

## Fail Early and Often to Succeed: A Case for Rapid Prototyping in Libraries

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### Abstract

At Penn State University Libraries, we are endeavoring to support a library and user community in a state of flux by moving from a culture of rigidity to one of flexibility. Changes to Penn State University Libraries' organizational structures and strategic priorities have been swift and ongoing. In some contexts, we are using rapid prototyping practices to respond with agility to these changes, as well as to the changing needs of our faculty, staff, student, and community users. This article describes the general rapid prototyping approach, showcases the concept in use by a library's teaching and learning department, and uses a case study to illustrate how these practices can be applied to a specific learning object. We also suggest applications in other, more systemic, areas of organizational work. Key takeaways include encouraging a culture of experimentation, being open to failure, and keeping lines of communication open to strengthen collaboration.

### Introduction

"Perfect is the enemy of the good." This quote, commonly attributed to Voltaire, has become a mantra for many high-achieving professionals trying to accomplish more by overcoming perfectionism.<sup>1</sup> It can be more than a mantra, though, for organizations like libraries that need to innovate, adapt, and evolve in order to embrace their power and achieve their missions. For these organizations, striving for iterative, gradual improvement and change rather than planning for perfection can be the key to creating a supportive work environment, responding to community needs, and preparing to lead new community initiatives. Several departments at Penn State University Libraries, including the teaching and learning team, have found this to be the case as they have used a different process for creating successful library products and programs. This process, rapid prototyping, is a useful tool for quickly moving projects and initiatives forward. Rapid prototyping can also be applied to shifting the mindset

and culture of an entire organization toward appreciating, valuing, and incentivizing efforts intended to push the organization forward, even if it means running the risk of failure.

The Penn State University Libraries is one very large and complex library geographically dispersed across 24 campuses of varying size and includes a faculty of 135 librarians. Librarians collaborate across all locations in a number of ways including sharing authorship of LibGuides, providing reference through our online Ask A Librarian service, and participating in a Community of Practice (COP) for instruction. With a new Strategic Plan in 2014 and several new administrators joining the library leadership team, there have been many rapid changes at Penn State University Libraries.<sup>2</sup> This includes the realignment of a number of departments with the intentional development of a culture of cross-departmental collaboration, as most efforts require librarians and managers to work with those outside of their own department, reporting line, or location.<sup>3</sup>

As part of this context, the Penn State University Libraries' Library Learning Services (LLS) department experienced major redirection and change. LLS, located on the University Park campus in State College, PA, oversees the foundational-level information literacy program, coordinates course-related instruction, facilitates the use of instructional classrooms, manages library tours, and provides instructional design and pedagogical expertise within the Libraries. The LLS team is comprised of teaching librarians and staff whose roles focus around student engagement, outreach, learning design, instructional technology, online learning, and assessment. Changes for this team, and for all of the Penn State University Libraries' colleagues involved in teaching and learning initiatives, include the development of a new philosophy statement and new programmatic outcomes, based on updates to the Penn State General Education curriculum and the development of the ACRL Framework for Information Literacy for Higher Education.<sup>4</sup> More dramatic changes for teaching and learning at Penn State University Libraries, however, include new approaches to integrating information literacy into campus curricula and collaborating with faculty in order to devise sustainable approaches to creating and enhancing learning objects. For teaching and learning at Penn State University Libraries, the process of rapid prototyping offers major potential for supporting these ambitious goals.

Changes to Penn State University Libraries organizational structures and strategic priorities have also been swift and ongoing. We needed to develop practices that allowed us to respond flexibly and nimbly to these changes, as well as to the changing needs of our faculty,

staff, student, and community users. Long planning timelines and complex production processes for services, curricula, and collaborations do not fit within this dynamic landscape of evolution and growth. What is needed within this landscape is a culture shift that enables individuals to embrace continuous growth and improvement, integrated assessment, and failure when working toward meeting our own needs, our faculty colleagues' needs, and our students' needs.

