

Reinventing the Library's Digital Footprint: Creating Interactive Learning Tools

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May 2024

The University of Houston-Clear Lake (UHCL) campus is a Carnegie class doctoral/professional institution in southeast Houston, Texas and is a member of the University of Houston System. The Houston metropolitan area is located on the Gulf Coast and is the fourth most populous city in the United States with a diverse cultural population. UHCL's student population reflects this diversity and serves as a Hispanic Serving Institution with close ties to NASA's Johnson Space Center.

In 2022 the University Technology Advisory Committee approved a recommended transition from the Blackboard LMS to Canvas LMS.¹ In Spring 2023, librarians decided to take advantage of this LMS transition and expand the library's information literacy content onto the Canvas platform. Up until this point, the library's online teaching presence consisted of LibGuides, YouTube videos, virtual one-shot instructions, and embedded librarianship. Engaging students on the LMS platform would allow librarians to provide needed research tools to the increased number of students enrolled in online classes. It would also expand the library's ability to promote library resources.

Creating the Course

Research and Instruction Librarian Alexandria Kennedy was the first to initiate this process in meetings with Jennifer Willis-Opalenik, Director of Instructional Design and Technology (IDT). The IDT department expressed enthusiasm about the library's interest and was greatly instrumental in providing access to the Canvas platform, faculty training, and technical support.

In Spring 2023, the team of five Research and Instruction Librarians met to discuss who would be interested in and able to create new Canvas content. While all librarians were interested, only three felt like they had time for the project: Alexandria Kennedy, Cindy Goode, and Theresa Rodriguez. These three librarians then discussed what Canvas content would look like and how it would be created. At the time, the library had access to three underutilized Articulate 360 licenses, which is an authoring platform for creating learning assets.² The platform includes both computer applications and online applications that can be used to construct a variety of interactive modules and lessons. The librarians decided that they wanted to use Articulate's interactive features and then integrate or embed the lessons in Canvas. Specifically, they used Rise 360, an online tool that provides modular content boxes that can be dropped into a lesson and customized with user content. It is user friendly, requires little graphic design or computer knowledge to use, and would lessen the amount of time needed to create content.

Timing was a major factor in choosing the type of content to create. The librarians had only a few months before the initial soft rollout of Canvas across campus. IDT first recruited faculty to participate in the early adoption phase of the platform who would have their first live Canvas

¹ (2022, October 26). Canvas Post-Announcement News (Part 1). *OIT Instructional Design and Technology Blog*. <https://uhclblackboardtips.blogspot.com/2022/10/canvas-post-announcement-news-part-2.html>

² Articulate 360 <https://www.articulate.com/360/>

courses with enrolled students starting in Fall 2023. This left little time for librarians to create information literacy content, so they opted to create a course that would introduce students to library resources. The course would be globally accessible to all students and faculty in Canvas and consist of eight microlessons.

The course was called *Welcome to the Neuman Library!* and used language and graphics to present a friendly and welcoming tone to students. Navigation between microlessons would be unrestricted, allowing students to review any section at any time. An alternative option would lock navigation and force students to progress in a linear fashion from one lesson to the next, but this did not make sense for this course.

Description of Microlessons

The following is an overview of the eight microlessons in the *Welcome to the Neumann Library!* course:

The first four microlessons were created by Cindy Goode and consist of “Where can I find the library?”, “What does the library have?”, “What can I check out?”, and “What is OneSearch?” “Where can I find the library?” used a tabbed box to showcase the three places where students can access the library: the library website, the main campus library, and the Pearland campus library. The library website tab included a short demonstration video showing how to find the library web page on the UHCL website. The remaining two tabs included building names, room numbers, phone numbers, and email addresses for the two physical library locations. They also included photographs of the libraries so that students can more easily recognize them on the campuses.

“What does the library have?” introduced students to the library’s broad range of materials. Using the Canva.com graphic design platform, Cindy created a photomontage visually demonstrating library resources. The image was then imported into Rise 360 and used to create an interactive image with hotspots. Each of the five photos in the montage was assigned a hotspot, and when a hotspot was selected, a pop-up window appeared containing information about the resource. The five highlighted resources were the UHCL Archives and Special Collections; periodicals (journals, newspapers, and magazines); research help services; study spaces; and the XR Lab.

