

# User Stories at the Montana State University Library

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## Summary of Key Takeaways

- *User Stories* is a service design tool that 1) reveals insights for service improvement, and 2) helps build empathy and community connection by capturing the experience of delivering and using a service.
- This project was completed over the course of the Fall 2019 and Spring 2020 semesters, and serves to demonstrate the application of a *user story* in a library setting. We offer a model for others to follow in creating new *user stories*.
- The *user story* created through this project revealed insights related to the Perch handoff.
- The research data produced through the interviews for this project can be reused at a later date and reinterpreted through a different lens to reveal further service insights.

## Project Overview

This project explored the creation and application of a new tool for user research and service design called *user stories*. A user story is a brief outline of a problem situation and a desired outcome that articulates how a user action can successfully be completed.<sup>1</sup> The template for the user story is as follows:

When <*problem situation*>, I want <*desired goal*>, so that <*expected benefit*>.

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<sup>1</sup> *User Stories with Examples and Template*, Atlassian.  
<https://web.archive.org/web/20191213142134/https://www.atlassian.com/agile/project-management/user-stories>.

The goal of this project is to model this tool so that it can be adapted and utilized in the library to help inform the work around the development of library services. We have identified four main motivations for creating user stories:

- To facilitate service design through research-based storytelling
- To highlight problem areas of a service
- To suggest solutions for improving services and the patron experience of using a service
- To build empathy in support of understanding the staff experience of delivering services

Our exploratory project focused on student and staff workflows at the library Service Desk. We approached the creation of a user story through a literature review and interviews with staff from the Learning Research and Services (LRS) department. From this research, we produced a series of user stories that reveals different aspects of the service delivery experience of the Service Desk at the MSU Library. Our results are expressed in Table 1 in the following section. Research data is presented in full in the appendix.

## The User Stories Tool

The user story tool presented below represents the perspectives of both student employees and staff supervisors. We have created two user stories from each perspective: one to capture the emotional aspect of working at the Service Desk and another to capture the practical aspect.

**Table 1. User Stories for MSU Library Service Desk**

	Student Employees	Staff Supervisors
Emotional Aspect	<i>When I am overwhelmed, I want to be supported by our process, so that I can feel that I am providing excellent service.</i>	<i>When I need to make a decision at the Perch, I want to have flexibility, so that I feel empowered to help my students and make a difference that improves the experience of employees and users.</i>
Operational Aspect	<i>When the Perch rotates, I want to maintain a consistent connection with the supervisor, so that I can provide excellent service.</i>	<i>When I need to make a decision at the Perch, I want to have my department's support in making that decision, so that I know that my decision supports consistently excellent service delivery.</i>

## How to use *User Stories*

### How to use the Service Desk *User Story*

The *user story* presented in the section above represents key themes derived from observations and interviews with Service Desk staff.

In summary, we discerned two related aspects for the Service Desk—emotional and operational. Emotionally, staff are motivated to deliver excellent service, and to feel that their contributions are understood and supported by other department members. Operationally, staff focused on the Perch, expressing a desire for consistency among the various student employees and staff supervisors when handoffs at the Perch occur.

To apply this *user story*, members of the Learning and Research Services department can share and discuss the story, using it as a launching point for developing new or refined policies and procedures for ensuring clear and consistent Perch handoffs.

### How to create your own *User Story*

The *user story* is a flexible and adaptable tool. To create your own *user story*, we offer a six-point work plan:

1. **Determine the service that you wish to research.** In our case, we chose the library Service Desk. But the *user story* can be applied towards a range of services, such as printing, checking out a laptop, or accessing a digital collection.
2. **Follow the user stories template:**
  - a. When <*problem situation*>, I want <*desired goal*>, so that <*expected benefit*>.
3. **Conduct observations and interviews** with key service providers and/or users.
4. **Analyze the observational notes and interview transcripts** for major themes, paying attention to how participants describe any problems, goals, and benefits of the service.
5. **Complete the template.** The results of your analysis serve to complete the three components of the *user stories* template.
6. **Share and discuss your *user story*.** Once completed, share your user story with key stakeholders, including users, service providers, and supervisors and administrators. Ideally, the *user story* will add a new dimension of understanding related to the operation of a service, and provide new empathy and insights for designing and delivering the service.

We discuss our own creative process in more detail below.