### Rapid Prototyping & Libraries: A Literature Review

As shown in Figure 1, the rapid prototyping design cycle involves quickly creating an initial design, building a first version, and testing in the real world.<sup>5</sup> This is followed by more incremental improvements to the design and testing each iteration in order to make continual changes. The goal is to adapt products quickly through assessing their effectiveness frequently in order to produce the best design. Rapid prototyping is most frequently associated with design of products and often uses 3D printing to create models.<sup>6</sup> The field of software engineering began using rapid prototyping almost four decades ago.<sup>7</sup> In the 1990s it was adopted into the field of instructional design primarily for computer-based instruction.<sup>8</sup> The availability of more user-friendly software tools allowed changes to system in a much more dynamic manner. While this made the design process more informal and less rigorous, the advantages were accelerated improvement and error correction.

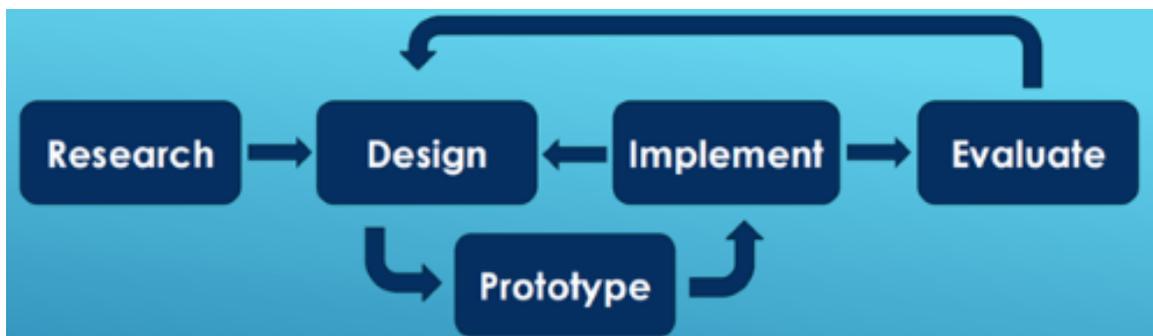


Figure 1: Rapid Prototyping Design Cycle

The speed of rapid prototyping is achieved by spending less time in the research and design phases and instead creating an initial version as fast as possible. Errors and failure are likely, almost common, but lessons are learned quickly and the next iteration of the design will fix those problems. The advantages of rapid prototyping are shorter design periods, higher

quality outcomes, and greater engagement with the user.<sup>9</sup> Academic libraries have adopted techniques and design processes from instructional design for teaching and digital projects.<sup>10 11</sup> A similar model that many instruction librarians may be familiar with is the ADDIE (Analysis, Design, Develop, Implement, Evaluate) instructional design framework, a step-by-step, iterative process for creating learning objects and instructional experiences.<sup>12</sup> While ADDIE and rapid prototyping share a few characteristics, such as regular assessment and evidence-based design changes, there are some advantages to the rapid prototyping approach such as its faster time to implementation, lower investment of time and resources, and more frequent assessment. This is not to say rapid prototyping comes at a lower cost, indeed a faster design process and project long assessment may require more staff.

Rapid prototyping can be used at all levels of design from a single learning object to an overall approach to organizational change.<sup>13</sup> For a lesson plan, each class session presents an opportunity to redesign a small amount of the session and evaluate the result. For learning objects and tutorials, there exists the opportunity for a more rapid creation process and a move away from the traditional approach of investing a great deal of time, energy, and other resources on design and development.<sup>14</sup> Rapid prototyping can even be used for scenario planning, using critical making sessions to forecast far into the future.<sup>15</sup> Rapid prototyping is just one more tool in the toolbox of design thinking, a term for human-centered and practical approaches to problem solving, one that has a higher risk than other approaches like ADDIE but that is also more agile.<sup>16</sup>

