Exploring Teaching Librarians' Beliefs about Undergraduate Student Learning

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Abstract

Whether formally articulated or tacitly held, all librarians have beliefs about how undergraduate students learn. Framing learning beliefs as a component of a teaching philosophy, this study explored how librarians described how undergraduate students learned best. Thirteen librarians from three doctoral universities in Texas were interviewed. Teaching librarians in this study believed that students learn in different ways; that students need to interact with others, act, and reflect in order to learn; and that students learn when certain conditions are met. The learning beliefs identified align with learning theories and the science of learning, but the threshold concepts theory underlying the ACRL *Framework* did not appear to influence how librarians conceptualized the learning process. These findings are a starting point for librarians considering how to articulate their own beliefs about learning.

Keywords: learning beliefs, ACRL Framework, learning theory, library instruction, teaching philosophies

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An instructor's view of the learning process influences not only their teaching, but also how students themselves learn (Trigwell et al., 1999; Tynjälä, 1997). Therefore, beliefs about learning guide teaching librarians' interactions with undergraduate students in instruction sessions, research consultations, and reference work and can influence student learning. The purpose of this study is to explore teaching librarians' beliefs about how undergraduate students learn. This is important for two reasons. First, many teaching librarians do not have formal education about learning theories (Brecher & Klipfel, 2014; Namaganda, 2020). Second, the exploration of teaching librarians' beliefs about learning will provide insight into how librarians' beliefs about learning align with the threshold concepts theory underlying the *Framework for Information Literacy for Higher Education* (Association of College and Research Libraries [ACRL], 2015). The research question guiding this study is: How do teaching librarians at Texas doctoral universities describe their beliefs about how undergraduate students learn?

Literature Review

This study is guided by previous research on how teaching librarians learn about learning theories and on how librarians think about the *Framework*. These two topics will be the focus of the literature review.

Developing Knowledge of Learning Theories

Librarians often lack formal knowledge about learning theories (Bewick & Corrall, 2010; Brecher & Klipfel, 2014; Montgomery, 2015), as most librarians do not learn about teaching and learning in their LIS master's programs (Bryan, 2016; Julien & Genuis, 2011). Instead, they learn how to teach through on-the-job training, conference attendance, and self-directed learning (Bryan, 2016; Julien & Genuis, 2011; Westbrock & Fabian, 2010). Looking deeper at what librarians know about teaching practices, Bewick and Corrall (2010) found most participants felt comfortable with their level of pedagogical knowledge, but knowledge of teaching and learning theories and instructional design emerged as two areas where librarians had the least amount of competence.

Unfamiliarity with learning theories can make it challenging for librarians to teach in a way that contributes to student learning (Brecher & Klipfel, 2014). Additionally, knowledge of learning theory can influence a librarian's teaching identity or how they view their teaching role. "Problems

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with professional education" emerged as a theme in Walter's (2008, p. 62) study of librarians' teaching identities, illustrating the role master's programs play in supporting the development of a librarian's teaching identity. In their autoethnographic study, Mattson et al. (2017) discussed how learning about teaching and learning theory helped them accept their teaching role. While not focused exclusively on learning theory, Hays and Studebaker (2019) found engagement in the scholarship of teaching and learning (SoTL) had a postive impact on librarians' teaching identities. Therefore, knowledge of learning theory is important not only for its influence on student learning but also because it can shape a librarian's teaching identity.

To address the gap in knowledge about learning theory, individual libraries and the wider profession have developed programs, such as the ACRL Immersion Program, Librarians Active Learning Institute, and the Library Instruction Leadership Academy, to enhance librarians' competencies in pedagogy, including learning theory. Brecher and Klipfel (2014) advocated for the use of self-directed learning as a way for librarians to learn about how students learn. Multiple articles have discussed learning theories and described how the theories could be applied to library instruction (Ha & Verishagen, 2015; Li, 2007; McNeer, 1991; Sanderson, 2011). The available literature has demonstrated a range of opportunities that have been created to help librarians deepen their knowledge of learning theory; however, less is known regarding the beliefs teaching librarians have internalized about the learning process. Librarians may be basing their learning beliefs on experiential learning that does align with learning theory. For example, through the assessment of a training program on adult learning theory, Malik (2016) found that some participants realized that they already used adult learning theory in their instruction. Thus, more research is needed to explore how librarians define and explain their beliefs about student learning and if these beliefs are based on articulated learning theories or the librarian's experiential learning.

