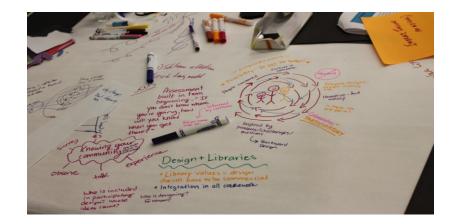# Designing Future Library Leaders:
Takeaways from the 2018 National Forum

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Introduction & Background

While people with a variety of educational backgrounds practice the tasks of librarianship, master's level library education traditionally distinguishes professional librarians from other library workers. The MLIS and equivalent degrees are intended to prepare students to be not just practicing librarians, but professionals—future leaders and community anchors in the library world. In the 21st century, these future leaders increasingly require new skill sets beyond what has been traditionally taught in master's level library education programs. We posit that the educational opportunities informed by design can support library professionals' mastery of new skills to improve their ability to address community needs.

In order to understand the current state of design thinking and methods in master's level library education, the Syracuse University School of Information Studies in conjunction with the University of Washington Information School proposed the Designing Future Library Leaders project: an IMLS supported National Forum in Seattle, Washington on incorporating design thinking, methods, and principles into master's level library education (RE-98-17-0032-17). The two-day, interactive forum sought to actively engage library practitioners, library educators, and design professionals to understand the current state of design thinking, methods and principles in master's level library education and generate ideas for integrating design into this space.

The forum had two goals:

1. to actively engage library practitioners, library educators, and design professionals in collaborative, hands-on activities and discussion to understand the current state of design thinking, methods, and principles in master's level library education; and

2. to generate ideas for integrating design in this space.

This white paper summarizes and discusses the Design Future Library Leaders National Forum event, including preparatory research, forum planning and development, and project outcomes.

Pre-Forum Preparation

To prepare for the forum, we sought a baseline understanding of the current landscape of design in both master's level library education and library practice. Prior to the forum meeting, the research team conducted two types of preparatory research:

1. a field scan of existing MLIS curricula in ALA-accredited master's level library education programs, and
2. an online survey of library practitioners regarding the interest in and use of design thinking and methods in library practice and the use of and need for design skills and abilities in library practice from active librarians.

Field Scan of Existing Curricula

To better understand the current curricular offerings regarding design in master's level library education, we conducted a field scan of existing coursework. Between July and December 2017, we compiled publicly accessible curricular information from ALA-accredited MLIS and equivalent programs in the United States, Canada and Puerto Rico. We collected available title and course description information that included the word "design" from the websites of all 60 ALA-accredited graduate level library education programs. We then used an inductive card sorting process to identify similar courses and topics in the course descriptions. We also performed basic linguistic analysis on the collected text of the course descriptions, calculating word frequencies and compiling concordances with "design" at the center, as well as basic grammatical analysis on the titles and course descriptions to surface the multiple ways the term design aligned with various parts of speech when used to describe a course and its content.

Our field scan identified 466 courses that included the word "design" in the course title and/or description, with an average of 8 courses per program. Card sorting revealed that technology-related topics (e.g. web design, database design, etc.) were far and away the most frequent use of the term (212 of 466 courses). There is a stark drop-off between technology and the next most frequent occurrences of the term: instructional/educational design (43), design in relation to use and users (38), design in specific settings (e.g. public libraries, art libraries, etc.; 34/466), research design (28) and information organization (21). Out of 466 courses, only 4 courses were identified as being specifically about design or design thinking as the topic of the course itself. Basic linguistic analyses also reflected the correlation of design and technology, as well as revealing the highly varied application of the term in context: the word "design" can be used as a noun, a verb, or a modifier. It may also be used not to describe the course topic, but rather other aspects of a course, such as the target audience (e.g. "This course is designed for students interested in becoming skilled searchers") or other contextual or motivational information. More details about the varied uses of the word "design" and the field scan findings overall can be found in Clarke (2020).

Survey of Design Thinking in Library Education and Practice

To better understand the interest in and use of design thinking and methods in library practice and the use of and need for design skills and abilities in library practice, we created a questionnaire intended to solicit feedback about these topics from library practitioners. The questionnaire included questions about topics such as practitioners' familiarity with design thinking and methods; source(s) of education

for any exposure to design thinking and methods; and their thoughts regarding incorporating design thinking and methods into MLIS programs. The questionnaire was deployed online using Qualtrics and was open for responses for approximately 10 weeks from January through March 2018.

Overall, 60.9% of respondents from public libraries and 75.5% from academic libraries reported being either somewhat familiar or very familiar with design thinking. When asked if they had ever actively used design thinking and methods in their library work, 27% of respondents answered yes; 38% answered not sure; and 34% said no. Respondents felt that design thinking and methods were most relevant in traditionally user-facing library services, such as children's and youth services, adult services, and information services. Less public-facing work, such as technical services and digitization/preservation, were thought to be less relevant to design.

