suite of digital resources into a cohesive online information literacy program that is accessible, effective, and easy to use utilizing the principles of Universal Design, a concept that moves beyond accessibility into creating an inclusive learning experience for all users. Because of our unique student population, around half our student population comes from traditionally underserved backgrounds, our team is uniquely situated to draw upon the expertise of professionals working with diverse user groups including the campus National Center on Deafness, Universal Design Center, Dream Center, EOP and additional academic programs. Enlisting the aid of colleagues to draw on existing campus partnerships, our team of two lead librarians has taken a no-holds-barred approach advocating for the needs of our users.

## Universal Design

"Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability" (The Centre for Excellence in Universal Design 2014). Typically Universal Design has been applied to the field of architecture but it is building steady traction within the field of Higher Education.

The Center for Applied Technology (CAST) developed a set of three principles in order to improve the quality of education for all learners regardless of ability or learning preference. These principles are referred to as the Universal Design for Learning Guidelines and are meant to progress from ensuring that all learners are able to access instructional content to creating empowered learners who are resourceful, strategic, and motivated (http://udlguidelines.cast.org/). By following the practices suggested in the Guidelines, one can be reasonably assured that they are creating opportunities for inclusive learning experiences. The three major principles are:

- 1. Provide Multiple Means of Representation
- 2. Provide Multiple Means of Action and Expression
- 3. Provide Multiple Means of Engagement

## Accessibility

Accessibility is a core value of academic librarians. However, due to constraints of knowledge, time, and experience, we usually fail to take it into consideration in practice. Creating accessible content during the design and development process will save a tremendous amount of time and effort. Evidence-based best practices to make content accessible include the following:

#### Content:

- Text: use the template, heading, and structure provided by the software/platform.
- Video & Audio: include captioning and transcripts.
- Images: include alt-text or descriptive text.

#### Tools:

- Consider using Microsoft tools because of their strong commitment to accessibility.
- When considering a new tool, check website for their commitment to accessibility.

• The content creator makes the content accessible, not the tool.

## Testing:

- Color contrast
- Test both with tools and manually. Use tools such as WAVE and guidelines such as Easy Check from W3C.
- Keyboard accessibility. Use tab and Ctrl + to navigate and zoom in & out using keyboard.
- Test both browser and mobile version using Chrome.

#### Engaging in Practice Session

The presenters conceived of the active learning session as an opportunity to model creating inclusive digital learning objects in an LMS. While participants were introduced to Universal Design Principles, those principles were modeled both in the digital content created for the workshop as well as through the physical delivery of instruction. Great care was taken to ensure that all session materials were created with accessibility in mind. During the presentation the presenters underscored how Universal Design and accessibility principles were demonstrated in the delivery of the workshop. The participants were then instructed to discuss in groups how to incorporate these principles in their own instruction as well as test out some tools and best practices in a web content of their choice.

In creating the workshop, librarians Ding and Rassibi set to assemble a collection of resources and best practices that they have amassed in working with the aforementioned campus partners. They created a Canvas course for participants to have continued access to this information as needed in creating their own inclusive digital learning objects in an LMS. All elements in the Canvas course were created with accessibility in mind, utilizing Universal Design principles and were meant as an example of a successfully developed inclusive learning experience. The course remains available to anyone and includes resources on creating inclusive learning objects, tools used to create accessible digital learning objects, best practices for accessibility, tools used to check accessibility, and tips and tricks for using Canvas: <a href="https://canvas.instructure.com/courses/1293023">https://canvas.instructure.com/courses/1293023</a>.

## References

The Centre for Excellence in Universal Design. (2014). What is Universal Design. Retrieved from http://universaldesign.ie/What-is-Universal-Design/

Davoudian, Alen. (2017, November). *Testing for Accessibility*. Universal Design Center Workshop presented at California State University Northridge, Northridge, CA.