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GoGo Gadget Google Suite: Using Google Suite Tools to Enhance Online Learning

Kristina Bush

Patricia L. Hernandez

Emily Metcalf

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INTRODUCTION

The authors of these proceedings came together as collaborators after meeting during the LOEX 2020 virtual conference. With a sudden shift to virtual learning, the three librarians shared ideas and methods for online engagement in library instruction. Despite their vastly different institutions, all three created active digital learning tools using components of the Google Suite of resources—namely Docs, Forms, and Sites.

It is important to frame these proceedings within the context of critical digital pedagogy. So often, library instructors feel constrained by a digital tool, however, the pedagogical approach they bring to the tool is much more valuable than the tool itself. As written by Sean Michael Morris and Jesse Stommel (2018) in *An Urgency of Teachers*, "None of these tools have what we value most about education coded into them in advance. The best digital tools inspire us, often to use them in ways the designer couldn't anticipate," (part 1, section 3). This is the core belief that has inspired the presenters' work and why librarians often function as Inspector Gadget types who select the right tool and make it work rather than letting the gadgets confine instruction.

GOOGLE DOCS

The Need

When the Berkeley campus of the University of California closed in response to the COVID-19 pandemic, instruction librarians had to quickly adapt to remote instruction. The biggest challenge of synchronous remote learning was creating active learning opportunities for students. Google Docs proved useful as a tool to redesign group-work activities and handouts for the remote learning context. Implementing Google Docs as "handouts" in synchronous remote instruction sessions provided collaborative opportunities for students during information literacy workshops.

A database comparison activity is an example of an information literacy exercise that transitions well to remote instruction with the use of a collaborative Google Doc. Inspired by the jigsaw discussion technique, students work in

teams to analyze library databases using a Doc handout with guiding questions. After sending a link to the Doc with editing permissions turned on, students collaborate in breakout rooms to respond to the questions, annotate the Doc, and then return to the main Zoom room to share their insights about each database with their peers. The collaborative Google Doc serves as a lasting resource for the students to revisit.

Benefits

Some benefits of using a Google Doc are that all the students actively engage in note taking synchronously; are socially motivated to complete the work without an instructor looking over their shoulder because they can watch each other edit in real time; and it offers a collaborative, empowering way to create a lasting educational resource. In these ways, using a Google Doc supports critical and active pedagogical techniques in the remote instruction classroom.

Collaborative Google Docs can be integrated into various information literacy activities. In an art history adaptation, the library instructor supplies the title and image of an artwork to research in the instructions and asks reflection questions about art historical research strategies. Google Docs may be used to encourage collaboration in other activities, including source type comparison, individual self-paced exploration, database speed dating, generating keywords, searching bibliographies, and formatting citations.

Students and faculty have responded well to information literacy activities that use Google Docs for collaborative work. Students, in particular, note that they are more actively engaged when involved in active learning exercises than in a lecture-based workshop. They also reported revisiting the Doc to look at the notes that they took, and faculty have often assigned students to add notes on additional databases. The library instructor can assess whether students have met learning objectives based on their responses to the guiding questions preserved on the Google Doc.

Limitations

Google Docs can only have 100 active editors at a time, so it would not be possible to use this tool in a very large class. The presenters do not suggest using a collaborative Google Doc with a class greater than 40 students, as the number of editors becomes overwhelming above 40.

GOOGLE FORMS

The Need

In Fall 2019, librarians at UC Berkeley developed a Digital Library Notebook in response to a call for instructional resilience during a particularly damaging wildfire season. In 2020, with the shift to online learning, the librarians at Texas A&M University-Corpus Christi utilized the Notebook template to create digital worksheets as a way to engage in library instruction for newly asynchronous virtual classes.

When it comes to asynchronous online learning, digital learning objects need to contain all of the essential aspects of library instruction without a librarian's presence. Video tutorials can replicate demonstrations, but they rarely allow students to engage in active learning and thoughtful reflection. Digital worksheets created in Google Forms provide a way to incorporate the active engagement students often miss out on when simply watching video tutorials.