The *Framework* and Learning Theories

Beliefs about learning can be influenced by one's discipline (Schönwetter et al., 2002). For librarians, the *Framework* is a document that could influence how they conceptualize how students learn information literacy. The *Framework* is based on the threshold concepts theory, backward design, and metaliteracy. Of particular interest to this study, is the theory of threshold concepts. Meyer and Land (2003) described threshold concepts "as akin to a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress" (p. 1). Building from this definition, the *Framework* articulates six frames, which represent the threshold concepts for information literacy. These frames are the aspects of information literacy that once understood,

change a student's view of the information landscape. Ultimately, teaching information literacy in terms of threshold concepts could influence one's beliefs about how students learn through the characterization of the frames as portals to new ways of thinking.

The *Framework* calls for teaching that goes beyond lecture and demonstration to teaching that involves students (Burgess, 2015; Mattson, et al. 2017). Articles on the *Framework* have focused on its applications to teaching, like the teaching strategies librarians have used to implement it (Latham et al., 2019; Vossler & Watts, 2017) or redesigning instruction based on it (Haren, 2019; Mills et al., 2019). Another line of research has focused on librarians' feelings about and preparations for implementing the *Framework* (Charles, 2017; Gross et al., 2018; Nichols Hess, 2015). These studies primarily focused their inquiry on teaching and instruction related to the *Framework.* Although teaching and learning are inextricably linked, an explicit discussion of the beliefs teaching librarians hold about student learning and how those relate to the *Framework* is still unexplored.

While some librarians have questioned the application of learning theory in the *Framework* (Bombaro, 2016; Malik, 2016), others have viewed it as a way to advance the knowledge and understanding of theory. Schachter (2020) saw the *Framework* as one way the profession has been integrating theory into practice. Malik (2016) suggested that the *Framework* could be a catalyst for advancing the discussions of learning theory in relation to information literacy. Because of the importance of the *Framework* to the profession, it is possible that it has influenced teaching librarians' beliefs about how students learn information literacy, but more research is needed to explore this connection.

This literature review has highlighted the need for further exploration of librarians' perceptions of how students learn. This research is important because the *Framework*, a guiding document in the profession, is based on a particular conception of learning. Additionally, because MLS programs generally do not have courses that include learning theory, there is no shared knowledge base in the profession about how learning occurs. This study aims to provide insight on these issues by investigating what beliefs teaching librarians hold in regards to undergraduate student learning.

Methodology

This research was conducted as part of a larger dissertation study that examined the teaching philosophies of teaching librarians at three doctoral universities in Texas. A teaching philosophy statement articulates a teacher's views on teaching and learning and how those views are implemented during teaching interactions with students. The focus of this study is on one aspect of a teaching philosophy: librarians' beliefs about how undergraduate students learn. Beliefs about

learning include personal assumptions about learning, conceptualizations of student learning, and a "discussion of learning parameters (styles, diversity, difficulties)" (Schönwetter et al., 2002, p. 89). Conceptualizations of student learning can be "intuitive and based on experiential learning, rather than on a consciously articulated theory" (Chism, 1998, p. 1). While this article focuses on beliefs about learning, these beliefs were discussed within the overarching context of a teaching philosophy.

