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An Exploration of Academic Librarian Self-Efficacy in the Teaching Role: A Canadian Perspective

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AN EXPLORATION OF ACADEMIC LIBRARIAN SELF-EFFICACY IN THE TEACHING
ROLE: A CANADIAN PERSPECTIVE

by

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Dedication

I dedicate this dissertation to two people who had a profound impact on me during the completion of this degree. To my son, Heath, who was born during my coursework, may this remind you that with hard work and dedication, all things are possible. To my Granny, Ruth, who passed away aged 101 before she could see me complete this degree. The patience and inner strength I learned from you has served me well and I know you are with me in spirit as I celebrate this achievement.

Abstract

The purpose of the study was to examine the impact of short professional development interventions, covering core concepts in teaching and learning, on the self-efficacy of academic librarians in the teaching role. The participants in this study were six academic librarians at a large, research-intensive university in Canada for whom instructional work was a requirement of their position.

To examine librarian self-efficacy in the teaching role, the participants completed a standard self-efficacy questionnaire and a semi-structured interview prior to participating in the professional development interventions. The topics covered for professional development included learning theory, lesson planning, classroom management, and assessment, with an emphasis on formative assessment practices. After participation in the professional development, participants engaged in their regular instructional work and, six to eight weeks later, completed the standard self-efficacy questionnaire and a second semi-structured interview.

The results of this study indicate librarian self-efficacy in the teaching role is a complex interplay of factors, including self-perception, faculty interactions, and institutional support. While self-efficacy is impacted by short professional development interventions on teaching, those interventions alone are not enough to develop teaching self-efficacy for academic librarians.

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Chapter One: Introduction

Teaching in the Western educational tradition has typically been conceived as a public good meant to appropriately socialize the citizenry for work and contribution to a functioning society (Heater, 2003). Brumbaugh (1986) stated the, "...aims of education should include individual authenticity, aesthetic sensitivity, social effectiveness, and intellectual discipline" (p. xxi). Teachers in early North American schools were simply adults with no particular training, but by the early 1800s teacher training institutions called normal schools had been established (Feiman-Nemser, 1989). These training programs typically consisted of two years of study post high school, and were often attended by young women, as the pay for professional educators was extremely low in most jurisdictions.

Within higher education, educational models developed around specific academic disciplines meant to shape the social, moral, and intellectual experiences for their elite students (Smart, Feldman, & Ethington, 2000). As teacher education became more formalized through the normal schools, educational institutions designed specifically for the training of teachers were founded around North America. While these programs had a strong professional emphasis, they also developed by drawing from the disciplinary model and requiring a strong foundation in liberal arts subject areas prior to specialized coursework in education. This extended the training for prospective teachers from two to

four years of post-high school education and led to the founding of schools of education within institutions of higher education around the continent.

A Brief History of Librarianship and Formalization of Librarian Education

For most of history, librarianship was not formalized as a regular profession. Rather, it historically arose from the clerical profession out of need, when individuals or groups began to own enough materials and books to require organization and a formalized lending process. Though early librarians were typically male secretaries, the rise of libraries, but especially public libraries, corresponded with a shift toward women in such clerical roles, leading to an overrepresentation of women in the library profession (England & Boyer, 2009). In North America, libraries quickly became public and social institutions, allowing lifelong learning amongst the electorate. This specialized positioning has opened libraries up to a variety of uses, but academic libraries in particular have always held a more focused and particular role within the institutions they serve.

Regarded as a service profession, librarians sought to work with and for their communities in a reactive manner. There have been considerable discussions of this positioning and debate of whether librarianship constitutes an actual profession, as profession connotes social privilege, a status librarians often lack even while the institutions in which they work, the libraries, are afforded such a special status (Drabinski, 2016; McGuigan, 2011). These issues were further compounded by the feminization of the library workforce, creating issues of intersectionality between the service, clerical, social, and gender status of librarians (Bruce, 2012; Maack, 1998).

The education of librarians in a formal sense began to coalesce in the late 1800s when the American Library Association, the premier professional organization in the field, began to discuss appropriate education levels in the field and advised that students pursuing careers as librarians should complete a bachelor's degree in an appropriate subject and an additional year of schooling for library-related content (Murray, 1978). By the 1920s, the format of librarian education was changing and moving toward a two-year professional degree with a focus on core subjects needed to work in the profession (Irwin, 2002; Murray, 1978). Such material included selecting, ordering, and processing books, reference, library administration, classification schema, cataloging, and the history of books and libraries (Irwin, 2002). Over time, programs evolved to include more electives to support librarians' specializations. For instance, children's literature courses were added to many programs to support the education of school and public librarians (White, 1961). Students interested in work in the academic setting often took the path of pursuing both a library degree and an additional degree, either a second master's or Ph.D., in a subject area related to their work (Mayer & Terrill, 2005). However, even when library and information science (LIS) students have access to curricula directly addressing their future instructional roles in academic libraries, it is unclear what that curricula covers and how closely the learning in the classroom aligns with professional expectations and competencies (Sproles, Johnson, & Farison, 2008).

