

Finding the Power in Mini

Rethinking Library Tutorials with Microlearning

We have all been there where we create tutorials in a variety of formats (e.g., videos, LibWizard Tutorials, embedded tutorials) and students simply do not engage with them. This is where the University of Wyoming (UW) Libraries was in spring 2024, asking ourselves how we could better engage and support students with our tutorials and guides. While attending an Open Educational Resources Conference in Cork, Ireland, we learned about microlearning—the idea of bite-sized tutorials rather than typical tutorials or short courses. When we turned to the library literature for guidance, we found very little information about microlearning courses. We have all heard the statistics of videos eight to ten minutes or less¹—and one Microsoft study even claims humans pay attention for only eight seconds.²

Microlearning was established to combat struggles with workplace training within the private sector by breaking down concepts into bite-size pieces. Further micro-content makes it even easier to integrate these short learning bursts into our daily activities.³ One study found when comparing two classrooms—one utilizing microlearning and the other traditional learning—the former showed 18% better knowledge retention.⁴ Such studies demonstrate that microlearning can be effective, but how do we apply these concepts to libraries? In this article, we'll discuss the approach we took at UW to begin implementing these strategies in our library instruction.

Background and Definitions

For our purposes, when we speak about microlearning tutorials, we mean a micro, or short, tutorial that is a smaller chunk of information in an accessible format (e.g., mobile-friendly) for students. These might include short videos, screenshots, or step-by-step instructions, ranging from seven to ten slides max. This differs from our traditional tutorial model, where each one took students two to five minutes to navigate the content. Instead, these microlearning tutorials are meant to take much less time to view.

The only detailed, library-focused microlearning article resource we discovered was a 2022 *Library Technology Reports* edition by Yvonne Mery, who argues that microlearning tutorials can be effective tools for academic libraries to combat short attention spans but not for all information literacy instruction. Instead, they are better suited for discrete skills like search strategies.⁵ Otherwise the literature in libraries focuses more on mini and micro-courses than this microlearning tutorials model. For example, one group designed microlearning

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and micro-credentialing modules for business information literacy skills⁶ and a blog post focused on microlearning for professional development in libraries.⁷

When considering the impact of tutorials on student success and engagement, studies have focused on the effectiveness of tutorials versus videos, often finding mixed results. A 2017 study by Qianjin Zhang and Kari Kozak found no difference in comprehension from guide-on-the-side versus video tutorials, but when asked, 58% of students preferred guide-on-the-side as opposed to 32% for video tutorials.⁸ Similarly, a library-focused study evaluated the difference between screencast and web-based tutorials, finding students performed better with static information rather than the screencast approach.⁹

After investigation, the UW Libraries made the decision to adapt our existing tutorials and videos to adapt to the microlearning model, and we began the search for a fitting platform. Criteria for a platform included accessibility, user experience, flexibility in format type, cost, and student data privacy. One of the biggest factors was finding a tool that did not require students to log in or gather student data. Similarly we looked for a tool that was both mobile- and browser-friendly and that incorporated accessibility-friendly practices. Another feature that became appealing after browsing options was artificial intelligence (AI) integration within the tool. We landed on CoAssemble,¹⁰ a more cost-effective option to meet our needs.

How We're Doing It

We were primarily interested in developing asynchronous content that could be easily digested and shared at point of need to support student learning outcomes. This interest was heightened because we recently migrated to a new integrated library system and discovery layer, and many of our existing video tutorials were immediately out of date. Our perspective is less that these microlearning options will replace video tutorials or library guides; rather they work in tandem and provide more bite-sized ways for students to get started on a learning pathway. UW Libraries are supporters of Universal Design for Learning (UDL) and believe providing options for student engagement is important.¹¹ Since we have a peer mentor (or library coach) program, we thought involving this team would be a meaningful way to support implementation of microlearning. With two peer mentors at different stages in their educational journey, we hoped the student perspective in tutorial creation would make them more useful, especially for our undergraduate student population.

Peer mentors began by exploring the CoAssemble tool and sharing their questions with their supervisors to seek support. They were initially tasked with taking a video tutorial they had developed and thinking through how they might share about the same topic in a micro format. This proved to be a useful starting place as it prompted good conversations among the team about the core message to be delivered, the tone to strike, and the best way to break down a more in-depth learning object. The questions the peer mentors shared helped us understand early on what types of structure may help support the process of creating these microlearning objects and prompted us to develop a style guide document (see the supplemental files available with this article online). In addition, a library staff member worked closely with our branding guidelines¹² for the library to create a variety of “templates” to utilize for our microlearning purposes. These intro and concluding images (Figures 1 and 2) function as templates and live within our account, along with test microlearning samples, so anyone in the library can see what the design options are.