A qualitative case study research design (Creswell & Poth, 2018) was used to explore the phenomena of beliefs about learning. The use of a qualitative case study research design allowed for an in-depth understanding of the phenomena through the lens of each participant. Additionally, this research design was chosen to account for the role of the library context. Prior research has demonstrated that a librarian's institutional context could influence a librarian's teaching role and teaching identity (Austin & Bhandol, 2013; Davis et al., 2011; Julien & Pecoskie, 2009; Nichols Hess, 2019). Thus, the author selected three institutional cases using homogeneous sampling, where all sites had a similar characteristic (Creswell & Guetterman, 2019). Each case was a public doctoral university with very high research activity (Carnegie classification of R1) in Texas. The three cases included in this research are designated as Regional Research University (RRU), Northern Research University (NRU), and Metropolitan Research University (MRU).

Participant Recruitment

Librarians at each institution who had teaching interactions with undergraduate students were eligible to participate in the study. The author consulted with contacts at each institution to verify all departments where librarians have instructional responsibilities and sent email invitations to all librarians in the identified departments. The author continued to send email reminders and utilized snowball sampling until at least four participants were recruited from each institution. After signing an electronic informed consent form, participants filled out a demographic questionnaire about their teaching experience and scheduled an interview.

Interview Data Collection

The author conducted semi-structured interviews via the Zoom online video conferencing platform in October 2020. The audio of the interviews was recorded and transcribed using Zoom. A semi-structured interview protocol using open-ended questions guided the one-on-one interviews. Open-ended questions allowed the participants to provide extended responses, and the semi-structured interview format allowed the author to ask unscripted questions to seek additional information. The interview protocol was refined through pilot testing with teaching librarians at

the author's institution. Appendix A contains the full interview protocol. Two questions focused specifically on the teaching librarians' beliefs about learning: "How would you describe how undergraduate students learn best?" and "Could you describe how your teaching practices contribute to undergraduate learning?" Another question asked, "In what ways does the ACRL *Framework* guide how you help undergraduate students learn?" Other questions focused on teaching methods, beliefs about teaching, and institutional culture related to instruction.

Description of Participants

The author collected data from 13 participants: four from RRU, four from NRU, and five from MRU. Appendix B describes each participant's teaching experience and training for library instructional duties. At the time of the interviews, participants' experience as academic librarians ranged from 1.5 years to 21 years. Four participants (Anne, Elle, Lauren, Sarah) had an MLS course or practicum that prepared them for instruction duties. Four participants (Edgar, Lauren, Rene, Sarah) had teaching experience in a college or K-12 school setting prior to becoming an academic librarian. In their current positions, all participants taught one-time instruction sessions tied to courses. NRU was the only institution where librarians taught an information literacy credit course. Of the four participants from NRU, Sarah and Regina were active instructors, Valerie had taught the course previously, and Lauren had not taught the course yet but had taught for-credit library courses at a prior institution. Although all participants teach in their current positions, not all fully embraced a teaching identity.

Data Analysis

The data analysis was guided by Creswell and Poth's (2018) data analysis spiral and Lincoln and Guba's (1985) processing of data for naturalistic inquiry. The interview data analysis spiral followed this process: managing and organizing the data, reading and memoing emergent ideas, describing and classifying codes into themes, developing and assessing interpretations, and representing and visualizing the data (Creswell & Poth, 2018, p. 187). To develop the themes, the author used the qualitative analysis software ATLAS.ti for open coding, which consisted of assigning phrases to sections of the transcribed interviews to describe learning beliefs. When new learning beliefs were identified in the transcript, the transcript sections were compared with prior phrases to determine if an existing phrase could be used to describe the section or if a new phrase should be created. After all the transcripts were coded, the phrases were grouped together to make code groups within ATLAS.ti. With a focus on commonalities, the related code groups were combined to create themes.

Researcher Positionality

In qualitative research, the researcher is the instrument for collecting and analyzing the data (Merriam, 1998). As a teaching librarian at a doctoral university in Texas, the author is a member of the teaching librarian professional community recruited for this study. Therefore, her familiarity with and beliefs about the research topic influenced how the interview questions were asked and the interpretation of the findings. To bracket her beliefs, the author kept a journal with notes and reflections on the data collection and data analysis. The author also used peer debriefing with her dissertation committee chair to discuss the themes that emerged from the data.

