

2022

Let's Tell a Story: Narrative, Constructivism, and Accessibility

Anders Tobiason
Boise State University

Publication Information

Tobiason, Anders. (2022). "Let's Tell a Story: Narrative, Constructivism, and Accessibility". In M.R. Barefoot, S. Parme, and E. Woods (eds.), *Once Upon a Time in the Academic Library: Storytelling Skills for Librarians* (pp. 123-132). The American Library Association.



Chapter 9

Let's Tell a Story:

Narrative, Constructivism, and Accessibility

Anders Tobiason

I started making video tutorials as a graduate student in library and information science, took a few years off, and started again as a reference librarian at Portland State University. While I always had a sense that video tutorials could be better than they often are, I wasn't really sure exactly what that meant—that is, until I went to remake a few older videos to reflect some changes in the library catalog. How could I communicate those changes in a way that was engaging and helped move the viewer through the video? Then I remembered an old lesson from teaching music theory: tell them a story. For me, telling a story was a foundational aspect of both writing and teaching. So, I thought I would try it out. I was going to tell stories in my videos!

Thinking back to those days teaching music theory also reminded me to focus on accessibility. I taught a student who was blind for two semesters, and the lessons they imparted to me have informed my teaching practice ever since. A really important one was that following how to do a task was so much easier if the story surrounding it was engaging and included direct causal relationships. This was a nascent version of the idea of creating a breadcrumb trail for students to follow in learning a particular concept. Indeed, this whole process of thinking through creating better and more accessible videos is like following a trail of breadcrumbs. Each connection back to classroom teaching and engaging with the specifics of the particular



videos I was remaking led me further and further toward understanding narrative as an accessibility tool. It is still a work in progress, as all good journeys are, but the trail is certainly one I enjoy exploring.

Storytelling Goal

I decided to use storytelling/narrative over other techniques because it allows viewers to follow along with the story and use the story's causal links to form concrete memory-based connections. It also allows for enhanced accessibility by describing both how to do something, and what the consequences of the doing are, and why they are important. Just describing in detail is vital, of course, but adding in storytelling creates those concrete moments of causality.

In addition, I turned to narrative as a means to create a “trail of breadcrumbs” effect so that all users can follow the content. By grounding video tutorial design in both Universal Design for Learning as well as narrative teaching strategies, we can work to create truly accessible and engaging videos. Instead of just illustrating a concept, the idea of telling a story allows for us as creators to connect with how we teach, rather than just what we teach. Using narrative fundamentally entails inviting the viewer/listener to participate in the task, rather than just passively receive the information.

Audience

The video is intended for anyone who interacts with the Ex Libris PRIMO ILS system, not just Portland State Students, though it is branded for PSU.

Delivery

The video is hosted on the Portland State University (PSU) Library YouTube page. It is embedded in many course and subject guides as well as directly in the PSU Course Management system for certain classes. It is used to instruct students about the ways they can use persistent limiters and filters to enhance their research process. It is one of a number of short videos that librarians

can use in place of, or in conjunction with, in-person interactions should they need or want to do so.

Theory

Narrative and/or storytelling has a long history in educational theory and is generally considered to be part of the constructivist school of teaching and learning.¹ In constructivism, learners actively connect concepts and are invited to recreate learning experiences on their own.² By using narrative and storytelling techniques, we invite the student/learner along with us in the mode of discovery. Narrative is a form of storytelling that makes use of causality and direct communication to engage the reader/listener in a story. The key to narrative is a description of what happens during and as a result of an action rather than a static description of the thing itself.³

Constructivism is, by its nature, a storytelling process, whether in creating narratives that allow for students to experience a particular concept in terms of their own lived experience or encouraging students to work alongside the teacher by inviting them to actively do so. In other words, we construct an educational experience that is active and student-centered. As Linda Harasim writes, “Guided by the teacher, students actively construct their knowledge rather than mechanically ingest knowledge from the teacher or the textbook. The teacher thus plays an active and essential role, assisting in identifying a knowledge problem, providing guidance in how to understand it and suggesting resources.”⁴ The idea of a teacher as a guide is particularly prescient here. What is one of the main functions of a guide? It is not just to move people through a space but also to tell a story of that space in order to empower others to interact with it in their own ways. Indeed, Harasim also writes that “constructivism seeks to tap into and trigger the student’s innate curiosity about the world and how things work. Students are not expected to reinvent the wheel but to attempt to understand how it turns, how it functions.”⁵ Using narrative in this context allows all students, both disabled and able, to understand how the wheel turns rather than having to reinvent it for themselves.

