Hacking for Good - Workshop Summary

Alex Humphreys
Ithaka, alex.humphreys@ithaka.org

Curtis Michelson
Minds Alert, LLC, curtis@minds-alert.com

Heather Ruland Staines
MIT Knowledge Futures Group, heather.staines@gmail.com

Geoffrey P. Timms
College of Charleston, timmsgp@cofc.edu

Caroline Muglia
University of Southern California, muglia@usc.edu

Author ORCID Identifier: http://orcid.org/0000-0003-0970-2618

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Alex Humphreys, JSTOR

Curtis Michelson, Minds Alert

Heather Ruland Staines, Knowledge Futures Group, heather@knowledgefutures.org

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Introduction and Background

A hearty band of enthusiasts determined to "hack" challenges related to their libraries and institutions gathered in Charleston on Tuesday, November 5 for a morning of interactive deep dives into library strategy, workflow, and processes. There was no need for coding knowledge, just a willingness to collaborate and brainstorm with fellow attendees. This gathering resulted from a few sparks generated at the 2018 Charleston Conference.

In recent years, the Fast Pitch Competition has enabled tool creators and solution-oriented makers to pitch their ideas before a panel of judges *Shark Tank*–style with the chance of winning prize money. In addition, the intrepid band of poster presenters frequently touch on projects that in essence "hack" library workflow or culture. Hearing attendees discuss the innovating projects from both these initiatives, a small team envisioned a new type of preconference workshop promoting just such hacking. In March, a webinar pitched the idea to the Charleston universe with a positive response. Subsequent months saw a larger team come together to support attendees for the half day session.

"At my previous company, Hypothesis, the last day of our annual conference was reserved for a Hack Day, but that included nontechnical folks who had projects they wanted to work on or who wanted to make themselves available for feedback to the more technical projects. We began to call that day a 'Do-a-thon'," notes Heather Staines, head of partnerships for MIT Knowledge Futures Group. "I had similar hopes for the hacking preconference, and the eventual activities of the day surpassed my wildest expectations. I'm not a very technical person myself, so I wanted folks like me to feel included."

Approach and Methods

The approach taken in the workshop was informed by the work of two of the facilitators, Curtis Michelson and Alex Humphreys, who innovate with clients and partners in scholarly communications and in the wider corporate arena. It turns out, innovating in any context—nonprofit, for profit, governmental, and so on—relies on some pretty fundamental tools, and as mentioned already, mindsets. Humphreys's work with JSTOR Labs and Michelson's work with publishers, scholarly societies, and corporates leveraged techniques that help to pull and shape new ideas from even recalcitrant group participants. Many people come into such workshops with self-limiting notions: "I'm not creative" or "I'm not a designer." And they leave realizing that "hacking" is simply about helping improve one's organization in ways small or large, and that it is fundamentally a team sport. And, when well facilitated and structured, the work is engaging and fun. And lastly, that teams who practice these innovation or hacking techniques benefit from diversity—of experience, of gender, race, position, or perspective.

To that end, the workshop facilitators worked with the limitations of time (just three hours for a preconference session) and space (a room with sacred walls that could not tolerate besmirching sticky notes being placed on them) to hack together a learning experience for librarians, which offered a bit of the theory and philosophy behind some of the techniques, but mostly, hands-on practice trying out the methods in situ on real library problems.

Indeed, the attendees had been asked in advance to bring their "problems" (also known in innovation parlance as "opportunities") to the session. Some in fact did, so the first task of the morning was narrowing down the list to just two opportunity areas. Just

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two because there would be two working teams of 5–7 members each. This first task also afforded a chance to teach the first skill—how to make decisions as a group using dot-voting, also known as "dotmocracy." Simply put, each person received the same number of colored sticky dots and then went to the list of assembled problem/opportunities and "cast their votes." They could put all dots on one problem they were passionate about, or spread their votes across three areas. With that, we had two areas of focus for the morning.