Findings

Three themes about learning beliefs emerged from the interviews. First, participants discussed that undergraduate students learn in a variety of ways. Second, they believed that the learning process entails students interacting with others, students doing some type of activity, and student reflection. Finally, participants believed that in order to learn, students need to see the applicability of the content and have their emotional needs met. The learning theories and thoughts on the *Framework* articulated by the participants are presented separately after the learning belief themes.

Undergraduate Students Learn in a Variety of Ways

Participants believed that there was not a single best way for students to learn. This belief was expressed through general statements about students learning in multiple ways. For example, Anne stated, "there is not a one size fits all." Participants also expressed this belief by indicating that students have different learning preferences. They referred to the idea of learning styles both generally and in terms of the visual, auditory, and kinesthetic (VAK) styles. For example, Regina described the VAK learning styles quizzes she uses with her students. Elizabeth articulated learning preferences through the use of Harvard education professor Richard Elmore's (2014) modes of learning framework:

> Trying to have as many of those components is how you're going to get the best organic learning experience for a class because each student will learn differently… there's not one way that you can teach students and hope that they learn, so you have to provide these different modes.

As opposed to using general statements stating that students can learn differently, participants appeared to be influenced by existing frameworks when describing learning preferences.

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The narratives also suggested that the participants were realizing aspects of student learning that differed from their own. This occurred when participants described how their personal learning preferences differed from how they taught library instruction sessions. For example, Anne stated, "I know the way that I learn, and I'm not teaching the way that I learn." Sarah discussed her learning preferences and subsequent teaching in terms of learning styles, "I really like the auditory and the visual because that's what I am. But I really try to employ the kinesthetic." These statements illustrated participants' reflection on their own learning preferences and consideration of the different learning preferences students might have.

Undergraduate Students' Actions in the Learning Process

Participants believed that students do not adequately learn through lecture. They believed that students need to do certain things to learn: interact with others, do something hands-on, and reflect. These three aspects were discussed separately, not as a sequence of actions.

First, participants believed that students learn by interacting with their peers and their instructor. As Valerie stated, "I really do think that the more the students can be actively talking either to peers or to the instructor the better." This interaction could occur through discussions, asking questions, or when working together on a group activity. While interacting with others can overlap with hands-on activities, interaction refers to broader actions like being able to ask the librarian questions or unstructured discussions as opposed to a coordinated activity.

Second, participants also believed that learners must do something hands-on to learn. They asserted that being talked at or simply watching a video was not enough for students to learn the content. This action is distinct from interaction through a more specific focus on providing learners with independent practice or time to work on activities on their own. Engaging in activities frequently related to having a hands-on component in the instruction session in order to facilitate learning. Elizabeth mentioned this when talking about using databases:

> I think with learning how to use databases, because it's such a kinetic skill, you have to work through it. You can't just watch someone access a database and then expect your students to remember how to do it a week later or something like that.

The belief that students learn through doing was also shown through statements comparing active learning to lecture methods. For example, while discussing the challenge of integrating a student-centered approach in online videos, Elle reflected on the research that shows the importance of not relying on lecture: "based on the research I've seen, students learn better when they are learning in that series of non-lecture-based methods."

Third, participants believed that students need to take time to reflect on their learning. Valerie described reflection in terms of how students answer questions, "I think that having students write a more reflective-type response to questions instead of again either just sitting and listening or just verbalizing it with one of their peers." Kate summed up this belief by stating, "we also try not to burn students out, like activity after activity after activity with no real sit and think time." While all participants discussed interaction or hands-on activities as ways to facilitate learning, only a few participants at each institution discussed the role of reflection in the learning process.