We asked if participants had ever received education in design thinking and methods, and if so, what was the source or venue for that education. 39 (out of 104) participants replied that they had experienced some kind of design education. Participants reported a variety of venues as the source of education, including university courses, professional development workshops within libraries or at their workplaces, and association conferences. There were also several mentions of informal or self-education resources such as books, articles or blogs, or conversations with colleagues. When asked if they would be interested in education or training in design thinking and methods that was specifically tailored for libraries and library workers, 55.17% of respondents said yes, they were interested in this kind of education. Interestingly, respondents who were already somewhat or very familiar with design thinking were more likely to indicate interest in participating in education or training in design thinking or methods specifically for library workers. Most (95.17%) respondents were in favor of including education for design thinking and methods in MLIS programs, with 26.9% (39 of 145) answering that it should be required and 68.27% (99) that it should be offered but optional, like an elective course. Respondents from all roles felt that it should be offered at least optionally, with the exception of administration/management and information services, in which a small number of respondents said no, it should not be offered.

In our survey, we also asked a number of open-ended qualitative questions about their experiences with design thinking. We asked respondents to briefly define 'design thinking' as they understood it, and we received a wide range of responses. One person offered up "*Creatively approaching solutions and alternatives*," while another said "*It's a methodology for creating solutions to problems, ideally in a rapid manner, with less-than-perfect prototypes, to get to a workable or unusual solution*," and yet another replied "*Applying design techniques and principles and in non-design contexts, such as project management or accessibility.*" The variety of the responses reiterates the idea that definitions and understands of design and design thinking vary widely.

More details about the survey, including methodology, sampling, responses, findings, and implications, can be found in Clarke, Amonkar and Rosenblad (2020).

National Forum

Participants

We incorporated the findings from the field scan and survey into the planning and development of the national forum on design in master's level library education. The forum included participants comprised of educators from ALA-accredited programs, educators from design schools, library employers, and design professionals. Forum participants were invited based on identification from the field scan and/or notable identification with design thinking in libraries. We sought to foster a representative group that included a balance of library educators, library practitioners, design educators, and design practitioners, as well as an inclusive and diverse representation of gender, ethnic background, and other characteristics that allow for a variety of viewpoints. We extended invitations to 32 individuals; 19 attended the forum. In addition to the invited participants, the forum also included attendees from the University of Washington, two University of Washington graduate student volunteers, and the forum organizers, making a total of twenty-eight people in attendance. A list of forum attendees appears in Appendix A.

Activities

Participants met for two days in Seattle, Washington (March 14-15, 2018) to review and discuss the results of the field scan, identify aspects of design education relevant to MLIS education, share professional experiences, and brainstorm curricular approaches. The two-day forum was structured as a design exercise itself, bookended by findings from the field scan up front and reflective discussion and recommendations at the conclusion. During the two days, participants themselves drew on design methods to tackle the problem of incorporating design into master's level library education.

Day 1: Wednesday, March 14, 2018

Setting the Stage

The forum began with prompting participants to think about design even as they arrived in the space. Tables covered in white butcher paper and markers encouraged participants to consider the meaning of design. The prompt was directly inspired by the research from the field scan and survey, in which we found that the word "design" has various and fluid meanings. Thus we wanted to encourage participants to considering their own

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ARRIVAL PROMPT
The word design can mean different things to different people. What does the word "design" mean to you? Using the materials provided, work together with others at your table to communicate what design means to you.

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definitions of design as well as be exposed to others' definitions, perceptions, and connotations. Attendees were encouraged to respond to the questions by writing or drawing their thoughts on the paper-covered tables as they trickled in, before any formal activities.

Introductions

Once all the invited participants had arrived, we began introductions. To begin the process of envisioning themselves as designers, we encouraged participants to take construction paper and glue and create torn-paper collage portraits (Martin & Mills, 2017) of who they are in terms of design, using

the following prompt: "Who am I as a designer? What do I want people to know about me?" Initially reluctant and even a little terrified, the participants eventually set aside their perfectionism and gave the exercise a try. Dr. Michelle H. Martin[1] has used this exercise with undergraduate and graduate students, children, even fine artists, and the simple rules (no scissors, let go of perfection, have fun) result in stunning, original, revelatory portraits. Our goal with this exercise was to encourage our participants to experience some discomfort, think about their practice in new ways, and approach their work in this forum with a design lens. The collages created by our participants were at times abstract and always as unique as their creator. Each portrait served as its own kind of introduction, not only to the creator themselves but also to the messy, imperfect, iterative, and reflective world of design. We also learned about participants' comfort or discomfort with the meaning and nature of design, demonstrating how new design still is to the field of librarianship. The exercise loosened everyone up, enabled us to learn about one another in a new way, and set the tone for the forum.

FIGURE 1. EXAMPLES OF TORN-PAPER COLLAGE PORTRAITS

Synthesizing a Definition of "Design"

After these introductions, we invited participants to engage in small group discussions at their tables regarding their answers to the questions about design before turning to a discussion among the entire forum group. Many attendees equated design strictly with design thinking, even though there is much evidence that the two are not synonymous; rather, design thinking is one of many approaches under a larger umbrella of design (see Clarke 2016; 2018; 2019 for more about this). Despite this perspective

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[1] Beverly Cleary Professor of Children and Youth Services, Information School, University of Washington

from some, attendees across the board brought up more universal concepts from design in their definitions, including but not limited to the following elements:

- Exploration
- Trial and error
- Risk-taking
- Flexibility
- Inclusivity/inclusion
- Goals of ongoing improvement
- Input/feedback/critique
- The importance of exploration
- Appropriation/inspiration from external sources
- Problem solving
- Empathy and seeing situations from the perspectives of others
- Usability/user-friendliness

Although forum participants used different words and supplied different examples, these elements recurred in their definitions of design, and all of these parallel overarching elements that unite various design fields and approaches (Clarke 2016; 2018). Participants were particularly interested in the dynamic nature of design, and how there is not just one way to approach design. This is evident in the above themes. However, participants' confidence in and understanding of the flexibility of design differed depending on participants' backgrounds and previous experience with design.