## **Institutional Transformation**

### *Initiating Change*

The practice of rapid prototyping spread to many fields through a design model popularized by the company IDEO.<sup>17</sup> This approach introduced activities and attitudes that are important both for creating and refining ideas, but also improving efficiency and collaborative behavior. Traditionally, many academic—and other—library organizations have used rigid hierarchy and decision-making processes that impede change and prevent staff from participating in decision making.<sup>18 19</sup> Libraries can adopt new design approaches, like rapid prototyping, into current operations to begin an organizational culture shift toward flexibility. Other ways libraries have encouraged innovation include investing funds to stimulate

experimentation, though the amount of money invested in research and development can vary widely from hundreds to thousands of dollars.<sup>20</sup> Often, though, organizational transformation and innovation happens through the efforts of individuals who, with a combination of their expertise, backgrounds, and passions, bring new ways of thinking and working into the organization.

One of the authors of this paper, for example, has a background in computer engineering and learned rapid prototyping design almost two decades ago in a human-computer interaction (HCI) curriculum. In this program, artists, designers, computer scientists, and engineers worked together on product design. Similarly, the other author of this paper has a background in instructional design, a field that, like engineering, focuses on the act of creation through feedback and iteration. As the pace of change in libraries accelerates, it becomes apparent that a new approach to operations and planning, like the iterative approaches used in computer engineering and instructional design, is needed to make the library more agile. Here, we use three examples of rapid prototyping in practice from Penn State University Libraries; one example illustrates what rapid prototyping looks like at the project level, one example illustrates what rapid prototyping looks like when it is integrated into the professional practice of an entire department, and one example reflects on the need to integrate rapid prototyping into collaborative work with our entire community.

### *Prototyping in Practice: A Project Approach*

At Penn State University Libraries, we applied the rapid prototyping approach through instructional design to improve one of our key teaching objects. As background, in 2002-2003, Penn State's Schreyer Business Library worked with a web developer and designer to create the original "Patent Search Tutorial". It was recognized by PRIMO as exceptional online library instruction material in May 2003.<sup>21</sup> A few years later, responsibility for the patent collection moved to the Physical and Mathematical Sciences Library. In 2007-2008 when the Penn State University Libraries moved to a new content management system, we simply migrated the tutorial with no changes. Difficulties with the video and audio files necessitated the redesign and update the tutorial. In 2009, we hired a graduate student in learning design from the College of Education to assist subject liaison librarians on the project. Based on interviews with the patent librarian, the graduate student worked for a semester to create videos and integrate them into the tutorial by 2010. Again in 2013, changes to the US Patent and Trademark Office

(USPTO) website required the tutorial to be updated. The patent librarian created screenshot videos that were accessible and reflected the current database interfaces.

Each of these updates required at least a year of planning, design, and implementation. Every iteration also involved many hours of staff time from multiple individuals. The cost in time and effort of each redesign was so high that librarians were reluctant to do it again. In 2016, Penn State University began migrating to the new learning management system (LMS), Canvas, and the Libraries' website began moving to Drupal. Rather than automatically migrating all library tutorials, the Libraries looked critically at the most frequently used learning objects and opted for redesign rather than migration for most. In the case of the patent tutorial, the material had again reached the stage where some of it was out of date.

The first stage of rapid prototyping the patent tutorial involved research into users needs. The tutorial was located in one place, the Libraries' website, serving multiple roles for a variety of audiences. Upper-level undergraduates in chemistry used it before a flipped classroom session about patents, inexperienced inventors completed it before meeting with the patent librarian for consultation, and some students used it for just-in-time instruction. It was leveraged in lesson plans created by and instructional opportunities facilitated by the patent librarian and other instruction librarians in over a dozen courses a year. After considering these uses, we created multiple videos with different formats and designs, some on the web and others in the Canvas LMS. Each targets to specific audiences for desired learning outcomes. Some were developed with teaching faculty outside the library, others among a group of librarians that frequently teach patents at different campuses.