With this understanding of how storytelling can be constructed to enhance student learning and accessibility, let’s take a look at the script for a video I

created and see how it plays out. The title of the video is “Persistent Filters and Limiters.”⁶ Stories always begin with a problem or stressor that needs some attention. In the video, the problem, as it were, is having to refilter search results every time one changes a keyword or does a new search. A potential way to alleviate this stress is to use the lock filter tool. We can imagine a story starting to form from these basic elements. The narrator begins by stating that “one of the more frustrating things when searching within our library catalog used to be that every time you changed a search term and redid a search, all of the filters and limiters you were using got reset as well. Well, that is no longer the case. You can now lock any limiter or filter that you are using in one search to be used in the entire searching session.”⁷ Not only is this statement the beginning of a story, but it also actively constructs a situation a researcher will be familiar with and can then add their narratives and experiences to.

The next section of the video invites the user to do a series of tasks alongside the narrator. This doing-alongside-the-teacher style of interaction is another hallmark of constructionism.⁸ During this series of tasks, the narrator tells a story about why doing these tasks is important and makes the causal relationships between the tasks clear. The description of the tasks is also spelled out in detail to make sure that the story can be followed easily. This clarity also engages the user by explicitly describing how each filter functions. In fact, the end of this section directly asks the user a question: “Are they exactly on the topic we were looking for or do we need to change or add to our keywords?”⁹ Here we find another moment where active participation in the learning process is constructed. And it is also a crucial storytelling element. The statement asks the viewer to place themselves in the story by evaluating this results list. This, then, is a concrete version of the frustration mentioned at the beginning of the video: the user may find the results list lacking and need to redo the search but will be frustrated when the filters reset as well. So now, to alleviate some of this frustration; “It’s time to lock the filters and show why it may be a path forward.” This is the meta-story, but within each description of the tasks, there are also discrete storytelling elements that create causal connections. For instance, the video describes how to lock the filters, add a new keyword to the search box, and finally run the search. But it is not enough just to describe the task—that is not a story; rather, the key here is that the video details the effect of doing the tasks in this

order. In other words, selecting the lock filter tool before changing a keyword keeps the filters locked when running a new search. As the narrator states, “The filters stayed with us as we changed our search terms. Awesome!”¹⁰

The video continues to mirror Harasim’s concept of the teacher as a guide by describing other ways that the locking filters tool can help alleviate research stress. In the process, it allows space for the creation of more connections between using the tool and individual lived experience. The final section of the video provides a concrete example of the larger effects of locking the filters by ruminating on a little bit of an expanded research technique. “You can have multiple searches in different tabs and keep some or all of the limiters the same.”¹¹ This is an example that researchers may encounter in real life and, by describing the causal effect between locking the filter and having multiple searches, the narrator pushes the story forward again. As is true of the video as a whole, the user is invited in to tell their own version of the story based on individual experiences. Thus, the story grows the idea that using the tool can alleviate some research stress though, perhaps, in unexpected ways.

The video ends by stating that “locking filters and limiters can help you efficiently search for resources by eliminating the need to re-filter every time you search!”¹² The key word here is “can.” Instead of saying that the tool absolutely *does* make research more efficient (which is a highly problematic and charged concept anyway), the video allows the researcher to make that judgment call for themselves. The story delineates the causal connections that show why the tool may be helpful but in the end does not prescribe absolute meaning to it. By using the techniques of storytelling, both in the long form of the entire video and the short form of individual sentences, coupled with a consciousness that it is part of a constructionist school of teaching, we can create space for users to interact with a tool on their own and tell their own stories of its usefulness. This, in turn, can create more accessible learning objects. As Carlos Leon writes, “Producing narratives is not only an ability that is more or less natural, but a specific topology for storing information.”¹³ He then further clarifies the idea of narratives as creating information storage containers by stating that “narrative objects are then created. Full narratives are then created from these narrative objects as constituents. Finally, narratives are the main elements of the narrative-aware episodic memory and

procedural-semantic memory.”¹⁴ As we shall see in the next section, creating a semantic structure is a key feature of accessibility.