In terms of the role of design in libraries and librarianship, major themes included the following:

- librarians as designers;
- incorporation of design terminology; and,
- how design can help librarians reach their goals and missions.

Participants saw a strong connection to the mission and values of libraries. One participant noted that LIS programs generally do a good job of instilling the mission and values of libraries, but do not seem to offer the same level of depth and intention regarding how to actually translate the mission and values into library services and products. This, the participant claimed, is where design comes in—by offering a framework for creating tools and services that align with the core mission and values of libraries. Others felt that the elements of and concepts from design, such as those outlined above, could help librarians grapple with unstable environments and be more responsive to changes in community needs and resources. In this context it was noted that many educators strive to teach LIS students "*how* to think rather than *what* to think," with varying levels of success. Although some participants noted a positive attitude towards design and its potential for improving services and experiences, others pointed out that it may also have negative repercussions: one attendee had observed reluctance to get involved in design thinking projects because even though some minor incremental improvements may occur, the process may also reveal bigger and more significant problems that exceed the capacity of the team or organization to address.

Although there were fewer responses to this question, perhaps because not every participant at the forum had a background in LIS, each saw design and design thinking as a valuable addition to LIS. Participants discussed how the introduction of design to LIS could create spaces, referred to as "brave spaces" (Arao & Clemens, 2013). Arao and Clemens frame "brave spaces" in terms of social justice dialogues, as places where discomfort and safety are perhaps in tension with one another in order to push people to think more authentically in an effort to give up one truth and embrace a new one. It is a space in which people feel brave enough to recognize mistakes and seek to rethink previously held beliefs in a communal space where everyone is committed to doing this work. Failure, itself a kind of mistake and moment of shift away from what was previously intended toward something new, can be supported and fostered in this kind of brave space, in which the design processes of iteration, action, and reflection themselves embody this dynamic nature of being and making.

In a Design in LIS classroom as brave space, LIS educators, students, librarians, patrons, and others could experiment with both design and user-experience design. Amidst these various themes, however, forum participants were also unable to reach a consensus on a definition for design. This could be due to a variety of factors, such as the nature of the forum, participants' backgrounds, the composition of the questions or the inherently flexible nature of design. Regardless, design remains an elusive and perhaps highly variable concept, one that forum participants define according to their own needs and purposes.

Sharing Preliminary Research

After sharing out the results of the small group discussions, Dr. Clarke then shared a presentation highlighting findings from the preliminary research conducted in preparation for the forum as well as other contemporary research at the intersection of librarianship and design. More information about the findings from this preliminary can be found in earlier sections of this document as well as Clarke, Amonkar and Rosenblad (2019) and Clarke (2020).

Card Sorting Activity: Problem Finding

After setting up the previous foundations, the forum pivoted to begin problem-solving activities. In true design fashion, the first step was to identify problems. Based on their own personal experiences as well as the opening discussion and preliminary research findings just presented, participants were asked to write down what they saw as the three largest issues facing the incorporation of design in LIS education.

CARD SORTING PROMPT

Based on what arose in our discussion and/or your own experience, please identify 3 major challenges regarding design and library education.

Participants each received three large (5"x7") sticky notes and asked to record one problem or barrier they saw on each sticky note. The sticky notes were then collected on a wall-sized whiteboard and sorted as a group.

FIGURE 2. FORUM PARTICIPANTS ENGAGING IN CARD SORTING ACTIVITY.

The activity surfaced a number of coalescent themes. The **conflicting definitions of design**, as noted earlier in the forum, emerged as one potential challenge to address when incorporating design into LIS education.

One major theme was **authenticity of experience**, in which participants lamented the lack of connection between "real-world" problems and the classroom. Additionally, many forum participants, both educators and practitioners, voiced that while they had learned about design and design thinking previously, they still had trouble implementing it in their work. This disconnect between knowledge and implementation resonated across participants as a major challenge to LIS education.

Curriculum issues also arose as a major theme. Although it might seem likely that issues of what and how to teach would constitute a large portion of concerns, these questions manifested in interesting ways. Notably, this category was concerned with discerning teaching qualifications for design courses in LIS. LIS educators spoke of wanting to begin experimenting with design and design thinking in their own courses, but they felt stifled by lack of expertise and/or perceived qualifications, as well as by traditional bureaucratic barriers. The other major barrier surfaced in this category was concerns about accreditation from the American Library Association (ALA). Given the short term of most residential MLIS programs (usually two years) and the tightly drawn curriculum maps for those two years, it can be difficult to fit in a new course without losing another—possibly a core—and tying the learning outcomes of the course to the standards outlined in the ALA Accreditation process.

Multiple cards reflected **lack of incentives for adoption** of design into LIS education and practice. Even though some educators were clearly interested in incorporating more design aspects into their courses, their institutions either explicitly or implicitly did not encourage them to do so. While no one mentioned being forbidden outright, some participants said that the emphasis was on other topics, or other initiatives were higher priorities. Sometimes time was an issue, in terms of what someone could devote to a course, and they would not receive extra time or salary for such a project. Similar thoughts were echoed by practitioners, some of whom reported similar concerns from their organizations.