Undergraduate Students' Conditions for Learning

Participants believed that particular conditions must be in place for students to learn: seeing the applicability of the content and feeling emotionally ready to learn. In describing the first learning condition, Kate explained that it is "easier for anybody to learn if they could see why that learning is going to be useful to them or is going to impact them in positive ways further down the road." Participants also described connecting information literacy concepts to students' prior knowledge and real-world experiences. The participants at MRU believed in activating students' prior knowledge as a way to initiate the learning process. For example, Olivia stated,

> the important thing is that the students feel empowered and that they're aware that they do come with knowledge and pre-existing experience that is meaningful and that we're just trying to kind of help them build off of that, so that they can do their best work.

This condition for learning articulated by the participants primarily described actions that a teaching librarian can take during an instruction session. As instructors, the participants believed that they could help students make connections between the content and prior knowledge, real-world experiences, or future work to help students learn.

The second condition for learning was students must be in the right emotional state and feel comfortable in the learning situation to learn. Rene described the idea that learners need to be ready to learn. Other participants described learners needing to feel supported. For example, Edgar stated, "they want someone they can trust to ask questions or get advice from without feeling inhibited or feeling, you know, like they're not allowed to ask those sorts of questions." These beliefs spoke to understanding a student's emotional state as well as creating an atmosphere during the instruction session that makes students feel comfortable.

Participants also discussed students feeling like they are a part of the learning process as another emotional need that influences learning. As Sarah stated, "I really think undergraduates learn best

when they feel like they're part of the lesson that we're not just preaching at them, or just lecturing at them." Participants from MRU described how when learners are actively participating, they feel empowered in their learning and learn better. While an earlier theme highlighted the role of hands-on activities in the learning process, this belief showed recognition of the affective dimensions of learning that the hands-on activities or classroom interactions can create.

Articulated Learning Theories

Some participants did mention theories or instructional design methods that influenced their beliefs about student learning. These were not talked about consistently by all participants, and some participants discussed multiple learning theories and methods. Participants mentioned several theories including constructivism (Fosnot & Perry, 1996), Elmore's (2014) modes of learning framework, and andragogy (Knowles, 1970, 1980). Instructional design methods included universal design for learning (CAST, 2018), backward design (Wiggins & McTighe, 2005), and the USER (Understand, Structure, Engage and Reflect) instructional design method (Booth, 2011).

The *Framework* and Student Learning

The *Framework* was discussed by some participants prior to the specific question in the interview protocol, while others did not mention it until specifically asked about it. For the participants in this study, the conception of learning advanced by the theory of threshold concepts did not influence their beliefs about student learning. In some cases, there was some resistance to the theory of threshold concepts from the participants. For example, Elle described,

> The idea of threshold concepts never quite was as effective. So there's the frames and then there's the idea underlying it about threshold concepts, and that I think it's just too hard to measure in a one shot, so I've never really glommed on to that aspect, but I love the idea of some specific frames.

Participants viewed the *Framework* more as a document to guide what is taught than how learning occurs and discussed that they used it for developing student learning outcomes.

In addition to using the *Framework* to develop learning outcomes, participants mentioned that it influenced their conceptions of information literacy. Edgar described how the *Framework* moved information literacy from skills to concepts:

> I think the *Framework* is primarily a conceptual model… rather than like a teaching rubric or a skills model. It's not as specific as that; it's really about understanding these big concepts. And I think the ideas are more important at least to me than the competencies.

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Rene described a similar conception of information literacy by focusing on students' ways of thinking:

> If we say we provide information literacy education, I think it's not, okay you have to do this, you should be able to do that. But, it would have a way of thinking. And we just follow some of these different areas to teach students a way of thinking, and that's what I'm trying to do.

While the *Framework* did not influence the learning beliefs of the participants, it did influence the learning outcomes of instruction sessions and how the participants conceptualized information literacy.