The next order of business was to form the teams and let them pick names. Landing a team name is not the most critical decision, but it's curious how often groups can accelerate the formation of team esprit de corps and cooperation with something as simple as an appealing name and a few ground rules. In this case, playing off the Alice in Wonderland theme of the conference, team 1 became "Team Walrus" and team 2 became "Team Carpenter" (https://www.poetryfoundation.org/poems/43914/the-walrus-and-the-carpenter-56d222cbc80a9). Walrus identified a problem space that is common to many libraries/ians; namely, the political space and what happens after a "re-org" in your unit when you want to pull together a group to work on improving a key part of the back-end business process of the library—the subscription renewal and invoicing systems. Team Carpenter, on the other hand, widened their focus into a much larger strategic concern; essentially, how can or how will libraries adapt and grow in the age of shrinking budgets?

The final bit of setup was ensuring that the space created for the morning was safe, inclusive, welcoming, and yes, fun. Innovation workshops that don't mind this side of the work risk failure because they carelessly ignore the most important dimension of this work, the human dimension. People who show up to an innovation session (mostly librarians in this case, though a couple publishers came too) are putting themselves and sometimes their half-baked ideas out in front of the group for consideration and, yes, for rejection. Minding the natural fears around such work, it's important to level set for the group participants that bad ideas are actually good, in fact, amazing.

The other mindset point to make clear is that the process is messy. Those who like the pegs to line up neatly in a row can be frustrated by the iterative and circular process of searching for and making sense of early stage vague concepts, or the many questions that stem from off-the-wall or unorthodox solutions that arise in hacking workshops. We often say that we welcome ambiguity and even a touch of chaos, to encourage participants to stay open to holding that epistemologically fraught space until more refined ideas emerge. And it's understandable while most feel uncomfortable in this territory. It's not what most professionals get paid for each week, for being ambiguous about budgets or subscription numbers. So, giving permission to just explore and really mess it up was paramount. To that end, we offered the groups several methods called "liberating structures" for making the most of the messy human qualities of it all.

With the teams formed, the hacker mindset established, and the problems identified, it was time to dig in.

The process the workshop followed stepped participants through four phases of innovation projects: (1) finding the problem, (2) exploring the problem, (3) ideation, and (4) validation. Within each, a set of activities were described that can be conducted during that phase. The following section will step through this process and those activities, before we turn to how these were during the workshop itself.

Finding the Problem, or Finding Something Juicy to Work On

To start an innovation project—or a "hack"—we don't need to know in advance what specifically we will do. We don't need an idea or a solution, we just need the will to think creatively, to explore. Just as an explorer does not, by definition, know what they will find on their journey, we can't know precisely what kind of a solution or approach will be best suited for our needs either.

Like the explorer, what we do need, however, is a direction. This can take many forms, but the direction we choose answers one or more of the following questions: What opportunities or problem area do we want to work on? What impact do we want to have? Who would we most like to help with our work?

The following activities can help us to find something juicy to work on.

Activity: Organization Map

Time: 10–20 minutes

Materials: Sticky notes, markers, and a wall

Objective: Identify organizational context and trends, quickly capture the 5 Ws (Who, What, When, Where, Why)

Steps:

1. Take 2 minutes to individually and quietly write down items in the following categories regarding the organization we are aiming to help:

   Context: What are the current trends, threats, and opportunities?

   Who: Who are we creating value for?

   Why: What are our objectives or target outcomes? How will we measure those?

2. Take 5 minutes to pair up and discuss individual items.
3. Take 5 minutes to discuss as a full group.

Activity: Speedboat, aka Anchors and Accelerators

Time: 10–30 minutes

Materials: Sticky notes, markers, and a wall

Objective: Explore what is helping the team and what is holding it back

Steps:

1. Draw a horizontal line on the wall, or, if we're feeling fancy, the waves of an ocean and a boat on it (this boat is your team). Also write the main goal, or destination for the boat.
2. Working silently, team members have 5 minutes to write *accelerators* (one per sticky note) or what either helps or could help the team reach their destination faster.
3. Place these stickies above the water-line on the wall, placing similar stickies near each other.
4. Repeat the process, but with *anchors*, or those things that are holding or could hold the team back.