Fear of failure repeatedly arose as a barrier to the inclusion of design and design thinking in LIS education. Often, participants, particularly educators, would point to the fear of failure they saw in students. For example, this category included a card from a participant that read, "How to teach students not to be scared of taking risks." It quickly became evident that this was a common problem among many of the educators at the forum and one that many of them saw as a barrier. They discussed how they saw the fear of failure manifest itself in their students in a variety of ways, keeping them from taking risks both inside and outside the classroom. As a result, their students were either unable or unwilling to engage with design and design thinking. However, it was not just students who were identified as having a fear of failure. Many forum participants, both educators and practitioners, self-identified as struggling with a fear of failure and that this has kept them from fully embracing design and design thinking.

"But this is the way we've always done it," is a hackneyed phrase often associated with libraries and librarians. This stereotypical phrase underscores the idea that **resistance to change** has become a part of library culture and can be a major barrier to any changes in education and practice, including the incorporation of design. Such resistance is not just limited to practitioners. Participants at the forum from other fields acknowledged their own personal struggle with change and the issues their workplaces have with it as well. One of the many educators at the forum brought up the idea of the "sacred cow," an idiom referencing the Hindus' respect for the cow as a sacred animal, meaning something held, unreasonably, to be above criticism. In academia, a sacred cow could be a course, degree requirements, a certificate program, or another institutional requirement. Many of the educators at the forum shared that their institutions have dealt with such situations and how these "sacred cows" can prevent institutions from embracing change, including the incorporation of design and design thinking.

FIGURE 3. DETAIL OF CARD FROM CARD SORTING ACTIVITY.

Resistance to change is one perceived aspect of library culture that may present a barrier to incorporating design into LIS education. However, participants were also **concerned about conflicts with existing library culture** at large. For example, one participant wrote, "Design culture can conflict with library culture. Culture change is hard." This reflects more than just resistance to change, but rather tensions among entire occupational and professional cultures, such as the common perception that design is a

commercial-driven culture that would not be appropriate to apply to libraries and librarianship, a profession which is traditionally anti-commercial. This card also sparked conversation about the walls libraries and librarians put up around their work in terms of roles and occupational jurisdiction, and how difficult it can be to penetrate those walls.

Working with constraints was also a recurring theme. Constraints may reflect the time an instructor can devote to a course or to their professional development in design topics. But it also arose as an issue regarding teaching design to LIS students for a different reason: the major constraints of resources under which many contemporary libraries function. Participants were concerned about teaching design philosophies such as risk-taking, exploration, flexibility, and failure, to people going on to work in institutions that may not have the resources to support such endeavors.

Finally, one category represented the idea that LIS education supports a **diversity of future paths**. That is, although a majority of students who earn an MLIS or equivalent degree may pursue and eventually secure positions in libraries and similar organizations, not all student can or want to work in libraries. Therefore, there may be a challenge in incorporating design into LIS education in a way that is broad enough to account for a multiplicity of career paths.

Group Activity: Generating Solutions

None of these identified problems are simple to solve. Many of them overlap have multiple issues embedded or are affected by other simultaneous problems. These unique, interconnected, and ill-defined problems that cannot be definitively described are referred to as "wicked problems" (Rittel and Webber 1973). Because these wicked problems cannot be solved through traditional scientific means, and may only have better or worse resolutions rather than a single "correct" answer, creative

DESIGN ACTIVITY PROMPT
Choose one of the challenges. Based on your selected challenge, design a possible solution to address that challenge in library education.

approaches like design are necessary (Conklin et al. 2007). Design is often relied upon to tackle wicked problems that have failed to be solved via more traditional research approaches (Wieringa 2010). Given this, we asked forum attendees to participate in a creative design activity that would help uncover ways some of these issues might be addressed.

Participants were divided again into small groups and asked to select one of the problems that had been uncovered during the card sorting activity. Each group brainstormed and prototyped a physical representation of a project that MLIS students could undertake which would attempt to solve the chosen problem and help introduce design thinking in LIS education. Employing the "bag of stuff" technique (Druin 2010; Fails et al. 2013; Guha et al. 2013; Subramaniam 2016), the five groups used a wide variety of arts-and-crafts objects to create 3D representations of concepts in the following projects. This tactile design activity prompts creativity and emphasizes the making-ness of design, enabling participants to build and shape their ideas into a concrete representation.

Three of the groups developed ideas intended to address the problem of connecting students to real-world experiences. **Project Reality** is the development of a nationwide network connecting students

with library practitioners all around the country. Libraries would submit ideas for local problem-based projects to instructors, who would then select a number of projects and send their students out to develop solutions based on the design thinking process, which they previously learned about in the course. Similar to Project Reality, **Authentic Experience** seeks to connect students and library practitioners. However, in this example, the connection is facilitated via an online network and would support remote and digital teamwork for problem-solving. A third group developed a proposal for **Creating Partnerships Between Classrooms and Practitioners** in which students would be immersed into actual projects at an organization in order to see real constraints, issues, and successes. Students would introduce new thoughts and practices into stable and possibly complacent workplaces by bringing design thinking and methods into these spaces. Hopefully these partnerships would work toward resolving issues in library culture while also creating opportunities for students.