## Creative Process (“How we did it”)

In order to explore this tool in our unique library, we formulated a six hour process:

### Hour 1: Brief literature review

In examining existing literature on this topic, key concepts emerged as useful in library application:

- Start with high level situations (such as communication) and use observation (Hour 3) to discover smaller “jobs” that can help resolve the higher level situation
- Interviews uncover goals, current practices, and can lead to problem patterns that can be addressed in the user stories
- The user story should emphasize situation, motivation, and expected outcome

### Hour 2: Story Pattern Template

We synthesized the literature into the following formulation of a user story: *<problem situation>*, I want *<desired goal>*, so that *<expected benefit>*.

### Hour 3: User Research/Observations

- On Wednesday, September 25, we observed the workflows at the Service Desk from 10 am-11 am. From these observations, we gathered the following workflow patterns:
  - Users approaching the Service Desk looking for assistance with a variety of tasks
  - Desk staffed by a mix of student employees and staff members
  - Users utilizing the stapler table, and asking for assistance if there is an unexpected problem with resources
  - Users approaching the printers and needing assistance to ask questions about printing or pay for printing
  - Library faculty approaching the Perch to talk to the supervisor
- These patterns were used to formulate a series of six questions designed to explore Service Desk situations/problems, current actions, and desired outcomes. The questions are listed in Hour 4 of this section.

## Hour 4: Interviews

Four staff supervisors and three student employees were interviewed. These anonymous interviews consisted of five questions.

1. How do the staff members at the Service Desk interact with each other?
2. What common concerns from patrons do you observe at the Service Desk?
3. How are the common tasks/requests for the Service Desk handled?
4. What are the common workflow barriers or difficulties in responding to Service Desk tasks?
5. How do staff interact with students/Service Desk between scheduled desk shifts?
6. What is the role and rotation of Perch staff? What are their tasks?

## Hour 5: Prototype tool

We discussed the interviews, looking for patterns in situations, practices, and desired outcomes in order to create a User Story for student and staff employees at the Service Desk. See Table 1 for the created Tool (in *The User Stories Tool* section).

## Hour 6: Implementation Plan

After scheduled meetings with key stakeholders such as LRS Department Head Kris Johnson, ideally, this tool would be shared with the LRS department to finalize this aspect of the tool exploration. Library-wide sharing of this process will follow.

## **Reviewed Literature**

Forging high-quality User Stories: Towards a discipline for Agile Requirements. 2004. Fabiano Dalpiaz, Jan Martijn E. M. van der Werf, Sjaak Brinkkemper. Proceedings. 15th IEEE International Workshop on Rapid System Prototyping.

Designing features using Job Stories. 2013. Alan Klement. Inside Intercom.

Replacing The User Story With The Job Story. 2013. Alan Klement. Jobs to be Done.

Improving agile requirements: the Quality User Story framework and tool. 2016. Fabiano Dalpiaz, Jan Martijn E. M. van der Werf, Sjaak Brinkkemper. Requirements Engineering.

The Use and Effectiveness of User Stories in Practice. 2016. Garm Lucassen, Fabiano Dalpiaz, Jan Martijn E. M. van der Werf, Sjaak Brinkkemper. International Working Conference on Requirements Engineering: Foundation for Software Quality.

Design Thinking Methods: User Stories. 2016. Matthew Weprin. Uxdict.io.

Improving User Story Practice with the Grimm Method: A Multiple Case Study in the Software Industry. 2017. Fabiano Dalpiaz, Jan Martijn E. M. van der Werf, Sjaak Brinkkemper. International Working Conference on Requirements Engineering: Foundation for Software Quality.

When Coffee and Kale Compete: Become great at making products people will buy. 2018. Alan Klement.

Jobs-to-be-Done Oriented Requirements Engineering: A Method for Defining Job Stories. 2018. Garm Lucassen, Maxim van de Keuken, Fabiano Dalpiaz, Sjaak Brinkkemper, Gijs Willem Sloof, Johan Schlingmann. International Working Conference on Requirements Engineering: Foundation for Software Quality.

Who Will Use This and Why? User Stories and Use Cases. 2019. Kevin M Ford. Information Technology and Libraries.

Scrap the user persona. Replace it with the storyboard. 2019. Mark Wheeler. Invision.

## Appendix: Interview Notes

The following Interviews were conducted Fall 2019. Interview responses have been anonymized.