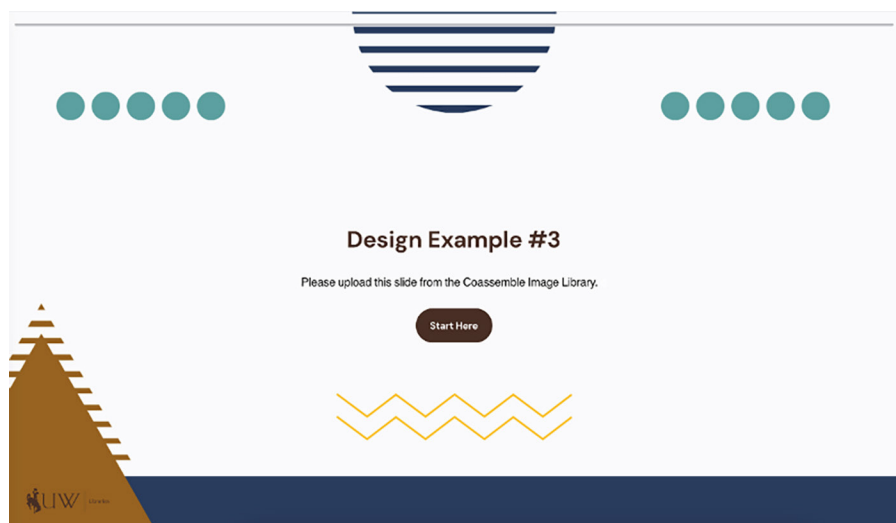


Figure 1: Introduction slide for template #3 featuring UW Libraries branding colors and fonts.

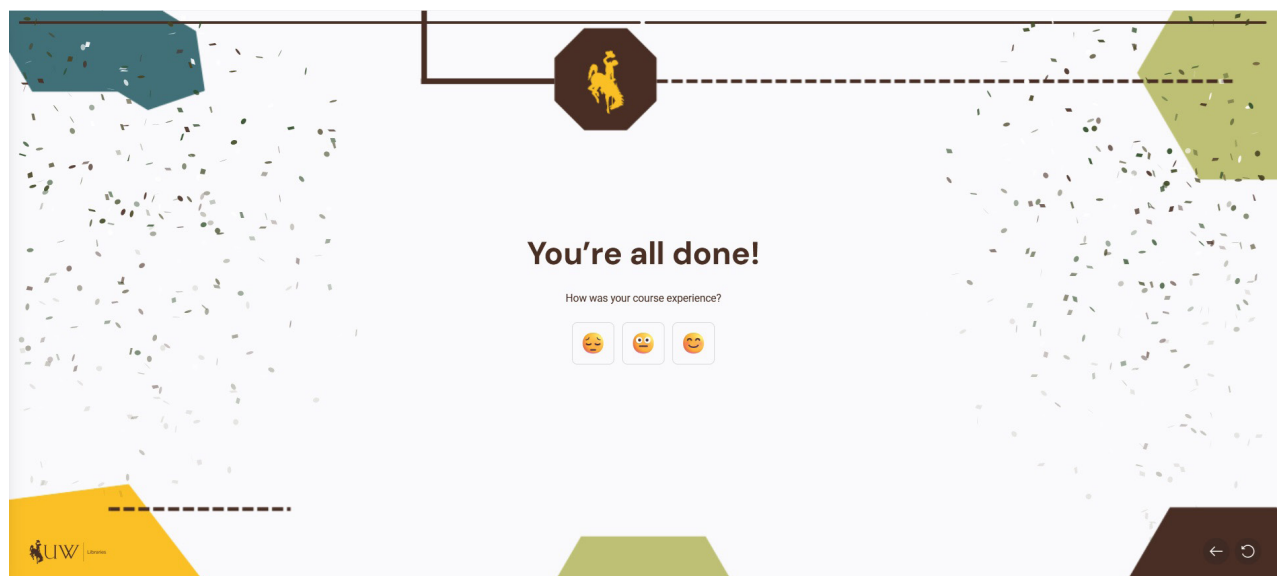


Figure 2: Concluding slide for template #1 featuring UW Libraries branding colors and fonts and CoAssemble assessment.

This choice delivers a more cohesive experience for our users and aligns content with our libraries' marketing team.

Audio Recording Space: A Specific Example

One example of micro-tutorials in action is improving the instructions for using Studio Coe.¹³ Studio Coe is the UW Libraries digital multimedia lab, where students, staff, and faculty can get support for audio-video recording and editing, graphic design, and virtual reality. The lab hosts the libraries' audio recording space and oversees a video recording lab. While some of our patrons may have experience with recording and editing audio using their phones or USB microphones and their laptop, they may not be comfortable navigating a professional audio recording setup.