The next microlesson, “What can I check out?” provided a more granular look at items that can be checked out from the library. In this case, a set of nine flip cards were created highlighting the most popular library items. The front side of each card consists of a graphic image that illustrates as closely as possible a loanable item. Canva.com was used once again to create the images. Each image included a text question that described what each card represented. Selecting a card “flipped” it over so that students could read the answer to the question. The following is a list of the questions that were printed in text on the front side of the cards:

- How many items can I check out?
- How long can I check items out from the General Collections?
- How long can I check items out from the Juvenile, Leisure, and Theses Collections?
- Does the library have the textbook for my class?
- Does the library have study rooms?
- Does the library have calculators?

- Does the library have headphones?
- What if I need a book that is located at another UH campus library?
- What if I need a book, article, or other item that is not available on any UHC campus library?

These questions both answer common student questions while also bringing awareness of library resources.

While Cindy worked on the first four microlessons, Alexandria simultaneously worked on the final four librarians. Alexandria used a process block when creating “Where can I find databases?” A process block in Rise 360 is a carousel-like feature that allows learners to move through multiple slides in sequential order. Images and text were used to demonstrate and explain the different ways to access library databases. The final slide includes options for students to either restart the carousel from the beginning or move through the slides in a backward order.

The following three microlessons were collaborations between Alexandria and other librarians. Alexandria had shared a draft of proposed microlessons with all research and instruction librarians for their input on content. Student Success Librarian Juliana Espinosa recommended adding a section highlighting how the Neumann Library contributes to student achievement. After further discussion, Juliana wrote a short script describing the library’s contributions to student success which Alexandria used when creating the microlesson. Alexandria also added a photomontage with hotspots to showcase the library’s contributions. The five hotspots included: Researching Process, Researching Needs, Engaging in Research, Intellectual Curiosity, and Scholarly Communication. Lastly, the library’s Calendar of Events was embedded on the page so students could see the many programming options that the library offers throughout the year.

A similar process was followed when creating the “Beyond Research” microlesson. Alexandria worked with Emerging Technologies Librarian Beth Fridrick on content regarding the library’s new XR Lab. Besides text, Alexandria created six flip cards focused on current applications available in the lab. A link to the XR Lab’s LibGuide was included at the bottom of the page.

The final microlesson, “Scholarly Communications,” was a collaboration between Alexandria and Scholarly Communications Librarians Linsey Ford. As previously mentioned, the library had only three Articulate licenses. Cindy and Alexandria were each assigned a license which is why they created the microlessons. Linsey was also assigned an Articulate license so that she could create specialized learning content for Scholarly Communications. Since she had access and knew how to use the application, Linsey created the microlesson herself, including text and three flip cards highlighting how the Scholarly Communication team helps with graduate publications, evaluation of scholarly journals, and copyright.

It is important to note at this point the significant contributions of Theresa Rodriguez, the third Research and Instruction Librarian who wanted to help create course content. Since she did not have access to Articulate, she was not able to create microlessons. However, she played a key role in reviewing content and making suggestions for improvement. Her notes were invaluable in creating content that would be accessible to a broad range of students and she contributed many ideas that helped craft the final product.

Technical Difficulties

Creating learning content for an LMS involves quite a bit of creativity, as does dealing with the many technical details that make the content accessible online. As librarians created the

library course, Alexandria Kennedy also worked with IDT and other stakeholders to make the course and other library resources available in the Canvas LMS.

Global Navigation in the Canvas LMS

Librarians wanted the *Welcome to the Library!* Course to be accessible to all students in all courses. Alexandria and Director of IDT Jennifer Willis-Opalenik worked together to make it accessible using a global navigation button that would appear in all courses. However, it took many attempts before this idea worked properly.