After conducting either or both activities, we should have a clearer picture of the organization and world we are operating within. If we are having trouble deciding where within this picture we want to focus, we can consider the dot-voting described above.

Framing the Problem, or Exploration

Before we can figure out what hack to implement, solution to build, or intervention to enact, it is helpful to fully explore the territory or focus area we've defined in the first step—this will help us to better understand the context within which we'll be working. Depending on the time and resources we have, this can be done quickly in a single meeting or workshop, or for a deep dive it can take weeks and even months.

The following activities can help us to explore a problem.

Activity: Problem Interviews

Time: 20–45 minutes

Materials: Something to take notes with

Objective: Understand the impact of the problem we're trying to solve on the person experiencing it

Steps:

1. Reach out to the person most impacted by the problem we want to solve and ask to interview them.
2. Prepare the questions for our interview. Things like:
   a. What does your average day look like? What jobs or tasks do you perform?
   b. What does success look like for you?
   c. What holds you back from that?
   d. If you could wave a magic wand and make one change to ____, what would it do?
3. Interview them!
4. Rinse, repeat with other people impacted by the problem we want to solve.

Activity: Empathy Map

Time: 15–30 minutes

Materials: Sticky notes, markers, a wall

Objective: Understand someone's context and motivations

Steps: Informed by Problem Interviews or your knowledge of the person you're trying to help with this effort,

1. Draw a smiley face (this is the person you are trying to help) on a wall, in the center of a circle with three equal parts. Label the three parts "Tasks," "Gain," and "Pain."
2. Brainstorm each section at a time, capturing each item on a sticky note and placing it in the proper section of the empathy map.

Activity: Journey Map

Time: 30–60 minutes

Materials: Whiteboard

Objective: Understand the process by which our target user currently performs their main task

Steps:

1. Write/draw our target user on the left.
2. Write the goal or end-state of the task we're mapping to the far right.
3. Draw or write all the people / roles involved in the task under the target user
4. Map the current version of the process or journey the user takes to achieve the goal, including dependencies or steps that other people / roles take, ending up with a "swim-lane diagram."

Ideation, or What Will We Do to Help?

Now that we are informed about the problem we're trying to solve or the area we are focusing on, it's time to figure out how to actually improve things, what hack to implement, what solution to build, or which intervention to enact. The key to this step is not to settle on a single approach too quickly—in fact, the more ideas we can generate, the better, as we'll then have more options to choose from. As we generate ideas, it's best not to worry whether an idea is "good"—it's too early to tell, and often, one person's bad idea can spark another person's great one. It's also best not to worry about feasibility at this point.

The following activities can help us generate a lot of ideas very quickly.

Activity: "How Might We . . . ?"

Time: 20–45 minutes

Materials: Journey map, sticky notes

Objective: Brainstorm ways in which we might improve the journey users make

Steps:

1. Looking at each stage in the journey map and working individually, write potential interventions and ideas on sticky notes beginning with the phrase "How might we . . . ?"
2. Share ideas, sticking How Might We's to the relevant spot on the journey map.

Activity: "We Can If"

Time: 20–45 minutes

Materials: Propelling question sticky notes

Objective: Generate new ways to solve for a problem by using limits as creative juice

Steps:

1. Describe our limitation or constraint (e.g., time, money, talent, etc.).
2. Describe the goal we're trying to achieve.
3. Write "We can if" in the center of the wall, and around it write six additional phrases: ". . . we think of it as . . .", ". . . we remove or substitute . . .", ". . . we access other people to . . .", ". . . we resource or fund it by . . .", ". . . we introduce a new . . .", and ". . . we mix together . . .".
4. Use each additional phrase as a way to creatively reframe your solution and discover breakthrough possibilities.

Activity: Crazy 8s

Time: 45–90 minutes

Materials: Pencil, paper with 8 rectangles drawn on it (we can also fold a piece of paper into eighths)

Objective: Create lots of ideas quickly

Steps:

1. Working individually, draw 8 ideas in 8 minutes.
2. Share your ideas.
3. Rinse, repeat, stealing and building on others' ideas.