### **Staff Supervisor 1**

- How are the common tasks/requests for the Service Desk handled?
  - If a user needs a cord, what happens?
  - Customer service is handled by students at the desk. They are the first to interact with patrons, from there it goes to the Perch if they need help.
- How do staff interact with students/Service Desk between scheduled desk shifts?
  - Depends on the staff. Some prefer not to be asked questions when they're not on desk. Some like to interact with students.

- What are the common workflow barriers or difficulties in responding to Service Desk tasks?
  - Different styles. **9 different staff supervisors and therefore 9 different styles.** Staff and students need to manage that. “You ask mom for one thing, and dad for something else.” Confusing for students that can mess up the flow in helping patrons.
- What common concerns from patrons do you observe at the Service Desk?
  - Needing help with the processes of the library—printing, scanning, checking out books. They want someone to show them. But the students aren’t always able to show them (they might be feeling tired or lazy). If there’s a packed passing period and someone wants to know how to print, they might rush that.
- How do the staff members at the Service Desk interact with each other?
  - Tag teaming the duties depending on who is on the desk. We update each other. White board keeps everyone up to date on task completion—books drop, commons, etc. Email also is a good tool.
- What is the role and rotation of Perch staff? What are their tasks?
  - Supervise students on the Service Desk and act as a resource and fix things as they break. Rotation depends on building hours and the individual schedules of each staff. It varies equitably. 1 hour shifts at 1 or 2 a day. Sometimes back to back.
- What metaphor would you use to describe the Service Desk model?
  - A lot of channels to tune into with rabbit ears, but the reception is not always great.

### **Staff Supervisor 2**

- How do the staff members at the Service Desk interact with each other?
  - In a friendly way. Asking about the weekend or how people are feeling. Just making sure that people are engaged.
- What common concerns from patrons do you observe at the Service Desk?
  - We are trying to be as friendly as possible, but some patrons are being overly friendly, which is kind of disturbing. They want to talk to some student employees for 30 minutes. Mostly older community members who take too much time. They think they can do whatever and get respect from students because of age hierarchies.
- How are the common tasks/requests for the Service Desk handled?
  - We have protocols. Checking in and books out. Printers. Students don’t often check if we have the books, so we check for them at the desk. Tech checkouts.
- What are the common workflow barriers or difficulties in responding to Service Desk tasks?

- Practically, we are doing customer service. So any common problems in customer service we also have. Printers being down and frustrated patrons. We have emotions from that. Lack of resources is a problem, like with psychology books. Communication can be a problem. For example, recently someone didn't know who had the next Perch shift that caused confusion (could have been an Outlook issue). There have been issues with communication about building changes (i.e. key access to the front doors causing issues for some staff members, especially weekend supervisors)
- How do staff interact with students/Service Desk between scheduled desk shifts?
  - **Every single person has a different approach to engaging with the student employees.** Some supervisors are more professional and only talk about the job. All the students know they are loved and cared for, but everyone has a different way to show it. Positive and considerate.
- What is the role and rotation of Perch staff? What are their tasks?
  - Main task is to supervise the students, but students often don't really need it. Making sure that everything is done professionally. Our role is to make sure that the students are safe, and that they know they're safe. Make sure that they're doing what they need to do, but not forced obligations.
- What metaphor would you use to describe the Service Desk model?
  - Family. Soft.

### **Student Employee 1**

- How do the staff members at the Service Desk interact with each other?
  - Doesn't interact with all the supervisors, only about four. Interaction good—especially with late night supervisors. They communicate with each other and with the student employee as needed. **Always available (even if not on Perch).**
- What common concerns from patrons do you observe at the Service Desk?
  - Stress from tech errors. Scanners and printers. But then they aren't able to communicate their problem—frustrations grow. **Need help with printing, which is easier to walk through than describe. But patrons don't always want the walk-through.** Could be seen as a burden to the staff?
- How are the common tasks/requests for the Service Desk handled?
  - Likes to go to the source of the problem and likes to walk through on-site as opposed to talking through. During the very late night shifts, common issues include: Word, browsers, web sites, all kinds of software. Will go their computer to help them. Not trained specifically in this—but can figure it out. Same issues come up again so can learn from common issues.