Impact of Technological Change on the Scope of Librarianship

Within academic librarianship (as a specialized portion of the broader field of librarianship), much of the education followed the same traditional path as librarianship generally, requiring future librarians to study the same core subjects as other types of

librarianship, and then rely on elective coursework to address the particular competencies needed for academic work. Examples of such electives include specialized subject-based reference coursework, information architecture and coding, or elective classes in information literacy instruction. While these courses are a positive step for the education of academic librarians, they may or may not directly address the needed skills of practitioners, and often fail to keep up with the technological changes that permeate librarianship in the teaching role and beyond (Sproles et al., 2008).

Early librarianship was shaped by the need for the profession to organize information within the care of the building and produce that information for loan or use upon demand. Over time, librarians in North America have worked to allow individuals more ready access to information on their own, enabling academic librarians to act more as caretakers and, later, educators. The first example of this new philosophy was the open card catalog. With the development of personal computing, library catalogs moved to the online environment and individuals were able to search for, identify, and personally locate printed materials. Over time, materials themselves moved to the online environment. Early online searching still required the librarian to act as an interface between the individual and the information due to cost structures of early database products (typically pay-per-search models). As these materials moved to a subscription model, and internet access in homes and businesses allowed users to remotely access these resources, librarians realized they had both the expertise and ability to address the need to teach others about information seeking, use, and evaluation. More recent studies of LIS curricula have identified growth in course offerings on information science, web

design and architecture, and metadata, but have identified no growth of educational offerings related to teaching (Chu, 2006; Hall, 2009).

Influence of the Teaching Profession on Librarianship

Teaching within the context of the academic library dates back to the late 1970s when library administrators became interested in integrating the work of the library with the curricular work being undertaken throughout the academy (Rader, 1995). This coincided with the increasing emphasis on general education curriculum and shifting accreditation standards with a greater focus on the training and knowledge of the people within the library (Rader, 1995; Thompson, 2002). It was typically named bibliographic instruction and was centered around teaching individuals to find and use traditional sources of academic information, from the card catalog to print indexes.

As teacher education has become more formalized, there is an increasing recognition that teacher education must continually evolve based on student outcomes and the broader understandings of how individuals learn (Darling-Hammond, 2006). This understanding has spread, in part, to the field of library and information sciences through the reshaping of the *Information Literacy Competency Standards for Higher Education* into the new *Framework for Information Literacy for Higher Education* published by the Association of College and Research Libraries (ACRL). This new set of professional expectations lays the groundwork for the educational approaches of librarians, reconceiving information literacy as a series of threshold concepts that students must understand before being able to progress to more complex aspects of a topic. This integrates the idea that librarianship must evolve to address how individuals learn, although it fails to set forth clear instructional approaches or training for librarians to

effectively address these concepts. In a recent systematic review of library science literature, teaching aspects of librarian positions were found to be of increasing importance and concern to practitioners (Vassilakaki & Moniarou-Papaconstantinou, 2015).

Although teaching has become, over time, a core competency of academic librarianship, there has never been an integration of ideas from the education of preservice teachers to academic librarians. Even when required by accrediting bodies, such as in the curriculum of school library media specialists, which is regulated by the Council for the Accreditation of Educator Preparation (CAEP), there has continued to be separation between teaching and librarianship as two distinct professions. In CAEP curricula, LIS students simply take one to two education courses as part of their study of librarianship, rather than dedicated courses within the LIS curriculum addressing teaching competencies for librarians (American Library Association/American Association of School Librarians, 2010). In addition, this coursework is largely elective and offered on a rotating basis, limiting the number of students who can take it at any time and fundamentally undervaluing the teaching component of library work while students are gaining their core competencies in librarianship.

Ultimately, there exists a disconnection between the professional competencies offered to prospective librarians in their education and the expectations of the work environment in academic libraries. This is compounded by the increasing technological innovation influencing all aspects of society, but of particular interest and importance to librarians. While these changes offer great opportunity for librarians to engage in the educational process as full partners with faculty and students, they must also rise to the

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occasion and see themselves as worthy educators. This requires a shift in mindset that must take place within the context of the work environment of the academic library.

Purpose of the Study and Research Questions

In order to begin addressing the gap between the training received by academic librarians and the real-world demands placed on them as educators, this study will investigate the present state of academic librarian development with respect to education. The results obtained will be primarily informative, outlining the foundation from which North American libraries can develop their teams into the educators needed by today's students. This study seeks to understand how librarians view themselves as educators, as well as explore what strategies may be effectively used to develop their skills as educators. In particular, the key research questions to be answered are the following:

RQ#1: What are the major tenets of librarian self-efficacy?