Cultural Considerations

One of the main goals of web accessibility is to create clear paths to and through web-based resources and web pages. WCAG 2.1.3 directly addresses this idea by giving specific guidelines, such as “instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, color, size, visual location, orientation, or sound.”¹⁵ The rest of that section of WCAG also addresses these concerns.¹⁶ In general, one of the basic ideas here can be described as a trail of breadcrumbs. We often think of web accessibility as making the visual-based nature of web resources into something that can be understood aurally. This is where intention, causality, and sequence (in other words, narrative) come into play—both narrative on the local sentence level but also a narrative structure in the entire short video.

When we think about web accessibility, one of the main tenants is to create a semantic structure or a logical document structure. Semantic structure means creating logical connections and steps between different pages or parts of a webpage on the backend or code side.¹⁷ If we take this basic principle and sit with it for a bit, it starts to sound a lot like narrative. In other words, what makes semantic structure so compelling from an accessibility standpoint are the causal connections between pages and objects that allow for any user, whether disabled or not, to access them without major difficulties. Making this explicit when we are talking or explaining a concept in a video, therefore, follows this tenant of web accessibility.

Web accessibility is not just for people with disabilities. It, in fact, benefits us all by using concrete planned structures to guide us through the webspace. By making logical and causal connections between elements that are linked in webspace, a basic sense of flow is achieved. And narrative, in the sense of an active description of a series of causally connected events, can also be said to have a basic sense of flow as an underlying goal. Thus, when creating a video, using narrative elements assists in constructing an accessible learning experience. While this certainly benefits differently abled users, it is not

exclusively for them. For students who have any library or research anxiety, using narrative builds a structure that they can latch on to. Just as with web accessibility more generally, using the causal and logical connections inherent in storytelling allows us to create videos that guide students through a process or concept.

Practical Example

Persistent Filters and Limiters (https://www.youtube.com/watch?v=6ci8U_KYtfM):¹⁸

Script:

Doing research is often a time-consuming and tedious process, so we at the library keep looking for ways that we can make the process a little less so.

One of the more frustrating things when searching within our library catalog used to be that every time you changed a search term and redid a search, all of the filters and limiters you were using got reset as well.

Well, that is no longer the case.

You can now lock any limiter or filter that you are using in one search to be used in the entire searching session.

So, let's take a look at how to keep those filters across multiple searches.

Begin by signing in to the library catalog, always a good idea for accessing resources. Then, type in some keywords, for instance, "electric vehicle", into the general library search box and press enter or the search button.

Start by limiting the results to the past 10 years by typing 2009 into the date limiter under the refine my results header. And pressing Refine.

Then, under the header availability, select the Peer Reviewed Journals filter.

And since we are only looking for peer-reviewed articles, let's also eliminate reviews from the search. Do so by selecting the red crossed-out checkmark across from the limiter which says Exclude this Reviews. Peer-reviewed journals contain reviews as well as articles, but these reviews do not count as peer-reviewed articles.

Now let's scroll through the results. Are they exactly on the topic we were looking for or do we need to change or add to our keywords?

Let's say that what we are really interested in is the environmental impact of electric vehicles. We haven't found a lot of those yet, so let's add a keyword.

Now comes the fun part. Don't search just yet.

Hover over the filter for peer-reviewed journals under the header Active filters. There is a lock that appears on the left of the filter and says "make this filter persistent throughout this session." Select this lock to keep the filter when you change the search terms. For now, lock all the filters.

Now let's add environmental to our keyword search.

Ok, now run the search by either pressing Enter or selecting the Search button.

The filters stayed with us as we changed our search terms. Awesome!

This doesn't only apply if you are just changing one word but also if you are completely changing your topic. And it is quite flexible.

Today, after this search on electric cars and the environment, you have another project you want to get started on. The project requires peer-reviewed articles, but the time frame for those articles isn't clear yet. So, before typing in the new keywords, just get rid of the date limiter altogether by hovering over the lock icon on the limiter and remove the persistent filter or eliminating the filter.

Now type in some keywords, like "water conservation", for the new search topic and press Enter. Only the peer-reviewed journals filter has remained persistent across the search, while the date limiter has been removed.

Awesome. Another cool feature is that if you do a new search in a new tab, these persistent filters will also be in the new tab. And this is cascading, so whatever the filters are in the previous tab will appear for a search in the next tab. This way, you can have multiple searches in different tabs and keep some or all of the limiters the same.

Locking filters and limiters can help you efficiently search for resources by eliminating the need to re-filter every time you search!

If you have any questions, please ask a librarian for help!