Validation, or Will This Really Help?

For an idea or hack to have an impact, it must have an encounter with reality. Usually, the sooner we can

take our idea "out of the building," the better. Getting feedback on your idea while it is still developing allows you to hear questions, critiques, and additions before you've had a chance to fall in love with your darlings, or invest too much time and effort.

The following activities can help us assess and prioritize our ideas.

Activity: One-Liner, aka Comprehension Test

Time: 15 minutes

Materials: Clipboard, paper

Objective: See if our idea is clear and memorable; hear how people react in their own words

Steps:

1. Sum up our problem and solution in a "one-liner" or mantra.
2. Leave the room, find 3 people, present our one-liner and invite their comments.
3. Listen especially for whether their response suggests that the one-liner is specific, clear, and memorable.

Activity: Napkin Sketch, aka Paper Prototyping

Time: 15–30 minutes

Materials: Pencil, paper

Objective: Draw a picture that conveys the basic concept of our idea

Steps:

1. Draw a picture or series of them that convey the basic concept of our idea. It can be a pencil mockup or a stick figure story.
2. That's it! Don't sweat the details.

Activity: Solution Interviews

Time: 20–45 minutes

Materials: Napkin sketch

Objective: Understand whether our idea will solve the problem we're seeking to solve

Steps:

1. Reach out to a person impacted by the problem we want to solve and ask to interview them.
2. Prepare a napkin sketch (or two) showing what we want to do.
3. Interview them! Show them the napkin sketch(es) without explaining or "selling" them. Ask:
    a. How clear is this idea?
    b. If this existed today, how excited would you be?

Activity: Solution Prioritization

Time: 20–45 minutes

Materials: Sticky notes, a wall

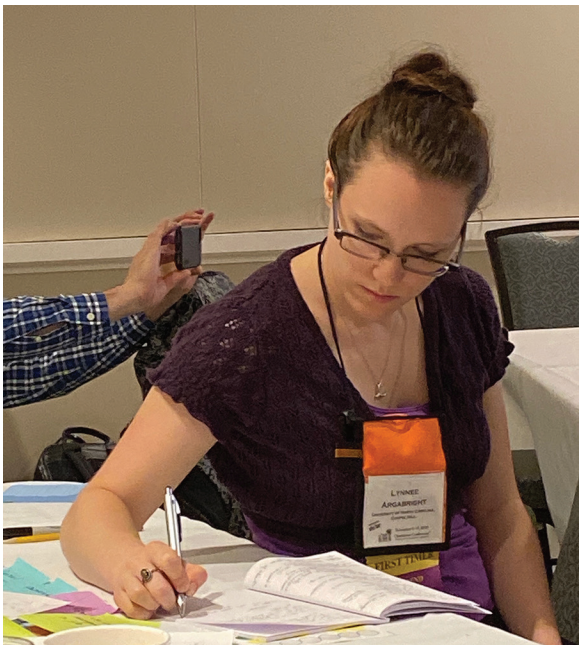
Objective: Understand the cost/benefit of potential ideas

Steps:

1. Write or draw each idea on a sticky note.
2. Place ideas on a graph showing your best guess at:
    a. X-axis: Effort—how easy will this idea be to bring about?
    b. Y-axis: Impact—once it is built, how much impact will this idea have?

Workshop Summary

Eight participants gathered at two sets of tables, arranged to facilitate collaborative interaction and creation of visual artifacts. Joined by facilitators from the Hacking for Good team, conversation soon



turned to the nature of the session and anticipated learning outcomes. At the appointed hour, the group was called to focus as the scene was set for an engaging and interactive learning experience.

As facilitators and participants introduced themselves, it became apparent that we were a small but diverse group representing libraries, publishers, and communication and organization professionals. The varied roles, organizations, and countries represented confirmed that organizational challenges (or opportunities to hack for good), including those related to processes and personnel, are ubiquitous across varied institutional and cultural contexts. From graduate students to practitioners, developers, and managers, each participant recognized a need for techniques to overcome challenges to organizational effectiveness.

