

Cathryn Copper

Experimentation in academic libraries

How to do it, and why libraries need it

One of the most sought after skills in innovation industries is curiosity. The brilliant thing about curiosity is anybody is capable of it. It does not require intelligent genes or an expensive education. The only requirement is a willingness to try something new. Trying new things is how we advance our disciplines, so curiosity is key to any innovative field. Not surprisingly, curiosity often manifests in experimentation because experimentation, at its core, is about trying new things.

In experimentation there are no commitments. This is the essential reason librarians have so much to benefit from experimentation. We are in a field of constant transition. However, we often find ourselves slow to adapt to changing needs. New resources and services are an investment that we can not always accommodate. Yet, without these new resources and services, we risk not meeting changing user needs.

That is why experimentation is having a moment. Experimentation gives librarians the opportunity to try a new idea, method, or activity before launching it on a larger scale. Likewise, the commitment to experimentation is minimal. At minimum, all a library needs is a digital space (think LibGuides) and perhaps a small physical footprint, depending on the experiment.

At Virginia Tech, the Art & Architecture Library, a branch of the University Libraries,

uses experimentation as a tool for exploration and concept testing. The experiments are an extension of the studios at Newman Library, the main library, which explore the use of technology. Newman Library studios integrate experiences across media design, data visualization, virtual environments, and 3-D design.¹ Students in creative disciplines like art and architecture have a lot to benefit from engaging with these types of technologies, but there is no need to recreate them in the branch library since students have access to them at the main library.

The head of the Art & Architecture Library felt the most important aspect of the studios was the adaptive, experimental culture they brought to Newman Library, and that could be recreated on a smaller, even more flexible scale at the Art & Architecture Library.

Why experimentation?

In addition to being noncommittal, experimentation is the sole avenue to advance our discipline. All the resources and services we consider core to libraries were once an experiment, and if librarians had never decided to give it a try, we may not be doing it today. Experimentation is a platform

Cathryn Copper is head of the Art & Architecture Library at Virginia Tech, email: cathryn@vt.edu

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to test new resources or services, primarily technology-related, but not always. With knowledge obtained through a trial period, librarians can make an informed decision on what should be fully supported. Framing it as an experiment makes it easy to start and stop. If it is not successful, then there is the option to stop without repercussions. On the flip side, if it does work, then you make a case to add a new, useful experience to your library.

Probably most important is the culture experimentation generates, and this was the primary driver of the experiments at the Art & Architecture Library. To users it says, “our library embraces new technologies” or “our library is trying new things to make a better experience for you.” To library staff and employees, a culture of experimentation gives them freedom and confidence to offer new ideas.

What makes a good experiment?

Experiments come in all shapes and sizes. They can be an event series, a digital resource, embedded instruction, lending technology, or any “new-to-you” concept. The Art & Architecture Library distinguishes experiments at an Experimentation Station. The station is located in the front of the library, visible to passersby, and identified with a vinyl graphic on the wall that reads, “Experiment + Play. Try something new.”

In its 12-month existence, the station has hosted small pieces of technology, everything from iPad apps to virtual reality tools. The experiments are chosen based on potential user interests and try not to duplicate what is already available at the main library or in the College of Architecture and Urban Studies, but may build upon an interest that exists in these partner units. The Experimentation Station launched a culture of experimentation at the Art & Architecture Library, and we’ve since come to think of almost everything we do as an experiment.

When we pilot a new technology, we typically start with an entry-level version. For example, we plan to lend the Oculus Go

headset as a virtual reality experiment. There is less of a learning curve with the Oculus Go, so more people will be willing to try out the new technology. If the experiment is successful, and we decide to offer it as a permanent resource, then we may invest in an Oculus Quest or Oculus Rift.

Another component we consider is the timeframe. It may fluctuate depending on the nature of the experiment. Some experiments can be assessed after two weeks while others need a year. Regardless, before the experiment begins, we decide what timeframe is suitable. Typically the Art & Architecture Library experiments rotate every semester. A semester is a good timeframe for small technology experiments because it allows time to publicize the experiment, partner with courses, and collect feedback. Also, consistency with the experiment schedule helps users know how long to expect the experiment and when to expect a new one.

It is important to have a sandbox fund in the library budget. A couple hundred dollars per year goes a long way, and a dedicated amount of money indicates to library staff that you are serious about welcoming new ideas and provides users the opportunity to test those ideas before they become dedicated programs or services. In the long run, a sandbox fund is a minor investment with a big return.

Once the timeframe and funding are in place, there are only a few additional requirements. If the experiment is technology-related, we test the technology first and create instructions or a tutorial for users. Next, we determine the desired outcomes. What do we want to learn from this experiment? Answering this question before we launch the experiment helps with assessment later. Finally, we publicize the experiment as widely as possible. Getting users to try the new resource or service is what experimentation is all about.

Examples of experimentation in libraries

The experiments at the Art & Architecture

Library operate on an easily accessible scale. The Experimentation Manifesto available on the libraries website notes,²

Experiments provide access to emerging technologies and encourage play and discovery. The experiments are not fully supported tools or services. They are opportunities to test, provide feedback, and improve concepts.

Framing the experiments in this way make them manageable by library staff, and, more importantly, the primary purpose is to offer an experience of exploration in the library. The first experiment tested the use of iPad Apps (Affinity Designer, Interaction of Color, and Procreate) in education. There was a low barrier to this experiment since all it involved was loading the apps onto iPads the library already owned. The most popular experiment to date is a 3Doodler to create 3-D objects without the use of a 3-D printer. This has proved to be an ideal experiment. It generated a lot of interest and was easy to offer as a fully supported tool post-experiment phase. The only ongoing expense of the 3Doodler is the PLA and ABS filament, which is relatively inexpensive so the library continues to fund it, even though students are willing to supply their own filament.