The new tutorial and videos were created and published immediately after a review by the instructional designer regarding accessibility and quality. Assessment is ongoing with statistics on use capturing the quantitative impact of each part, while quizzes and class assignments are being used to assess the qualitative impact on student learning. This new approach, working with subject specialists and content experts rather than relying on designers to create content separately, follows our new strategic direction and fits with the rapid prototyping method. In prior phases, changes to the tutorial were not published until extensive review was conducted. In each future iteration, we will be able to integrate more effective teaching approaches and content changes as soon as they become available.

### *Prototyping in Practice: A Departmental Approach*

Penn State University Libraries' revised strategic plan requires the LLS department, and all library departments that participate in the Libraries' teaching and learning enterprise, to develop new professional practices. These new practices are responding to strategic plan action items associated with inventorying learning objects, such as LibGuides, images, tutorials, or videos, piloting outcomes-based assessment plans, and piloting new delivery models for general education instruction. In order to accomplish these action items and balance work associated with their other roles, LLS colleagues need to move quickly and avoid feeling attached to learning objects they have created in the past or to the new delivery models with which we may experiment. In short, LLS team members and other Penn State University Libraries colleagues need to develop a new approach to producing and providing access to learning objects along with employing new learning and assessment strategies for classroom-based instruction.

This need has prompted new, collaborative relationships within the Libraries geared toward analyzing and solving problems related to web-based learning objects. When the Libraries' website began to migrate to Drupal in Fall 2015, one of the first areas identified for migration was the LibGuides landing page. Previously, all subject and course guides were listed alphabetically on the main page, which was neither attractive nor easy to use. A team including a Drupal developer, a user experience librarian, the Head of LLS, and the Manager for Discover Access and Web Services developed a landing page prototype, based on their relevant expertise and a brief exercise with user stories, over the course of several weeks in order to meet an aggressive migration deadline. The team knew that this prototype, which was an improvement over the alphabetized listing, was not perfect. The team published it regardless in order to get authentic feedback from stakeholders, including other librarians, that they could then apply to the next iteration of the page. This method of working was new and different for everyone involved on the team, and for the librarians whose work was impacted by the changing structure of the LibGuides landing page. For example, when the interdepartmental team responsible for creating a new landing page for all of our research and subject guides, course guides, and tutorials published an early version of this page, it was not what library colleagues expected. The team spent no more than a few weeks deciding on an early design for the landing page, with the goal of testing the new design with students, faculty, and other stakeholders in order to make positive, incremental changes to the page. Because of prior experiences, library colleagues believed that this was a final and permanent version of the

landing page, and became concerned about its structure and the process used to make the changes. The team was surprised by the negative feedback, but quickly came to understand that our colleagues were not aware of the new approach the team was taking with the Libraries website and its components, and that we needed to respectfully and intentionally communicate our new approach. Overall, we learned a lot from this experience, but this example underscores a central problem for librarians at Penn State University Libraries: the need to move quickly, be flexible, and take an iterative approach to our work.

### *Prototyping in Practice: A Community Approach*

Library faculty and staff are not the only ones at Penn State going through major change at the moment. Our teaching colleagues, including disciplinary faculty, instructors, and teaching assistants, are also being stretched in new directions and need new methods of support from the librarians that support them. The approval of the new General Education curriculum in Spring 2016, a renewed focus on engaged scholarship and undergraduate research, and attention to students' lifelong learning needs all represent forces currently converging on those involved in teaching at Penn State. While the Libraries are a valued partner in each of these areas, it is clear that traditional methods of collaborating, such as offering one-shot instruction sessions, no longer meets the needs of the faculty who are creating learning experiences or of the students who are participating in learning experiences. Rather, our faculty colleagues need a variety of options related to curricular support: help with designing research assignments, customized lesson plans they can use to teach concepts related to research without a librarian in the classroom, and web-based information literacy learning objects they can use to offer additional support to their students.