The session was organized into distinct logical phases of tackling a challenge: finding the problem, framing the problem, ideation, and validation. At each phase, facilitators explained the objective and introduced select tools, described in a previous section of this paper, to facilitate reflection, discussion, and synthesis of ideas. Each group identified a single problem to collaboratively tackle; one utilized the "Speedboat" technique to identify both hindering and helping factors in the organization, while the other used an "Organization Map" to answer several questions about the organization, its clients, and its desired outcomes. Participants wrote ideas on sticky notes and stuck them to visual frameworks on paper. Items were then grouped to identify patterns, and priorities were revealed with a dot voting exercise. These low-tech methods helped participants to focus both on content and each other; a key feature of these activities.

With problems defined, it became clear that some tools are particularly suited to specific issues, and that there is no one-size-fits-all tool. For example, "Empathy Mapping" was an ideal tool to help frame the workflow and personality-centric problems tackled by one group, while the other group used the "We can if . . ." framework to evaluate possibilities and potential partnerships in improving interaction with library users to discern satisfaction levels and resource and service needs.

Each activity involved individual contemplation, pairwise discussion, and group-wide synthesis of ideas. This stepped approach enabled different personality types to engage with the process and contribute their insight in a comfortable communication environment. Obtaining input from all people present is

a key accomplishment in such problem-solving activities. Perhaps the greatest challenge was, indeed, to refrain from progressing straight to discussion as a group before the individual and pairwise activities were completed.

Each group enthusiastically embraced the new techniques for thinking through problems and generating possible solutions. The process generated a welcome realization that these techniques could help address other existing issues in a nonthreatening way and lead to collaborative resolution of challenges as well as team strengthening. The three-hour session seemed to pass by very swiftly—an indication that participants were focused, interactive, and engaged in creatively addressing the problem their team was facing. Team Walrus used their time and activities to think strategically about the future of libraries, while Team Carpenter focused much more tactically on the cultural and process issues one member library was experiencing following a reorganization. That the methods taught proved relevant and helpful to both teams tackling two very different kinds of challenges is a testament to the power of these approaches. Finally, while the session concluded with one planned activity for idea validation still left to explore, participants found the experience and associated resources a valuable learning opportunity that can impact them in their own contexts. This was affirmed by postsession feedback.

Bringing These Approaches to the Library

We have all listened to presenters at conference sessions who articulated the challenges we faced at our workplaces and actionable steps they took to overcome those challenges. We have all left conferences armed with notes and a change management plan (or a few ideas!), only to return to the daily grind of work and either forget about or deprioritize the plan we intended to execute; the plan that would relieve us of a stressful or difficult workplace challenge; the plan that would allow us to focus our attention on the next big thing. The Hacking for Good preconference facilitators had a simple yet ambitious goal: to show each participant that they were indeed a hacker. And, as hackers, participants could return to their home institutions and confidently employ tools, techniques, and skills they learned in the supportive preconference setting. As Tanya Snook (2014) explained, "Hacking is a mindset, not a skillset."

The preconference design promoted a practical approach to challenges librarians face in their work including technology-driven or personnel-driven workflows, staffing, technology adoption, or career development. To spend the preconference exclusively conceptualizing challenges and solutions would have underutilized the opportunity to discuss commonalities among participants and their respective institutions. It would have also left the participants in that well-known place of *desiring* change, but being unable to do so. *What's the first step? Who do you talk to? What if you're the only one supporting the change?* In the preconference setting, facilitators and participants developed a plan together, along with the skills to enact it.

As library administrators and practitioners, we are all responsible for crafting stories that demonstrate the value of our work to various institutions. The preconference participants learned about methods of identifying an issue and choosing the best tool or approach to addressing the issue. In this way, the participants practiced the act of bringing the hacking approach back to their home institution with accountability measures, personal and organizational benchmarks, and small feedback cycles to assess the work being executed.

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