The **CV of Failure** is intended to help encourage risk-taking and combat the fear of failure. Each student (or practitioner, if implemented in a library setting) prepares a CV- or resume-like list of all of the projects or ideas they have unsuccessfully tried or failed to accomplish. These documents are shared within the classroom or organization, serving to build compassion among participants, escape the idea of perfection, and normalize failure as part of the problem-solving process.

FIGURE 4. POSTER FOR THE CV OF FAILURE

You're the CEO is a game show-style activity in which "impossible" or wildly creative projects would be presented by a library and practitioners and students would be challenged to use design thinking techniques to develop solutions. This manifests through an electronic or other signboard posted in the library listing various problems and proposals, so there is an ever-present list of opportunities from which students and practitioners can take inspiration as well as a leaderboard to motivate and incentivize participation.

The first day concluded with a gallery walk that allowed each group to explain their idea and invite others to provide feedback. This period of observation and discussion embodied the crucial design process of reflection, offering participants a chance to situate their learning for the day and stretch their own thinking as they looked at others' representations and visualizations.

Day 2: Thursday, March 15, 2018
Group Activity: Layered Elaboration

The second day used discussion of the ideas generated during day 1 as a springboard to identifying potentially actionable trajectories. The morning activity sought to create more concrete, actionable suggestions that educators could feasibly incorporate into MLIS coursework. Although one of the original intended deliverables from the forum was sample syllabi for design courses, it was evident from the previous day's activities that instructors felt that incorporating design methods and techniques throughout the curriculum, rather than siloing them into a single course, was important. Therefore, instead of teaming up to draft sample syllabi, we conducted an activity aimed at developing more concrete ways that instructors of any LIS subject or topic might be able to incorporate design into their individual courses.

Participants were divided into seven groups. Each group was randomly assigned a particular area of librarianship by drawing a card from a hat that listed one of the following areas:

- Access Services
- Administration/Management
- Adult Services
- Children/YA Services
- Collection Management
- Information Services
- Technical Services.

These groups were based on role categories from the earlier survey about design thinking in library practice and were originally sourced from membership categories at the American Library Association. Participants were presented with a new design challenge: to develop a lesson plan for an LIS class that incorporated design thinking as well as the knowledge from the previous day's activities (see the prompt at sidebar). Participants had approximately 45 minutes to develop a lesson plan that met the given specifications.

Once participants completed their initial lesson plan, we introduced a layered elaboration technique, which "allows designers to elaborate on ideas by changing, extending, adding, and/or eliminating the ideas of others without killing the original ideas or ideas that are thought of throughout the process

(Druin 2010; Walsh et al. 2010; Fails et al. 2013; Guha et al 2013; Subramaniam, 2016. Given the emphasis from the previous day's activities of using design to forward the mission and vale of libraries, we printed sets of 3"x5" cards representing ALA's core values of librarianship. Inspired by Envisioning Cards, which represent the role of human values in the development and use of technology, and used as part of Value Sensitive Design (Friedman, 2004), each individual card in the set was printed with the name of one value as well as its definition from ALA. The following values comprising the list at the time of the forum were included in the set:

- Access
- Confidentiality/Privacy
- Democracy
- Diversity
- Education and Lifelong Learning
- Intellectual Freedom
- Public Good
- Preservation
- Professionalism
- Service
- Social Responsibility

Following the techniques outlined in Value Sensitive Design, each group drew one card at random from the set and responded to a new prompt asking them to suggest modifications to the lesson plan that would explicitly incorporate the value on that card.

LAYERED ELABORATION #1
Now, based on the values card you received, please suggest modifications intended to improve the design.

Participants were given 30 minutes to revise their lesson plan. Then, another round of cards were used to iterate on the lesson plans, but this time with a twist—each group first passed their own lesson plan idea to the next group in the circle, and each group was then given 30 minutes to review and revise the new lesson plan according to the selected value card. Following this, the lesson plans were then passed

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LAYERED ELABORATION #2

Now, please suggest modifications that would allow this lesson plan to be delivered in an alternative format (in-person → online OR online → in-person)

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once more for a third 30-minute review round. Instead of using the values cards, in this final round of iteration we asked each group to reflect for 30 minutes on the mode of the course--online or residential—and consider how the same course might be offered in the other mode.

FIGURE 5. FORUM PARTICIPANTS ENGAGED IN DISCUSSION.

After a break for lunch, participants debriefed the lesson plans as a large group. Although the original intent of the lesson plan activity was to come away from the forum with concrete pedagogical plans that could be disseminated for instructors in any program to use, the outputs of the exercise varied widely among groups. A few lesson plans were quite concrete, outlining specific learning objectives and activities. However, most were more nebulous and reflected ideas at a more abstract level. While these all helped further the discussion, we found that these lesson plans were not yet concrete enough for sharing with a larger community.

Reflective Discussion

In true design fashion, we wrapped up with a reflective discussion about design thinking in LIS education and the results of the forum. Participants were asked to reflect on their own practice with design thinking; what the group can do going forward in terms of design thinking in LIS; and what it would take to include design in ALA accreditation. Participants were invited to share what they saw as next steps, both for themselves as individuals and for the group as a whole. As participants shared their suggestions, several trends began to emerge: collaboration, incorporation, designing resources, and bringing a design mindset to work.