- What are the common workflow barriers or difficulties in responding to Service Desk tasks?
  - **During busy times, users approach the rounded/open desk at the same time.** Even if only three users, feels overwhelming because they're all there at the same time.
- How do staff interact with students/Service Desk between scheduled desk shifts?
  - Not much experience here due to only working with some supervisors. Sometimes has noticed that if supervisors are bored or unbusy, they'll come up and talk with students/staff. This is not disruptive, but actually allows there to be more responsiveness because more staff can respond to users, if needed.
- What is the role and rotation of Perch staff? What are their tasks?
  - Based on my limited knowledge, it's based on some schedule so that rotation can help people stay fresh. They're the first-stop for questions.
- What metaphor would you use to describe the Service Desk model?
  - Ducks in a pond. We're all our own little duck doing our own think, but we also still work together. And people can see that we're all ducks in the pond.

### **Staff Supervisor 3**

- How do the staff members at the Service Desk interact with each other?
  - Rarely. But if so, loudly and ad hoc. Usually just one person at the Service Desk and everyone else is occupied elsewhere. Sometimes email. But the desk is distracting and so emailing doesn't typically happen. At the top of the hour when shifts change, there's a handoff situation that helps transitions. **Handoff is a verbal exchange. But sometimes that doesn't happen.** The two supervisors don't verbally interact, so this leads to lack of information. We also have a whiteboard.
- What common concerns from patrons do you observe at the Service Desk?
  - Printing is hard. Staplers disappear or break. We are not a free office supply store.
- How are the common tasks/requests for the Service Desk handled?
  - Submit a help ticket to printing people. Often this is after a student accompanies a user to check it out in person. For staplers, there's a blog. We try to achieve optimum efficiency, but the staplers sometimes just walk. I'm not sure if it's our job to have 700 staplers. For the office supplies, we politely reply, "we're sorry, we don't have a folder for you."
- What are the common workflow barriers or difficulties in responding to Service Desk tasks?

- **Access to immediate and definitive information.** So many times we wonder, “does a student do that? Does a staff member do that? Do we have a policy for this?” **We do have documentation, but it’s hard to find.** I get questions that I don’t know how to find an answer for.
- How do staff interact with students/Service Desk between scheduled desk shifts?
  - Depends a lot on personal preferences and professional relationship between staff and students. Sometimes students will ignore that a certain staff is on desk, and will instead go back and interrupt another staff members. **Supervisors and staff respond to this in different ways.** Some are more likely than others to jump up and go assist at the desk. This can be awesome but also problematic because than you have two supervisors at the desk. Other students only interact through the proper channels. We have an SMT workflow.
- What is the role and rotation of Perch staff? What are their tasks?
  - Staff members in LRS are at the Perch. There is one person at the Perch every hour that the library is open. Sometimes the students get different messages from different Perch supervisors. For that hour, the Perch person is the main point person for student because they have the best read on the flow. **They are the decision-maker for that hour, but different supervisors make decisions in different ways.**
- What metaphor would you use to describe the Service Desk model?
  - A Taco Bell, with a manager (Kris/Melanie), a shift supervisor (Perch person), and employees (students). But we can’t have regular supervisor meetings because schedule conflicts. **LRS needs to work more on solidifying the communication and expectation between supervisors.** We need to solidify that so that we can be unified with students. **A lot of our processes are just in the air, but we’re so diverse so it’s hard to come together.**

#### **Staff Supervisor 4**

- How do the staff members at the Service Desk interact with each other?
  - We’re a little more staffed at night. Perch staff supports the students by being aware of anything going on there. Sometimes I sit at the desk if there’s a seat there. Works better than when we used to sit at our desks, because the students know who to go to.
- What common concerns from patrons do you observe at the Service Desk?
  - Printing. Tech check-outs—non-stop at night. There used to be a reference librarian, and now we all try to wing it (sometimes good and sometimes bad)
- How are the common tasks/requests for the Service Desk handled?
  - Patrons usually come straight to students, and the students like to be responsive and help. If it’s a reference question, that can sometimes lead patrons into a

goose chase. But the students are generally good at elevating to the Perch person. Checking in and out items is straightforward. Students really know the printing.

- What are the common workflow barriers or difficulties in responding to Service Desk tasks?
  - **Sometimes people forget about the tier system.** Students bring items to people in the wrong order or the wrong way and leap-frog over the proper channels.
- How do staff interact with students/Service Desk between scheduled desk shifts?
  - Depends on their age, as younger staff may interact with the students more, but it depends on the individual. Everybody gets along.
- What is the role and rotation of Perch staff? What are their tasks?
  - At night, there's one student and one Perch person. It can be slow.
- What metaphor would you use to describe the Service Desk model?
  - Like a ship, and somebody takes charge, and then somebody relieves that person. **Somebody has to be in charge.** Ship's helm. With backup.