Similarly, many of the classes supported by librarians include lower-level English and Communication classes taught almost exclusively by graduate teaching assistants (TAs). This particular group of instructors has a unique set of needs, as they straddle the worlds of teacher and learner. While we often think of them as our teaching collaborators, these TAs are actually learning how to teach through these experiences, and we, as teaching librarians, should be able to use our expertise to support the TAs' learning as well as their students' learning. We can do this through in-depth consultation, experimenting with creating customized lesson plans that the TAs will use to teach, and developing course guides specifically aimed toward TAs in their first year or two of teaching.

Perhaps most importantly, our students' needs are also driving the shift in the way we approach teaching and learning at Penn State University Libraries. In addition to working and consulting with the faculty who are facilitating student learning, we are thinking carefully about the types of support that students need when they are completing research and other work outside the walls of the classroom. Through our liaison librarians' experiences, our Ask a Librarian virtual reference service, and our in-person reference services, we know that students often need just-in-time help when completing an assignment. Course guides, research guides, and tutorials are perfect for this learning experience, but this space requires that these materials be accurate and up-to-date. Furthermore, we are becoming increasingly aware of the sophisticated information skills that our students need throughout and beyond their university experience.<sup>22</sup> If we look to the ACRL Framework for Information Literacy for Higher Education, it becomes clear that our students' information literacy learning needs can only be addressed through integrated, scaffolded information literacy programs. Building this sort of program requires that we collaborate heavily with faculty, but also that we are prepared to move quickly into new areas of instruction and experiment with new methods for supporting faculty and students.

Overall, our problem can be defined as the need to support a library and user community in a state of flux by moving from a culture of rigidity to one of flexibility. We spend a lot of time designing, developing, and producing instructional experiences and learning objects, like tutorials, LibGuides, and videos, that we tend to view as somewhat permanent. However, if we perceive our work with the gravitas of permanence and finality, it can impede decision making and work production timelines because every decision and every action has a high failure consequence. Alternatively, if we use the lens of rapid prototyping to view our work, we understand that whatever we produce is never final, but rather an evolutionary point. This evolutionary point is not perfect, but is a point from which to iterate, grow, and move toward a better point and better product for supporting our users' needs.

### **Rapid Prototyping Strategies**

Rapid prototyping can be applied to the creation of any learning object within a library, and it is also useful for the redesign of face-to-face learning experiences, entire information literacy programs, and entire organizational approaches. For example, any library colleague with instruction responsibilities has everything they need in order to begin using rapid

prototyping to improve instructional practices right now. We all have lesson plans and learning activities that we have either been considering using or that we have only used once or twice because they didn't work out quite like we envisioned. Redesigning these old plans and activities are the starting point. At the next teaching opportunity, these lesson plans or activities easily can be assessed and improved through feedback from learners. Important factors to measure are what worked and what didn't, or, what they feel like they learned and what they still have questions about. With this information, small changes can be introduced that move the lesson plan or activity toward the potential teaching excellence that already exists.

After reading this description, it should be easy to identify places where library colleagues are already using a rapid prototyping approach when creating learning objects, lesson plans, or any other type of output within a library setting. If this is the case, consider how to spread these practices across entire programs or your entire organization. Rapid prototyping, for example, can be also be applied to participating in strategic planning efforts, writing programmatic outcomes, defining philosophies, and creating new types of community collaborations. Rather than waiting until strategic planning time rolls around again, for example, using a rapid prototyping lens can enable library colleagues to test out new strategies, ideas, and services in order to get a sense of whether or not an entire program or an entire organization should move in those directions.