- Participants suggested potential opportunities for collaboration, both at their home institutions and between practitioners and educators at varied institutions. Fostering

partnerships between education and the academy was a significant theme, mentioned by multiple participants, both educators and practitioners. Examples included creating a co-design group with librarians and practitioners reaching out to LIS programs. Several people acknowledged that while fostering these partnerships may be hard, it is worth the effort.

- Several attendees mentioned their commitments to ongoing advocacy regarding design and LIS education. This included activities like writing and presenting on the topic, collaborating with people both inside and outside of LIS (e.g. IDEO, Stanford d.school, and other design organizations), and applying for grant funding to support design projects.

- Multiple instructors mentioned being more intentional and explicit regarding the inclusion of design thinking in their curriculum. One instructor spoke about adding more creative elements into curriculum: while they usually ask students what a collection is and show students objects from around their own house, they now plan to turn it around and ask students to post a picture of a collection in their house and have them describe why it's a collection. Another committed to researching more about "brave spaces" and incorporating that into their instruction. The lesson plan activity revealed that many instructors are already incorporating aspects of design in their courses, but not necessarily calling it out or explaining it to students as design. Several instructors mentioned their commitments to calling out these connections to design to their students in a more explicit way. This also resonated with some of the practitioners, who mentioned that calling out design thinking in practice-based settings not only identifies it for what it is, but also can encourage people to get involved and help people feel supported when doing design work.

- Participants also considered how design is malleable and can be refitted to suit individual needs, as well as how to keep this in mind when fitting design into LIS education. In order to communicate this aspect of design, participants discussed creating and sharing a variety of resources intended to make design and design thinking more approachable. One participant mentioned finding a place to gather stories about what people are doing in the field regarding design and design thinking. Documenting existing experiences can help others explore how to translate those projects and techniques into their own work. It was noted that the Design Thinking for Libraries website (http://designthinkingforlibraries.com) includes a repository of examples, but the collection is currently quite small, and they would like to solicit more contributions.

- Another participant committed to volunteering to be part of a MLIS curriculum redesign in anticipation of upcoming ALA accreditation.

In addition to individual actions, participants also had suggestions for moving forward as a group. Suggestions included creating a listserv, wiki, or other online venue to facilitate discussions about design in LIS; partnering with other attendees from the forum for collaborations such as grants, case studies, and classroom activities; sponsoring conference sessions and workshops on design topics; and creating interest groups for design in LIS through professional organizations (such as ALA, ALISE, or local/regional associations).

Zine Creation

To conclude the forum, participants were asked to create a page for a "zine." Zines are self-published, small-circulation, often nonprofit books, papers, or websites. They usually deal with topics too controversial or niche for mainstream media, presented in an unpolished layout and unusual design.[2] Each participant was given a 5.5" x 8.5" sheet of paper and asked to make a page in response to the prompt. The intention of the prompt was to generate a final summative reflection

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ZINE PROMPT
If you could tell MLIS students one thing about design, what would it be?

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from each participant in a tangible form. The DIY and self-generated nature of zines overall makes them more reflective than directly communicative, yet even though many of the zine pages created by forum participants do not directly communicate forum outcomes, they express major thoughts and take-aways from the participants. After sharing at the forum, the pages were collected by the organizers and compiled along with some introductory material into a zine that was distributed back to participants and circulated at major library conferences such as the 2018 ALA Annual Meeting in New Orleans, LA, and the 2019 ALA Midwinter Meeting in Seattle, WA. A downloadable copy of the zine can be found on the project website.

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[2] https://www.merriam-webster.com/dictionary/zine

Summaries and Recommendations

Understanding the current state of design thinking, methods and principles in master's level library education

The goal of the forum was to actively engage library practitioners, library educators, and design professionals to understand the current state of design thinking, methods and principles in master's level library education, and generate ideas for integrating design in this space.

The current state of design thinking, methods, and principles in master's level library education is still burgeoning and in flux, with many potential directions and possibilities. From the field scan, we learned that there are few courses specifically focused on design thinking and methods. Design may be included within individual courses, but it is difficult to determine from course description information. Even where design theories or methods are included within a specific course, they may be included implicitly; that is, design methods may be used but they may not be identified and defined as such. Additionally, descriptions use the word "design" in a variety of ways, resulting in multiple definitions and understandings of design that contribute to the difficult in understanding current inclusion in curricula.

From the survey we learned that there is a strong interest and need for design education in librarianship. Practicing library workers would like to see design courses included in MLIS programs, at least as optional electives if not a requirement. Although not the specific purview of this project, the survey results revealed a strong need for professional development education options for library workers to learn about design thinking and methods.

From the forum, we learned that educators are interested in incorporating design into their curricula, but they face many challenges in doing so, including:

- a lack of consensus within the LIS field about what constitutes design;
- working with students who fear failure; organizational barriers and resistance to change;
- perceived lack of expertise and qualifications to teach design;
- the challenge of incorporating design into MLIS programs while maintaining ALA accreditation; and
- a disconnect between learning about design thinking and methods and implementing them in practical work.

It was also clear from the forum that many educators are implicitly incorporating design thinking and methods into their curricula, but they are not outright identifying such inclusions as design to their students and colleagues.