Historically, the audio recording booth had a set of paper instructions taped to the wall that guided users through the process of turning on the Focusrite Scarlett 18i8 audio interface and discussed how to correctly configure the microphones to enable recording. These paper

instructions were outdated with small text and screenshots that were difficult to read. They were also mounted in an inconvenient spot—on the wall opposite from where the audio interface and microphones were placed. This required users to move back and forth or have another person read the instructions to them.

CoAssemble's tutorials allow for cleaner presentation of this information compared to the paper instructions. By having a readily available QR code beside the audio interface, patrons may follow each step in the setup process at their own pace. The platform has also allowed for the expansion of the instructions to include navigating the playback controls, saving a project, and exporting a project as an audio file. CoAssemble also allows us to update any instructions as hardware and/or software inevitably changes.

While these updates have made the setup process more user-friendly, they are not without their challenges. Due to isolating specific pieces of information on the computer's desktop and in Adobe Audition, the dimensions of the screenshots vary wildly. Although these images are easily legible in the desktop version, they can be difficult to read in the mobile format. Fortunately, users can zoom in on these images to get a clearer view of the information presented. Studio Coe currently mitigates this by providing on-demand verbal instructions to patrons. Despite this challenge, Studio Coe plans to implement additional microlearning tutorials to facilitate ease of use for both patrons and staff. The next tutorials will support use of the One Button Studio and our reservable technology kits. These modules can be used both as training for Studio Coe's student workers and as follow-ups for class visits, empowering students to utilize additional resources to aid in the completion of their projects.

Peer Mentors: A Student Perspective

As noted earlier, creating effective microlearning comes with challenges, especially when you consider balancing visuals, content, and ease of use on different devices. Another challenge was how to best format these mini-tutorials. Getting the balance right between text and visuals can be what makes creating an aesthetically pleasing tutorial difficult. Peer mentors found that selecting the most important information to include was vital. If you are not conscious of accessible design, you may end up with a text-heavy tutorial that ultimately defeats the point of this format in which content is intended to be digestible and accessible. A visual with some explanatory text helps reduce the word count by minimizing the need to explain navigation elements of a digital resource.

Another challenge to microlearning is when you reference a related tool without explaining what that tool is or does. This runs the risk of confusing the viewer. Making a separate tutorial on that topic and linking it can be useful, but that could result in the viewer not finishing the tutorial if you must add links to every slide. This approach would remove the simplicity and speed for getting the information to the viewer if they needed to view several tutorials. Figuring out how to navigate a large audience's literacy of library terms is at the core of this issue. There is the option to add a slide to the tutorial itself explaining what the tool is, but this would increase the length of the tutorial, which isn't optimal. Designing a tutorial that gives the audience their desired information without being redundant is the goal. Assuming that someone searching for information on a niche topic already knows the basics may be the right approach. Balancing what to explain and when to link to another tutorial can be challenging depending on the topic and its complexity.

As with all media we create, our goal is to bridge the gap between technical jargon and the general public's knowledge. The informal nature of microlearning tutorials allows us to adopt a more conversational approach when discussing library topics. Between the learning curve of video production and time spent rerecording and editing, microlearning tutorials are much easier to create. The format of microlearning tutorials also caters to the changing media consumption of younger generations. Short-form entertainment—think TikTok or Instagram Reels—is the media format traditional students are used to consuming. By providing information in a familiar way, we believe we are able to engage with students more effectively.

The versatility of microlearning tutorials also expands access to information. They can be used as QR codes in public spaces where people might need an answer to a question or at specific places within the library website and online course shells. This variety of presentation mediums increases the number of ways we can raise awareness of library resources. The availability of a quick link to information saves resources for answering more in-depth questions by library staff. From verbal communication in person to videos or text-based media (like microlearning tutorials), having a variety of ways to share media gives people the option to choose the method that works best for them.

Conclusions, Lessons Learned, and Future Growth

An aspect of implementing microlearning tutorials has been the shift from two- to five-minute tutorials that can go more in depth on a topic to a more-focused approach. With our peer mentors, we have found it most effective to make space for scaffolding conversations to understand the goal of each microlearning tutorial individually. The conversations have taken more time than we may have anticipated investing but have helped establish better scope for each tutorial and inspired some additional workflow adjustments, like the script we now use as a guide for our student workers (see the supplemental files available with this article online).