Endnotes

1. A lengthy discussion of how storytelling fits within the history and pedagogy of constructivist teaching can be found in chapter 4 of *Learning Through Storytelling in Higher Education: Using Reflection and Experience to Improve Learning*. The discussion on page 42 is particularly pertinent; Maxine Alterio and Janice McDrury, *Learning Through Storytelling in Higher Education: Using Reflection and Experience to Improve*

- Learning* (London: Taylor & Francis Group, 2003), 42, accessed August 3, 2020, ProQuest Ebook Central.
2. Steve Olusegun, "Constructivism Learning Theory: A Paradigm for Teaching and Learning," *Journal of Research & Method in Education* 5, no. 6 (2015): 66–70, <http://iosrjournals.org/iosr-jrme/papers/Vol-5%20Issue-6/Version-1/I05616670.pdf>.
 3. "Simply put, narrative is the representation of an event or a series of events. 'Event' is the key word here, though some people prefer the word 'action.' Without an event or an action, you may have a 'description,' an 'exposition,' an 'argument,' a 'lyric,' some combination of these or something else altogether, but you won't have a narrative." H. Porter Abbot, *The Cambridge Introduction to Narrative*, 2nd ed. (New York: Cambridge University Press, 2008), 13.
 4. Linda Harasim, *Learning Theory and Online Technologies* (New York: Routledge, 2001), 71.
 5. Harasim, *Learning Theory*, 71.
 6. "Persistent Filters and Limiters," Portland State University Library, YouTube video, June 13, 2019, https://www.youtube.com/watch?v=6ci8U_KYtfM.
 7. "Persistent Filters and Limiters," Portland State University Library.
 8. "In the constructivist model, the students are urged to be actively involved in their own process of learning"; Olusegun, "Constructivism Learning Theory," 68.
 9. "Persistent Filters and Limiters," Portland State University Library.
 10. Ibid.
 11. Ibid.
 12. Ibid.
 13. Carlos León, "An Architecture of Narrative Memory," *Biologically Inspired Cognitive Architectures* 16 (2016): 31, <https://doi.org/10.1016/j.bica.2016.04.002>.
 14. León, "An Architecture of Narrative Memory," 33.
 15. "How to Meet WCAG (Quick Reference)," W3C Web Accessibility Initiative, last modified on June 4, 2019, <https://www.w3.org/WAI/WCAG21/quickref/?versions=2.0>.
 16. "How to Meet WCAG (Quick Reference)," W3C Web Accessibility Initiative; WCAG 2.1.3.2: "When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined"; 1.3.3: "Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, color, size, visual location, orientation, or sound"; 1.3.1: "Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text."
 17. Semantic Structure: Regions, Headings, and Lists. Web Accessibility in Mind, <https://webaim.org/techniques/semanticstructure/>.
 18. "Persistent Filters and Limiters," Portland State University Library.

Bibliography

- Abbot, H. Porter. *The Cambridge Introduction to Narrative*. 2nd ed. New York: Cambridge University Press, 2008.
- Alterio, Maxine, and Janice McDrury. *Learning Through Storytelling in Higher Education: Using Reflection and Experience to Improve Learning*. London: Taylor & Francis Group, 2003. Accessed August 3, 2020. ProQuest Ebook Central.
- Harasim, Linda. *Learning Theory and Online Technologies*. New York: Routledge, 2001.
- León, Carlos. "An Architecture of Narrative Memory." *Biologically Inspired Cognitive Architectures* 16 (2016): 19–33. <https://doi.org/10.1016/j.bica.2016.04.002>.

- Olusegun, Steve. "Constructivism Learning Theory: A Paradigm for Teaching and Learning." *Journal of Research & Method in Education* 5, no. 6 (2015): 66–70. <http://iosrjournals.org/iosr-jrme/papers/Vol-5%20Issue-6/Version-1/I05616670.pdf>.
- Portland State University Library. "Persistent Filters and Limiters." YouTube video, June 13, 2019. https://www.youtube.com/watch?v=6ci8U_KYtfM.
- Semantic Structure: Regions, Headings, and Lists. "Web Accessibility in Mind." Accessed December 13, 2020. <https://webaim.org/techniques/semanticstructure/>.
- W3C Web Accessibility Initiative. "How to Meet WCAG (Quick Reference)." Accessed on December 13, 2020. <https://www.w3.org/WAI/WCAG21/quickref/?versions=2.0>.