Ideas for integrating design thinking, methods and principles in master's level library education

Based on the current state of the field as determined above, we suggest the following recommendations for increasing and improving the incorporation of design thinking, methods, and principles in LIS education.

Explicitly Allow for Multiple Understandings of Design

By the end of the forum, participants still had not arrived at one definition for design. However, they had agreed that, perhaps there did not need to be just one definition for design. This lack of definition provides design with its own flexibility, allowing it to be incorporated as educators, researchers, and practitioners needed for their own purposes.

Specific recommendations:

- Be careful and intentional with the use of the word "design"
    - Provide definitions of what is meant by "design" and how you (educators and practitioners) are using it in a given context.
    - Encourage students to be specific and explicit about how they are using the word.
    - Work toward establishing a more specific vocabulary of design to reduce confusion.
- Incorporate multiple design perspectives and multiple approaches to design (e.g. design thinking, user-centered design, value-sensitive design, inclusive design, etc.)
    - Emphasize the variety of approaches and discuss when each might be useful and/or appropriate.
- Create beautifully and with respect
    - Consider what is already taking place in the space, collection, program or other object of your design activity. Use Berry's (1987) question-based framework to guide respectful work by respecting existing contexts. Ask and reflect on questions such as the following:
        - How are the current spaces, collections, programs, or other design objects being used? What are you observing?
        - What will that space, collection, program, or other object allow you to do as a designer? What constraints do you identify and how do you work around those constraints, being careful to understand what is flexible and inflexible?
        - What will that space, collection, programs or other object help you to do here? What opportunities exist that you can use to your advantage in your design work so that your work is embraced by stakeholders and the impact is meaningful?

Embrace Failure; Reduce Fear

The idea of failure was brought up repeatedly, both as a barrier (e.g., students' fear of failing) but also as a valuable vehicle for learning. Participants not only individually embraced failure during the forum, they also discussed failure as an essential skill that librarians and libraries must adopt. Given the important role of failure in design, including but not limited to supporting creative risk-taking and fostering iteration, we recommend that students are exposed to and experience various aspects of failure during their LIS education, when stakes are often lower than in professional employment situations, and where the experiences can be scaffolded with other instructional components. Additionally, many people (students included) fear that they cannot design because they are not creative, and design requires creative genius, despite established research that debunks this as a myth (e.g. Weisberg 1986; Ashton 2015).

Specific curricular recommendations:

- Foster "brave spaces" in LIS courses and programs
    - Remember that not all communities view risk the same way, and not everyone comes to a design space with the same level of empowerment. Ensure that classes (physical or digital) set guidelines and establish a supportive atmosphere that embraces learning from one another, iterating and reflecting, and lifting up historically marginalized voices to encourage inclusive design.
- Reduce pressure and fear associated with grading standards
    - Decrease fear associated with grades by adopting options such as pass/fail coursework or "ungrading" (Stommel 2017; 2018) to shift student focus from grades and achievement to reflective learning.
    - Harness iteration in assignment submissions (e.g. submitting multiple drafts for feedback) to help students learn from mistakes.
    - Giving and receiving feedback is a learned skill. Teach students how to give and receive critique, among peers as well as other relationships (student/instructor; student/practitioner, etc.)
- Share failures across students and instructors
    - Sharing failures can help build compassion and comradery, as well as help students become more comfortable with imperfection.
    - Instructors admitting their own failures can model this sharing for students as well as help students understand that failure is not a single hurdle to overcome, but rather and ongoing lifelong learning experience.
    - Design projects like the "CV of Failure" (see the Group Activity: Generating Solutions section of the document) and the post-mortem from mediaLABamsterdam's Design Method Toolkit can be useful vehicles for sharing failures.
- Reduce fear of risk-taking and lack of creativity through the use of responsible appropriation
    - Communicate that creativity is a spectrum and emerges from hard work, not individual inspirational genius (Ashton 2015). Encourage students to work in teams so that together creative solutions can emerge (Sawyer 2007).
    - Remind students that, as one forum attendee put it: *good designers design, great designers steal*. In other words, teach the ways in which appropriation is a necessary aspect of great design.
    - Model appropriation as a potentially less intimidating entry point to design ideas by showing examples of libraries and other settings that have appropriated design solutions for their own local use (e.g. "tough topics" finding aids, book bikes, and circulating "libraries of things" are all good examples of this). Use examples the show how appropriation can come from within the library community as well as from external sources.
    - Ensure that appropriation is done responsibility by requiring citation or other forms of credit attribution for ideas. Discuss the implications and responsibilities inherent in iterating on an existing idea and adapting it for local use vs. implementing an idea as-is.

Undertake Ongoing Program Development

MLIS programs are themselves design artifacts, and as such, they are constantly evolving. There are many questions about the integration of design into these programs, such as whether to offer courses specifically focused on design vs. weaving design throughout multiple courses; levels of knowledge and qualifications of instructors necessary to teach design concepts; and the consideration of design in program accreditation (specifically ALA accreditation).