During the first attempt, Jennifer tried to link the global navigation button to a Canvas course that would have the Articulate web package embedded in it. However, this did not work for two reasons:

- 1) A global navigation icon could not link to a course within Canvas
- 2) An Articulate web package could not be embedded into a Canvas course.

Later, it was discovered that Articulate web packages could be embedded into Canvas courses using a third-party application called SCORM; however, we tried other methods before discovering this.

The second option we considered was using our university website host to host our articulate packages in a web-based format. At the time, however, our Marketing and Communications department was understaffed and did not have the capacity to take on this project. As of May 2024, this option still has not been pursued due to continued staffing difficulties.

The third attempt was to embed the Articulate page into a LibGuide that would then be linked to the Canvas global navigation button. This would have been the most seamless option for statistical tracking purposes; however, this did not work, again for two reasons. The first being that when the html indexed webpage file was copied into LibGuides, even with edits, it failed to produce a viable page. The second reason that this did not work was because Articulate discontinued their iframe services of the preview link in June 8, 2020.

Our last, and most successful attempt was to just use the Articulate preview link for the Canvas global navigation button. This link redirected through one of our LibGuides and allowed librarians to make any desired changes to the Articulate course without having to provide a fresh web package to IDT. All changes would occur instantaneously. The downside to this method, and reason it was not used originally, was that using the Articulate Preview link does not allow for the collection of statistical data. In other words, librarians would lose valuable usage information.

Statistical Issues

Statistics tracking played a large part in determining how to integrate the global navigation button. Initially, we hoped to use the university's Office of Institutional Research Data Warehouse to store canvas statistics, but the warehouse would not be available until Spring of 2024, so we searched for alternatives. As of Spring 2024 we were made aware of the fact that this Data Warehouse would not track the statistics that were important to the library, as they were storing and tracking data from courses, which meant the global navigation tracking and statistics would not be captured.

As previously mentioned, we attempted to embed the Articulate course in a LibGuide but could not do it because of restrictions placed by the Articulate company. Also, using a LibGuide to redirect to the Articulate course did not work because LibGuides does not track statistics on

redirected guides. This led us to look outside of our current resources and into third party applications, which brought us to a “free” link tracking service called Rebrandly.³ It’s important to know that Rebrandly is only free up to a point (1,000 clicks a month), which we quickly discovered.

The library’s new course went live in August 2023 at the beginning of the Fall 2023 semester, with the early adopters of Canvas. Within the first week, the course reached the free Rebrandly tracking cap and we were forced to purchase a monthly subscription. We were also unable to find another quick and viable option to track statistics at that time. In the future, however, we intend to integrate Microsoft Clarity for better tracking in the guide and as a free method of tracking statistics. While it was encouraging to see students access our course page so much that it broke our ability to track usage statistics, we learned a valuable lesson about reading the fine print when selecting software applications.

Library Databases

One of the many decisions that librarians made early in this Canvas integration project was to find ways to make library resources as easily accessible as possible for students on the LMS platform. We wanted to remove barriers, including barriers to database access, and it seemed logical to integrate as many databases into Canvas as possible.

EBSCO was the one we struggled with the most, giving us two issues when trying to integrate it. During the first attempt, the JSON file failed to integrate with Canvas due to a missing EOF symbol at the end of the file; the missing symbol was eventually caught. The second issue was that a new Client ID and Deployment ID had to be generated so that the new JSON file could then be integrated.

These issues sound simple when described but caused much stress and frustration when they occurred. Eventually, we were able to integrate all EBSCO databases into the Canvas LMS along with Alexander Street Video and Gale eBooks. Faculty now can easily add database content to classes and students have an easier time accessing it. We hope that by doing this, our students will take more advantage of our databases for research rather than relying on random internet web searches.

Other Resources

A video was created to show faculty and staff how to use some of the library resources that have been integrated into Canvas such as: Gale eBooks, EBSCO Databases and the Creative Commons Undergraduate and Graduate modules.

<https://youtu.be/-EchvdxYEG4?si=hlciWIHI1rGZWb3Z>

³ Rebrandly. <https://rebrandly.com/>