Indeed, one of the most important keys to successful use of rapid prototyping, as mentioned earlier, is to introduce small changes. This may seem slow or counter-intuitive, but most organizations and people do not change quickly and have anxiety and uncertainties. Starting with individual practice will help each library colleague understand the process through experience. This may result in some early stumbles, but each trial is a learning experience. When librarians have started to achieve some successes, however small, encourage them to start talking about the experience as often as possible with colleagues and supervisors. Starting discussions between other librarians who have shown a habit of experimenting with their work, whether it's teaching and learning or something else, can create a community of practice around making gradual, iterative change within the library.

When creating something new or redesigning it, is always important to work backwards from the goals or outcomes of the project (see Figure 1). Perhaps these already exist for the lesson plan, learning object, or project at hand, but they should be revisited regularly as part of the iterative change process. If no goals exist, it is vital to identify these early since they will

drive the design and the assessment in the process. Keep things simple and short for clarity and to accelerate moving to the next step. For instructional projects, for example, it is often a good idea to start with a low-tech outline, mockup, or storyboard. This does not take very much time and can be used as a reference during the prototyping process. Visuals can take the form a flowchart for a tutorial, rough sketch for a website or infographic, or concept art for a video. Notes can be kept on a physical worksheet like the one included as an Appendix to this article.

Rapid prototyping design can work for individuals operating on their own, but it really benefits from multiple ideas and most importantly diverse perspectives. While an instructor or subject specialist librarian may focus on the concepts to be taught, an artist or designer will push for greater clarity and usability, and someone skilled in the website or instructional technology will add knowledge of the boundaries and features of various systems to support the design. When designing in a group try to manage the discussion to produce multiple designs rather than trying to find one design that fits everyone's ideas or find consensus. Try to walk the fine line between uncontrolled brainstorming and design thinking.

Rapid prototyping relies on the ability to create content, or prototypes, quickly, so it is a good idea to become familiar with tools and techniques that require less time for creation of documents, presentations, websites and multimedia. For example, while some software can have a steep learning curve or require a heavy time investment to record. Using an easier or simpler tool to create a first draft of a project will allow the creation of a working prototype for testing earlier. In the instructional setting, it may be that the first design of a learning object is a linear video with no features embedded in a website with a Google Form quiz, but a later version might be created to improve the video with superior editing and even embedded questions. Fortunately, it is much easier with mobile phones, tablets, and webcams to create multimedia almost anywhere. Some campuses may also have facilities like a One Button Studio for easily recording high quality video at the touch of a button.<sup>23</sup>

It is sometimes hard to figure out where to begin with improving teaching materials, instructional practices, and other professional habits. This may be driven by library strategic priorities; it is also helpful to identify key community collaborators who are open to experimentation and will work with library colleagues to implement new programs and approaches on a regular basis.<sup>24</sup> Remember that an important aspect of rapid prototyping is frequent, iterative improvement that can happen more successfully in a sustained partnership with an instructor. Identifying student groups or stakeholders on campus can and should also

inform the focus. Engaging them early in the design process, which is still important to meeting their needs, with RP also allows for demonstrating prototypes to them instead of unstructured brainstorming.

As mentioned earlier, assessment can take multiple forms depending on the materials. It could be as simple as verbal or anecdotal feedback, but should be documented in all cases in order to inform the next design. For example, for a web-based tutorial with multiple pages, web analytics can be used to see in sequence when most users leave the website. This can also be done by comparing the number of views between parts of a lesson that use different videos. When looking at solely quantitative data like this, be careful not to mistake low use due to low quality with low use due to lack of interest since they will inform redesign in different ways.

## **Discussion & Conclusion**

Ultimately, rapid prototyping encourages libraries to develop solutions quickly and test them through actual implementation. It provides an iterative structure to assess, redesign, and improve our projects and services while in the active hands of our users. Library leaders and staff need to be open to low-stakes failure on the path to providing the best-so-far design. With constantly shifting goals, decreasing resources, and staff turnover, libraries are already in an environment where planning in shorter cycles is necessary. Rapid prototyping and a design thinking approach can bring an agile order to this organizational chaos.