Google Forms enables the creation of multi-page worksheets, which allows for clearly organized information. Many question types are available—including multiple choice, multiple answer, and open text entry—allowing the creator

to determine the most effective question-type to encourage resource exploration and knowledge demonstration. Google Forms also allows the integration of multimedia, so embedding short demonstration videos alongside GIFs and images provides ample opportunity to demonstrate the steps students must take to accomplish their assignment.

To deploy a Form, the worksheet creator can simply send out a link. This link can be distributed via email or social media, hosted on a library webpage, or included in a learning management system, like Blackboard, Moodle, or Canvas.

Benefits

In addition to ease of distribution, there are many benefits to teaching an asynchronous lesson through a Google Forms digital worksheet.

Through Forms it is easy to incorporate any requisite demonstrations. Though time consuming in a synchronous learning setting, short video tutorials, GIFs, and images can replicate the necessary demonstrations while letting students find a pace that suits their learning style.

Because there is no time constraint to work within, worksheets can cover a breadth of topics, allowing librarians time to expand on the use of resources and incorporate reflection questions that often go unasked when pressed for time. Reflection is an important part of critical thinking, and these worksheets allow the space for students to seriously consider the purpose of these resources and the implications of the information they discover.

Built as complete learning experiences within themselves, students can respond to the worksheets whenever it is convenient for them. Students in an asynchronous course likely chose the course because of its flexible schedule. These worksheets are an easy way for libraries to accommodate student and faculty needs while providing the instruction students need to succeed in their course.

Google Forms makes learning assessment simple. With Forms, student responses are collected through a Google Sheets spreadsheet along with a timestamp of their submission. Sheets makes it easy to read through, assess, and distribute the responses to the faculty member for grading. Because all of the responses to a Form can be collected into a Google Sheets spreadsheet along with a timestamp, student work is easy to read through, assess, and distribute to a professor for grading.

Limitations

The primary limitation of using Google Forms to create asynchronous virtual worksheets is that Google Forms creates objects that are meant to be completed in one sitting. As such, there is no obvious way to save one's work and return to it. Students in asynchronous courses are often accustomed to working when they can and returning to assignments as needed.

To allow students the flexibility of returning to a worksheet if necessary, there are two potential solutions. First, when creating a worksheet, the creator can include instructions on how to submit one's responses and save the link Google Forms provides after submission that reads "Edit your responses." Students can use this link as many times as they like to return to their worksheet, resubmitting their work each time. This does preclude marking any questions as "required" in the Form, which would prompt a student to answer all questions before submission.

The second workaround for this problem is to have someone unfamiliar with the content go through the form before it is distributed and time themselves. The worksheet creator can then mention the average time needed to complete

the worksheet in the assignment instruction. While this does not help students save and return to their work, it does give them reasonable expectations so they can set aside the time required to fill out the Form in a single sitting.

GOOGLE SITES

The Need

Google Sites is a website builder similar to WordPress, Wix, and Weebly. This feature of the Google Suite provides intuitive tools to quickly build a website. Layouts, font and color themes, and a variety of embedding options are available to meet the needs of site builders.

A need for online engagement, both for information literacy instruction and for general library outreach, prompted the use of Google Sites as a host for virtual escape rooms. Adapted from the layout for physical escape rooms, the Google Sites virtual escape room would begin with a story-building narrative to immerse students. The students would then proceed to the first puzzle and so on, applying information literacy and digital literacy skills and techniques to learn and escape in a collaborative virtual setting.

Benefits

Since this is a tool within the Google Suite, it is free to use. Also, as is the nature of Google, it is an excellent collaborative tool. Librarians from the same university or across institutions can collaborate to develop an information literacy escape room to implement at their respective libraries.

Numerous studies have presented the benefits of learning through play (Rush, 2014). This hands-on, active approach allows the application of theory and abstract concepts through a captivating activity. It also allows librarians to step away from the demonstration-heavy model and shift to a more engaging approach. Additionally, when partnered with brief demonstration videos viewed prior to a library session, library instructors can lead students through a flipped classroom session.