### **Student employee 2**

- How do the staff members at the Service Desk interact with each other?
  - Interact well with each other. A few times they've gotten tense with each other. Overall pretty professional. Some miscommunications—like when one supervisor doesn't tell another supervisor that they're stepping away. Once, there was some printer frustration when a supervisor was hungry.
- What common concerns from patrons do you observe at the Service Desk?
  - Cash printing. Waiving fines (usually a very big fine. \$300). How long a book is checked out for. Sometimes patrons get mad about fines.
- How are the common tasks/requests for the Service Desk handled?
  - Usually by a supervisor in a professional manner. "Deckhand" sits at the desk occasionally to handle floater tasks.
- What are the common workflow barriers or difficulties in responding to Service Desk tasks?
  - Unclear communication between the supervisor and the student. You might not be familiar with your co-worker working style. **You might not know your supervisor's style, and that might cause conflict.** For example, I once had a new supervisor during closing, and I was out of practice for closing and we didn't communicate very well. Sometimes we're short-staffed—phone is ringing, printer issues, case printing request, and the supervisor is nowhere to be found!
- How do staff interact with students/Service Desk between scheduled desk shifts?

- They're usually at their desks working and there for questions. All the students talk to the supervisors; some are closer than others. Depends on who you work with the most.
- What is the role and rotation of Perch staff? What are their tasks?
  - One supervisor is on every hour or two hours. They put us to work. They're there for questions and if something happens. They're usually checking their email. Sometimes librarians are on chat, and they might be doing that.
- What metaphor would you use to describe the Service Desk model?
  - Like a ship. Anchor, captain, overboard, deckhand, floater.
  - Overboard = can go overboard with talking or when the employee gets stressed out.
- Others
  - **I wish I knew the supervisors' personality types (i.e. tests, Myers Briggs, etc). Would help me so that I can know their communication style.** Usually I can figure it out. But getting to know your co-workers more can help.

### **Student employee 3**

- How do the staff members at the Service Desk interact with each other?
  - Very clear communication between staff members, based on what I hear at the Perch. Staff members handoff and exchange updates. **Sometimes things can be confused or lost in the sauce when it's very busy.** Important things can be forgotten or missed.
  - Over time, things have changed. Previously there was no Perch. When the supervisor was at their own desks, there wasn't the "changing of the guard". Smoother transitions with the Perch.
- What common concerns from patrons do you observe at the Service Desk?
  - Power. Everything surrounding the move. Where did all the books go? When we get power? Where did the reference desk go? (question from community members). **Research/Access to articles online.** Users will go through so many steps, but get stuck and need help.
- How are the common tasks/requests for the Service Desk handled?
  - For me at least, technical issue with journal search I can figure out. Students/staff will do as much as they can, then shift to a librarian who's on call or accessible via email. One student was getting angry/aggressive with the power situation on the 2nd floor. **A script of what to say could have helped for the common issues we encounter.** Students could have answers prepped.

Research questions handled particularly well, but **newer student employees could use training here.**

- What are the common workflow barriers or difficulties in responding to Service Desk tasks?
  - **Communication between students, staff, and patrons can be a barrier to getting the patron what they need.** Example: “I need a charger.” “Okay, what kind of charger?” Knowing what follow-up questions to ask to troubleshoot the problem. Knowing what new tech we have.
- How do staff interact with students/Service Desk between scheduled desk shifts?
  - Really well. Supervisors do a good job of not coming up during a busy time. A good amount of small talk—not extensive but not complete silence. It’s a nice work environment.
- What is the role and rotation of Perch staff? What are their tasks?
  - Be a third student, so that when it gets really busy they can jump in. To answer questions that come up. Be the default back-up to help when students don’t know what to do or to jump in to give us a red slip. Red slip = in situations where students feel trapped at the desk because of an unwanted patron or task, the students can say “I need a red slip” or “Do you need a red slip”? And they can be swapped out by another students or supervisor.
- What metaphor would you use to describe the Service Desk model?
  - In cells, the whole way that the cell interacts with the world is through signal receptors. One part outside the cell, one part inside. The patron is outside of the cell. The Library is the cell. The patron touches the cell, and engages a signal to give it a task. The signal cascade would move through the cell, and the cell would respond to the exterior stimulation. Service desk is the surface-layer link between the exterior patron world and the interior world of the library.