The latest experiment tests the Looking Glass, a desktop holographic display. The potential for virtual reality in architecture and design is immense but almost always requires a headset to experience the technology. That is why we chose the Looking Glass as our first virtual reality experiment. The glass box offers a less-intimidating experience and the ability to create and view a 3-D object simultaneously.

These experiments have fueled a bigger initiative that uses experimentation beyond the microcosm of the Experimentation Station at the Art & Architecture Library. Proposals for an exhibition space, hybrid collections, and more advanced technology are all framed as experiments.

Another framework for experiments focuses on space development. MIT has used this model of experiments to encourage rethinking the use of library spaces,³ which is scalable to any size academic library. A simple rearranging of furniture can be framed as a library experiment to learn more about user configuration preferences. Most notable, is MIT's documentation of past successful and unsuccessful experiments, known as "graduates" and "graveyard" respectively. This type of transparency is important for experimentation culture and communicates that all experiments are valuable regardless of outcome.

Harvard's Library Innovation Lab operates in the same realm but on a big thinker scale. Primarily, projects are large, multiyear undertakings that advance the mission of the lab, but before it gets the "project" label, it's considered a "sketch."⁴ Sketches are experiments that allow the lab to test out an idea. They range from crowdsourced platforms to digital archives. The scope of these experiments take time, staff, and funding, but the concept can be applied to micro library initiatives. For example, the Art & Architecture Library piloted a digital repository of architectural drawings. The initial investment was to digitize 50 drawings, or 10 percent of the collection. Then users tested the interface and provided feedback on access preferences. At that point the decision was made to move forward with digitizing the entire collection. Thus, before we committed to a multiyear digitization effort, we piloted it as an experiment.

Assessing experiments

Assessment is central to experimentation. The methods for assessing experiments vary and may be unique for each experiment. Most important is to involve as many people as possible. The more people you can include in the pilot phase of the experiment the better. You will be able to analyze the success or failure of an experiment better with a breadth of feedback. On that note, library staff should provide input, especially

if they are asked to support the project. Include IT staff if the experiment is technology-related.

The process for assessment at the Art & Architecture Library is twofold. User feedback is collected with Google Form. For our initial attempt, we asked four questions: What experiment did you try? Would the experiment benefit your coursework? Should it become part of the supported tools and services the library provides? and What other technologies should we try? However, the response rate was low. To encourage more feedback, our next experiment will have a kiosk with two options, thumbs up or thumbs down. This simplified format was piloted by Newman Library, and the response rate more than tripled. In addition, we plan to use an Instagram hashtag for people to document their experience and share the work they created. This will help publicize the experiment as well.

The second part of assessment is measuring the experiment against strategic goals and personal knowledge. Questions to consider include: Does the experiment meet library strategic goals? Does it solve a problem? Is it requested by users? and Does it affect a large number of users?²⁵ Obviously experiments that respond positively to these questions bring value to your library. Equally important is personal knowledge.

For example, the first experiment at the Art & Architecture Library was testing iPad apps. What we learned through anecdotal evidence was users preferred to use apps on their own devices even at a somewhat high (\$40) price point. This was not evident in polling results but was an important factor to consider. Apply what you know about your institution and student population to make decisions that are right for your library.

Failure is a good thing

The idea of experimentation is to try something new. On occasion, ideas do not always work out the way we hope, and that's okay. Assessment helps determine if an experiment is worth supporting permanently. We consider the iPad experiment at the Art & Architecture Library a failure. The few students who tried the apps, liked the app Procreate, but there

was not enough evidence for us to continue offering it. Even though we call it a failure, it was not a waste of time. We learned that students are interested in digital art platforms but prefer to use apps on their personal devices. Therefore, our next experiment will investigate creating art in a virtual environment, a technology that most students do not have access to otherwise.

In addition to the Looking Glass, we will checkout an Oculus Go with art apps pre-loaded. This experiment builds on the interest in digital art while letting students experiment with a new technology platform.

If the decision is made that an experiment failed, be sure to document it. Create a space on your website for failed experiments. This serves as historical documentation and a learning tool. When librarians share their failures widely, library users see that the library is adaptable and other librarians have the opportunity to learn and reduce duplicating the failure. Analyzing failures helps one understand how to do better next time and increases the chances of success.

In the constantly changing landscape of libraries, we need to create cultures where it is okay to fail. After all, in order for libraries to be innovative, we need to be creative and curious. Experimentation in libraries has the potential to advance the library experience by encouraging library users and employees to share ideas, try something new, and fail from time to time.

Notes

1. Virginia Tech University Libraries, "The Studios at Newman Library," https://lib.vt.edu/content/dam/lib_vt_edu/studios/StudiosBrochure.pdf.
2. Virginia Tech University Libraries, "Experimentation Manifesto," <https://guides.lib.vt.edu/ArtArch/experiments>.
3. MIT Libraries, "Experiments at the MIT Libraries," <https://web.archive.org/web/20190913135128/https://libraries.mit.edu/about/experiments/>.
4. Harvard University, "The Library Innovation Lab," <https://lil.law.harvard.edu/>.
5. Nicole Henning, "Experiments," in *Keeping up with Emerging Technologies*. ↯