The content contained in a microlearning tutorial may be more focused, but this also means we are able to provide more detailed information than we can capture in a video tutorial (e.g., live links, zoomed-in screenshots, step-by-step processes). Despite the challenges, this format has also allowed us to incorporate instruction in new ways. This past year the student success librarian and first-year engagement librarian incorporated a selection of microlearning tutorials as follow-up to our typical English 1010 one-shot sessions. They were chosen to reinforce content that had already been introduced such as [Getting started with QuickSearch](#) and [Want to meet with a Library Coach?](#) These were shared with instructors via email and embedded in course shells across all English 1010 sections. Anecdotally this resulted in not only an uptick in our microlearning tutorial views but also more walk-in questions and scheduled consultations from students in these classes.

In the future, we anticipate embedding microlearning tutorials in other ways. This includes the use of more tutorials in our Personal Librarian Program, which sends emails directly to students of different populations on our campus. We initially tried this with a [Wellness Wherever You Are](#) tutorial for our distance campus Personal Librarian email but plan to expand this to future aspects of the Personal Librarian Program.

Incorporating this work into our peer mentor duties, alongside the support of staff and librarians, has centered the student voice in what we develop. This has been invaluable in terms of the topics we are covering and some suggestions on how they want to implement these tutorials throughout the library. This includes having a QR code in place at our catalog

computers in the stacks that point to our Finding a book on the Shelf microlearning object and a similar approach for guidance on using our KIC scanners. Expanding beyond what we initially considered the purpose of this platform is proving to be an opportunity to seek input from other library staff and librarians throughout our departments based on their expertise, which connects with our peer mentors.

As we have dug into the platform, we have realized there are more things we would like to see improved long term—for example, being able to easily make a new tutorial from a template, a better photo management system, and more. While some of these things might be addressed over time, we also accept the reality that not every tool will meet our every need. Sometimes we have to adapt to the tool too. We look forward to continuing to work with this format for our needs and the possibilities future tools may bring. //

Notes

1. Neil A. Bradbury, “Attention Span during Lectures: 8 Seconds, 10 Minutes, or More?” *Advances in Physiology Education* 40, no. 4 (2016): 509–13, <https://doi.org/10.1152/advan.00109.2016>.
2. Kevin Mcspadden, “You Now Have a Shorter Attention Span Than a Goldfish,” *TIME Magazine* (blog), May 2015, <https://time.com/3858309/attention-spans-goldfish/>.
3. Rebeca P. Díaz Redondo et al., “Integrating Microlearning Content in Traditional E-Learning Platforms,” *Multimedia Tools and Applications* 80, no. 2 (2021): 3121–51, <https://doi.org/10.1007/s11042-020-09523-z>.
4. Gona Sirwan Mohammed, Karzan Wakil, and Sarkhell Sirwan Nawroly, “The Effectiveness of Microlearning to Improve Students’ Learning Ability,” *International Journal of Educational Research Review* 3, no. 3 (2018): 32–8, <https://doi.org/10.24331/ijere.415824>.
5. Yvonne Mery, “Case for Microlearning,” *Library Technology Reports* 58, no. 5 (2022): 10–13, <https://doi.org/https://doi.org/10.5860/ltr.58n5>.
6. Heather Howard et al., “Scalable Competitive Intelligence Education through Microlearning and Micro-Credentials,” *Journal of Business & Finance Librarianship* 29, no. 4 (2024): 291–308, <https://doi.org/10.1080/08963568.2024.2379553>.
7. Becky Lomax, “Small Victories: Microlearning Gains Traction in Professional Development,” *American Libraries Magazine* (blog), November 1, 2024, <https://americanlibraries-magazine.org/2024/11/01/small-victories/>.
8. Qianjin Zhang and Kari Kozak, “Watch It or Read It: Understanding Undergraduate Engineering Students’ Learning Effectiveness and Preference for Video Tutorials Versus Guide-on-the-Side Tutorials,” in *2017 ASEE Annual Conference & Exposition Proceedings*, 29111 (ASEE Conferences, 2017), <https://doi.org/10.18260/1-2—29111>.
9. Lori S. Mestre, “Student Preference for Tutorial Design: A Usability Study,” *Reference Services Review* 40, no. 2 (2012): 258–76, <https://doi.org/10.1108/00907321211228318>.
10. “Home – Coassemble,” accessed April 29, 2025, <https://coassemble.com/>.
11. CAST, “The UDL Guidelines,” accessed April 29, 2025, <https://udlguidelines.cast.org>.
12. Jennifer Kirk, “LibGuides: UW Libraries Brand Identity & Marketing Support Guide: Home,” accessed February 28, 2025, <https://uwyo.libguides.com/c.php?g=1141184&p=8325573>.
13. University of Wyoming Libraries, “Studio Coe,” accessed April 29, 2025. <https://www.uwyo.edu/libraries/about/spaces-collections/studiocoe/index.html>.