Discussion

Many of the participants in this study reported not having any formal training in teaching and learning, and only some participants referenced learning theories or instructional design methods. Yet, their espoused beliefs about learning align with certain learning theories (e.g., Fosnot & Perry, 1996; Kolb et al., 2001) and the science of learning (e.g., Ambrose et al., 2010; Zull, 2002). For example, the tasks of interacting with others, doing, and reflecting are demonstrated in the literature on learning. The ideas of discussion, activities, and reflection underlie constructivism (Fosnot & Perry, 1996). Kolb's experiential learning theory hypothesized a process of learning through experience, reflection, thought, and action (Kolb et al., 2001). The beliefs about learners seeing the applicability of the content and having their emotional needs met also align with the science of learning. Learning must build on the learner's prior knowledge (Ambrose et al., 2010; Zull, 2002). In order for students to learn, instructors "must help them see how it matters in their lives" (Zull, 2002, p. 52). Making the learner part of the learning process can help the learner feel more control over their learning, which facilitates learning (Zull, 2002). This illustrates that librarians' experiential knowledge about how learning occurs can be a valid way of conceptualizing the learning process of undergraduates.

While most of the articulated learning beliefs were not directly attributed to a learning theory, the participants' beliefs about learning aligned with learning science and learning theories. This supports Malik's (2016) finding that librarians did not realize they were already using principles of adult learning until after participating in a professional development program focused on adult learning theory. Together these findings should give confidence to instruction librarians who feel that they lack sufficient knowledge of the learning process. However, until practicing librarians are

made aware of learning theories, they might not connect their espoused beliefs with existing theories. Professional development opportunities, like conference presentations and webinars, are one avenue for making these connections. Additional efforts within individual libraries, like internal trainings or communities of practice, are also needed to meet the specific needs of librarians within an organization. Internal professional development could provide opportunities to librarians who do not gravitate toward teaching-focused professional development sponsored by external organizations.

In reference to the different ways that learners learn, the term *learning styles* was used in different ways by the participants. Some participants used the term in the general sense to say that people learn differently, and others used learning styles to refer to visual, auditory, kinesthetic (VAK) learning styles. While the idea of VAK learning styles has been criticized (Pashler et al., 2008; Stahl, 1999; Willingham et al., 2015), librarians are not alone in VAK learning styles influencing their beliefs. A recent study of education professionals found that the VAK or visual-auditory-reading-kinesthetic (VARK) framework was one of the primary ways learning styles were conceptualized (Papadatou-Pastou et al., 2021). This illustrates that a concept that is ubiquitous in education, yet not proven empirically, has also influenced librarians. Additionally, this study supports Papadatou-Pastou et al.'s (2021) finding that teachers do not all use the term learning styles in the same way. Therefore, when discussing learning styles, librarians should explicitly define what they mean.

Participants in this study acknowledged differences between their personal learning preferences and what they believed were the learning preferences of undergraduate students. This appears to contradict Oberlies et al.'s (2021) finding that librarians had a "bias toward teaching their own learning style preference" (p. 520). One-time instruction sessions are fraught with challenges, including navigating faculty relationships (Julien & Pecoskie, 2009; Scott, 2016) and coming into an established class as an outsider (Arellano Douglas, 2018). Therefore, it might be easier to acknowledge student learning preferences when discussing beliefs than it is to incorporate student preferences while teaching. Additional research connecting articulated beliefs about learning with classroom observations is needed in order to explore how these beliefs are implemented during instruction sessions and to provide insight into how librarians overcome potential challenges to implement their beliefs.

The *Framework* did not guide the way participants thought about student learning. Rather the application of *Framework* centered around what and how librarians teach. The *Framework* was a move away from skills to "conceptual understandings" (ACRL, 2015, p. 7), and participants in this study did show a shift in thinking about teaching skills to teaching concepts. When the *Framework*

was first introduced there were debates surrounding the use of the theory of threshold concepts (Bombaro, 2016; Wilkinson, 2014). Now as the *Framework* has become more established, participants in this study are using it to develop learning outcomes, not for describing how students learn to be information literate. These findings suggest that librarians are focused on the practical implications of the *Framework,* i.e., how it can guide their instruction, rather than adjusting their learning beliefs to align with the theory of threshold concepts. The practical use of the *Framework* found in this study warrants further consideration of Scott's (2017) question of whether or not the six frames are operating as threshold concepts or as "concepts prioritized by librarians" (p. 298). If the frames are not viewed as threshold concepts, does this have implications for information literacy instruction?