Limitations

Due to the nature of virtual escape rooms, there are some aspects to consider when building one. For example:

- Brevity: Be cognizant of the time it takes to read through the story-building narrative and instructions. When the escape room timer begins, the desire to read through the narrative decreases. The goal is to be as succinct but engaging as possible. This may require iteration.
- Timing: Carefully design the room to provide the right level of difficulty, ideally with an 80-90% escape rate. The goal is for students to learn while being challenged in an enjoyable way. Allow time for a discussion on the most challenging puzzle(s) of the escape room and to review each puzzle in the event that some students did not escape.
- Difficulty level: Be aware of the difficulty level of the room and how students will be organized to work through the room's puzzles. Will it be a task for individuals? Small teams? Or the entire class? Difficulty levels can be modified through the number of clues freely provided. For example, an individual may receive 10 clues, but a class of 20 may only receive 5 clues.
- Testing: It is important to test the room multiple times. This allows the discovery of flaws or issues prior to implementing the room with the target audience. Testing also provides the opportunity to determine the difficulty level of the room itself.

As evidenced by the points listed above, the main limitation for using Sites to create an escape room centers less on the tool itself and more on the high time demand required to build a virtual escape room. It does take time and effort,

but ultimately escape rooms can benefit a library's information literacy program as well as the students who engage with them.

CONCLUSION

Utilizing the tools mentioned in this article takes active and digital learning objectives a step further, allowing students the opportunity to build on their familiarity with information and digital literacy techniques and apply them in a direct and engaging manner. These tools can be used to gamify the approach library instructors take when delivering sessions, help implement flipped classroom techniques, and even sometimes eliminate the need for a live library instruction session.

Google Suite offers free opportunities for collaboration within the library, university, and across the nation. All it takes is the courage and curiosity to explore the tools available through Google. Consider finding a new colleague or two and build something incredible together!

REFERENCES

Morris, S.M. and Stommel, J. (2018). *An Urgency of Teachers: The work of critical digital pedagogy.* Hybrid Pedagogy Inc. https://criticaldigitalpedagogy.pressbooks.com/

Rush, L. (2014). Learning through play, the old school way: Teaching information ethics to millennials. *Journal of Library Innovation, 5*(2). https://digitalcommons.odu.edu/cgi/viewcontent.cgi?article=1001&context=libraries_fac_pubs

APPENDIX A

Getting Started in the Google Suite

Links from the presentation:

- Trisha's Info Lit Escape Room example: https://sites.google.com/view/escape-the-library-loex21/home
- Presentation Wrap Up Reflection and Contact Information for Collaboration: https://docs.google.com/spreadsheets/d/1HHiKIN1EBvPBhWnwlZhXb-JFDqzpd5d2RS6XqmzAeww/edit?usp=sharing

Google Documentation:

- Google Docs Support: https://support.google.com/a/users/answer/9300503?hl=en&ref_topic=9296546&visit_id=637538520192167158-2072385944&rd=1
- Google Forms Support: https://support.google.com/a/users/answer/9302965?hl=en&ref_topic=9296604&visit_id=637538520192167158-2072385944&rd=1
- Google Sites Support: https://support.google.com/a/users/answer/9314941?hl=en&ref_topic=9296431&visit_id=637538520192167158-2072385944&rd=1
- Get Google Certified: https://edu.google.com/teacher-center/certifications/?modal_active=none

Examples from Kristina, Trisha, and Emily:

- Library Intro for Nursing Students Worksheet: https://forms.gle/K87SZJsEUtcFjdhA9
- Data in Nursing Digital Worksheet: https://forms.gle/pcETWGP1yQkhEDJ76
- View-only template for database comparison Google Doc activity https://docs.google.com/document/d/1IJ6ZiZ5iHFvPoz8ktttYHadWCPVnQ5Ai34LTZD_W2Bo/edit?usp=sharing
- Kristina's template digital library notebook: https://docs.google.com/forms/d/1bQBp6qRi9Gc0g7AKOfjJgU945P43xxgr-zgLpDM5HzQ/edit?usp=sharing
- Trisha's 80's Escape Room for the Bell Library International Games Day: https://sites.google.com/view/belllibraryescaperoom/home