Specific recommendations:

- Pursue continuing and professional education in design thinking and methods
  - This could be achieved through a variety of means. For example, the Association for Library and Information Science Education (ALISE) hosted an instructional session about design thinking and its relationship to LIS education at the 2017 conference. Other avenues might include formal coursework, conference sessions, self-paced readings, etc.
  - Educational opportunities should not be limited to the library field. A number of educational opportunities exist in the design profession, such as IDEO U (https://www.ideo.com/post/ideo-u). Stanford's d.school (https://dschool.stanford.edu/) offers a "crash course in design thinking" as well as educational fellowships for instructors from non-design fields.
  - Programs should support a variety of ongoing professional development activities and resources for instructors.
- Reflect on and embrace existing knowledge about design, regardless of expertise level
  - Instructors regularly engage in instructional design; a specific form of design. Connect this work and the frameworks and techniques of instructional design with which educators are already familiar to help bridge knowledge gaps and increase confidence in design knowledge.
  - Model design processes as part of course design. When introducing a class syllabus or assignment, discuss the students the design process(es) that underscore the syllabus or assignment. Consider co-designing a syllabus or assignment with students.
  - Call out design methods, techniques and theories when they are included in a course, especially when the course is subject-based. This can not only help students see the wide applicability of design, but also demonstrate that a person need not be a design expert to use and benefit from design approaches.
- Seek strategic partnerships and resources
  - If possible, partner with other units and organizations that are strong in design expertise. For instance, faculty in the MSLIS program at Syracuse University are building relationships with faculty in the Department of Design. Invite representatives from design institutions to visit and/or speak with classes and students. Partner with local libraries who are using or experimenting with design thinking.
  - Seek out useful resources, such as ideas for readings and assignments, from design courses or other educational sources. Rather than reinvent the wheel, use these materials as design inspiration, appropriating them respectfully and fairly.

- Explore ways to incorporate design principles into various standards within the ALA Accreditation process, to encourage MLIS programs to embrace and incorporate design and design thinking into their curricula.
    - Encourage collaboration between MLIS programs already offering design and design thinking courses and programs that are not yet offering these programs.
    - Draw on the expertise of MLIS-adjacent faculty, such as those in HCI and design-related fields, to facilitate interdisciplinary approaches to teaching design in librarianship.

Connect Education and Implementation

One of the biggest challenges noted was how to bridge the disconnect between learning about design thinking and methods and implementing them in practical work. It should be noted that this issue is not unique to design in LIS education. Because librarianship is a practice-based field, much of the education for this work faces similar challenges. In fact, design is uniquely positioned to help bridge this gap by its hands-on, creation-based focus on problem-solving.

Specific recommendations:

- Foster and support connections among educators and practitioners
    - Use contemporary technology or other tools to create mechanisms for making and building connections. This could be in the form of email lists, social networks, an online database of professional project opportunities, or other media.
    - Invest in educators who are also practitioners. Many MLIS instructors are adjunct instructors, meaning that they straddle both the professional and educational realms and therefore can offer a unique perspective that incorporates learning and application. Make sure that adjunct faculty receive appropriate professional development (see previous section) as well as other resources and support.
    - Build a repository of resources that draw on real problems from real libraries. This may range from introductory design materials (e.g. re-envisioning the "Design a Better Commute" introductory exercise from the *Design Thinking for Libraries* toolkit to reflect a more library-specific challenge) to a collection of problem cases taken from real-world scenarios.
- Harness the relevance of librarianship's core values
    - Connect abstract learning to real world situations by explicitly incorporating the core values of librarianship into projects, activities and discussions.

What's next?

Based on the synthesis of the above ideas, we recommend the following next steps for supporting increasing inclusion of design thinking, methods and principles in MLIS education.

1. To foster collaboration, we recommend the creation of an online venue, such as a listserv or wiki, to support communication about design thinking, methods and principles among educators and library practitioners. This can also function as a connection point uniting educators and practitioners for the purpose of developing real-world projects and assignments for students.

2. To support professional development for both educators and library practitioners, we recommend the development of a resource repository of educational materials. This may incorporate and/or build on the work of the Design Thinking for Libraries website, which currently features inspirational examples. Ideally it would also include curricular materials, such as recommended reading lists, handouts, worksheets, activities, etc.

3. For additional support for professional development, we recommend events and workshops at major professional venues, such as ALA conferences and the ALISE annual meeting. Online venues, such as webinars, may also be appropriate.

4. To communicate to a wider audience about the incorporation of design in librarianship, and thus help foster the concept of multiple understandings of design and the need to move from implicit incorporation of design to the more explicit, we recommend extensive dissemination of this work and ongoing support for work that explicitly communicates to research and professional audiences about the use of design in librarianship.

We strongly believe that moving forward with these next steps will build on the foundation established by this national forum by setting significant changes in motion that can affect master's level library education nationwide.

Appendix A: Participant List

<u>Invited Attendees</u>

Cindy Aden, Washington State Library

Brian Bannon, Chicago Public Library

Steven Bell, Temple University Libraries

Don Carr, Syracuse University Department of Design

Megan Emery, Chattanooga Public Libraries

Melanie Feinberg, University of North Carolina School of Information and Library Science

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David Hendry, University of Washington Information School

Susan Hildreth, University of Washington Information School

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Georgia Lomax, Pierce County Library

Gabriela Marcu, Drexel University, School of Computing and Informatics

Jeanette Norris, Brown University Libraries

Debbie Rabina, Pratt University School of Information

Juan Rubio, Seattle Public Library

Gary Shaffer, University of Southern California, Marshall School of Business

Pam Smith, Anythink Libraries

Mega Subramaniam, University of Maryland, College of Information Studies

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