For Penn State University Libraries, rapid prototyping represents a radical shift in how we think about our work. In a sense, rapid prototyping is all about reflecting on lessons learned from an earlier iteration of a project or service, and our first experiences with using rapid prototyping to move our teaching and learning program forward definitely generated some areas for reflection. We learned that clear communication and expectation management are important for helping colleagues understand this new approach to our work, that starting small can have a big impact, and that we need to start applying the rapid prototyping approach throughout our work if we want to inspire a real culture shift.

Because this idea of iteration over permanence is a departure from our previous way of approaching products and services, communicating with and managing the expectations of our library and campus colleagues represents a major lesson learned. If colleagues are expecting

polished, finished products, then their response will not be supportive when they see a product in an early version.

Librarians, like many professionals, tend to be perfectionists and want things to work perfectly before we take them public. This, however, is the antithesis of the rapid prototyping approach. In the rapid prototyping approach, we take things that we know are not perfect and let our stakeholders use them so that we can gather real evidence in order to improve these learning objects, products, and services. If individuals expect perfection, just like our colleagues did with the landing page for the subject and research guides, course guides, and tutorials, the process will become confused and feel bad to everyone involved. Although we had announced the process we were using to make the changes via a Libraries-wide forum, we realized that we needed to extend our communication strategies. Going forward, we are meeting with librarians from various campuses and various subject libraries in order to explain our process, gather feedback from them, and begin the next iteration of the landing page. Now that our colleagues understand what we are doing, and why, they are happy to provide constructive, substantive feedback that we can use to improve our design.

Big change, such as changing an entire institutions' culture, doesn't happen quickly, but rather, incrementally. Although rapid prototyping emphasizes small, iterative improvements over time, it is still surprising how much impact small changes can make. As a few librarians begin to model using a rapid prototype design approach with small projects, such as the patents tutorial and the landing page for research and course guides, other librarians are noticing. Additionally, the assessment data that we gather after creating each iteration, such as usability data from students navigating the research guides or feedback from instructional designers about the patents tutorial, serves to underscore the potential of the rapid prototyping process. By starting small with projects over which we had control, we were able to spark a larger conversation about our needs, our users' needs, and the ways that we can move quickly to meet these needs.

As this larger conversation begins to happen, we also learned the importance of thinking about how to integrate iterative improvement beyond the web-based learning objects with which we were experimenting. Again, in order to inspire true organizational change in the way we approach our work, we realized that we also need to model rapid prototyping in other realms, such as in face-to-face instruction and throughout entire instruction programs. We learned that every piece of our work needs to be approached with two truths: that nothing is ever finished or

perfect, and that we do not have to have a complete plan in place before we begin to improve something. These two truths, however, require trust among colleagues and a constant emphasis on assessment of user needs and experiences with our products and services.