Study Limitations and Future Research

This study has several limitations. First, the study population was limited to teaching librarians at three R1 universities in Texas. The findings focused on the similarities in the learning beliefs among the participants and might not be representative of teaching librarians at other institutions. Additional research is needed to explore the beliefs about learning held by librarians at different types of institutions and at institutions in different geographic locations. Second, this study focused on beliefs about learning as an element of a teaching philosophy at the time of the interview. Interview questions did not specifically ask what influenced learning beliefs or investigate how beliefs might have changed over time. Therefore, connections cannot be made in this study as to how participant background or prior knowledge influenced the articulated learning beliefs. Future studies could further explore how background and experiences have influenced the learning beliefs held by librarians. Third, this study explored learning beliefs about the *Framework* within the context of a teaching philosophy. Future studies could focus more explicitly on how librarians' beliefs about learning have been influenced by the *Framework*. Research could also explore if having teaching experience prior to becoming a librarian influences one's views of the *Framework.*

Conclusion

This study provides multiple prompts for individual reflection or group discussions. First, the findings could be used as a springboard for thinking about how one's personal beliefs align with or depart from the themes. Second, librarians could consider the role of reflection in the learning process and how to integrate reflection into instruction. Finally, in relation to the conditions for learning, librarians could contemplate how the classroom atmosphere influences learning and how to engage students who might not come to a session ready to learn. Through periodic reflection on

beliefs about learning, librarians can develop greater awareness of how their learning beliefs align with those of colleagues, students, and faculty to enrich their teaching practice.

Acknowledgements

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Appendix A

Interview Protocol

Introductory Questions

1. Describe how your library instruction has changed due to the COVID-19 pandemic.
2. How does your library instructional role shape your librarian identity?

Teaching methods for undergraduate students

1. What teaching methods do you use in your library instruction sessions?
    a. What about your research consultations (or reference interactions)?
2. In your opinion, what are good teaching methods for teaching librarians to use? Why?

Beliefs about undergraduate teaching

1. How would you describe your role as a teacher for undergraduates?

2. What does the concept of "teaching undergraduates" mean to you?

Beliefs about how undergraduate students learn

1. Could you describe how your teaching practices contribute to undergraduate learning?
    a. Why do you think those teaching practices would help students learn?
    b. Information literacy, in particular?
2. How would you describe how undergraduate students learn best?

Extra Questions

1. In what ways does the ACRL *Framework* guide how you help undergraduate students learn?
2. In what ways does your library environment or culture influence your teaching practices?
    a. How has your library environment prepared you for teaching?

Appendix B

Table B1: Teaching Experience and Teaching Preparation of Participants

Participant [a]	Institution	Years as librarian with teaching duties	K-12 or college teaching experience prior to becoming academic librarian	Preparation for instructional duties			
				MLS course	On the job training	Professional development [b]	Library instruction training program [c]
Anne	RRU	12		✓	✓		
Constantine	RRU	6			✓	✓	
Edgar	RRU	4	✓		✓	✓	
Elizabeth	RRU	1.5			✓	✓	
Elle	MRU	11		✓	✓	✓	✓
Kate	MRU	12			✓		
Lauren	NRU	5	✓	✓	✓	✓	
Nicole	MRU	9			✓	✓	✓
Olivia	MRU	5			✓		✓
Regina	NRU	15			✓	✓	✓
Rene	MRU	21	✓		✓	✓	✓
Sarah	NRU	15	✓	✓	✓	✓	
Valerie	NRU	7			✓	✓	

[a] Participant names are pseudonyms chosen by the participant or the author.

[b] Includes conference programs, pre-conference programs, online webinars, and/or online courses.

[c] Includes Immersion and Librarians Active Learning Institute.