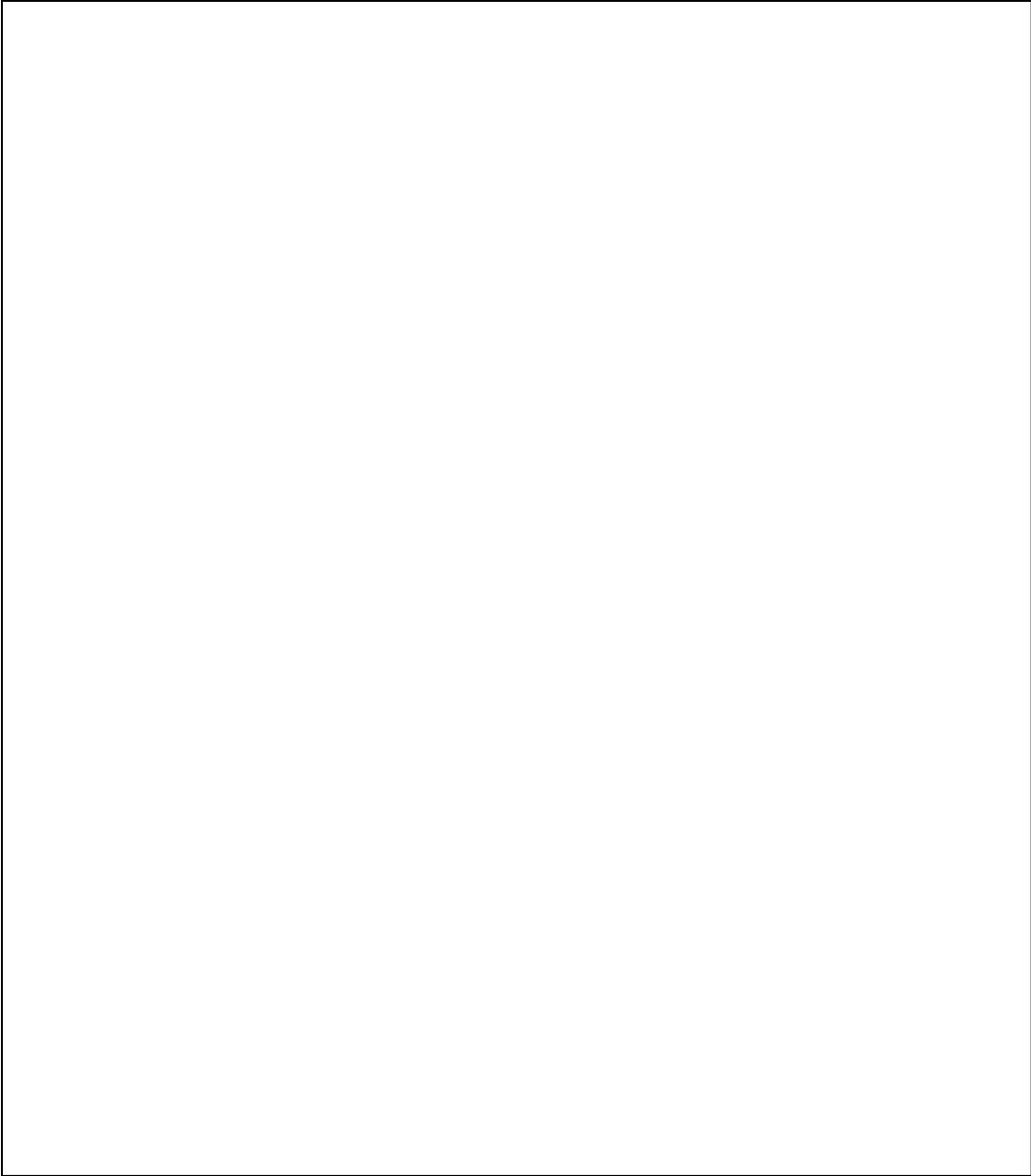
Rapid prototyping has been adopted as an instructional design approach, but in a way, it is also a philosophy. As a philosophy, it liberates us from the captivity of perfection and gives us permission to fail, because failure on this level not only has fewer consequences, but also serves a purpose. Reflecting on ways to apply rapid prototyping to instructional programs and objects, also consider what it might look like in other areas of the library. Could a rapid prototyping approach, for example, change the way new learning spaces are designed? Or, could it change the way collection development and management operate? Rapid prototyping truly represents a lens to use in any aspect of work and the organization in order to inspire renewal and innovation.

## Rapid Prototyping Worksheet

**Research** (Define the learning outcomes or goals for the service you are building)

**Design** (Identify strategies for meeting each of the learning outcomes or goals)

**Prototype** (Think visually about your prototype. Draw your initial design)



**Implementation** (Write out a plan for implementing your design. Consider the timeline, resources you'll need, and other factors that may impact the implementation of your design)

**Evaluation** (Gather feedback, assessment data, and other information after you have piloted your design)

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