RQ#2: What teacher development approaches are associated with the development of the self-conception of "a teacher" by Canadian librarians in academic libraries?

RQ#3: Do short professional development approaches on topics currently applied to preservice teachers effectively help academic librarians develop self-efficacy as educators?

Significance of the Study

This study is the first that applies the theory of self-efficacy to teaching librarians in higher education, extending an area of investigation long studied in the education field. The findings from this work provide insight into how self-efficacy is engendered in teaching librarians and what factors influence high or low self-efficacy in teaching for

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librarians. This leads to the development of a proposed model for librarian self-efficacy that is distinct from those of others in teaching professions. This expands the body of knowledge in self-efficacy research and applies methodological approaches to a new population of participants.

Beyond proposing a methodology and model to investigate academic librarian self-efficacy in teaching, the study also investigates the effectiveness of professional development interventions to support librarian achievement as teachers. Findings from this portion of the study can then be directly used by other academic libraries to effectively enhance the teaching performance of their librarians as a result of professional development interventions.

Summary of the Introduction

Chapter one provided core background information on the history of librarianship and the library's evolving role in higher education. Chapter two will provide a review of the literature relating to this research, including andragogy, teacher and librarian self-efficacy, librarian views on teaching, and librarian professional development. Chapter three will discuss the methods used to conduct this research and analyze the data gathered. Chapter four will review the research results. Finally, chapter five will discuss these results in the context of the theories used for this research, as well as their place in the greater literature. The discussion will also address limitations and recommendations for future research in this area.

Chapter Two: Review of the Literature

To fully examine the research questions for this study, it is important to review the literature on several different intersecting areas of inquiry. Because most librarian education relating to teaching in the academic environment is provided to librarians after they have begun their career, the theory and literature of adult learning, androgogy, are reviewed. This will be one of the core theories used for interpreting this research, with its best elucidation found in Knowles (1970; 1980). The following section, "Librarian views on teaching," explores librarians' perspectives on teaching as well as their self-conceptions as "teachers", supporting investigation of Research Question 2. The section "Teacher self-efficacy and professional development" reviews the field of self-efficacy studies and the importance of self-efficacy to teacher success, as well as the strategies commonly used to support professional development for educators generally. Self-efficacy is the other core theory which will be used for interpreting this research, with its clearest formulation stated by Bandura (1977). This information is central to all research questions, especially Questions 2 and 3. The section "Self-efficacy and librarianship" addresses the discussion of librarian self-efficacy in particular, to be explored in Research Question 1. The section "Existing training approaches for librarians" reviews the present-day state of professional development activities for librarians, including those activities designed to aid their development as educators. This information provides perspective on Research Questions 2 and 3, and serves as a springboard for understanding the effectiveness of these approaches as asked in Research Question 3.

Andragogy

Andragogy is defined as the art and science of adult learning. Credited to Knowles (1970; 1980), it is presented in contrast to pedagogy, which centers on teaching child learners. According to andragogical theory, adults and children are considered fundamentally different learners who consequently require different approaches to teaching. Child learners are generally thought to have several specific features, including arriving at learning with an undeveloped self-concept dependent on their family and the social order of their culture, lacking prior experience from which to draw upon when learning, learning to gain knowledge valued by the teacher, and needing to be heavily guided in their learning by teachers. By contrast, adults arrive at learning with greater self-motivation, more background knowledge, are oriented toward practical application of the gained knowledge, and are looking to solve the problems related to their own lack of knowledge. Merriam (2001) highlighted andragogy as an approach to teaching and learning that is highly learner-centric and demands the instructor focus on individual needs, appropriately differentiating instruction for each learner.

Andragogy contains six core assumptions that guide the discipline's approaches to education. These include the presence of a self-concept, experiences that can be drawn upon as a resource for learning, a relationship between the readiness to learn and the tasks of the social role the adult possesses, a problem-centered orientation to learning, an internal motivation to learn, and the need to know the reasoning behind learning something (Kowles, 1980; Kowles, 1984). These assumptions guide the manner in which a teacher of adult learners designs and deploys instruction, seeking to simultaneously balance multiple criteria, including making the curriculum problem-based and

immediately applicable, allowing the adult learner to self-direct the learning, and building understanding from past experience and knowledge. This approach is more process-oriented, more focused on the approaches to learning used by each individual student and less concerned with the outcome of the learning (Merriam & Bierema, 2014). It recognizes students will all begin with different background knowledge and expects the student to absorb the information and make use of new knowledge as appropriate to address problems of immediate concern.

When it comes to continuing education related to their teaching practice, librarians should be considered "adult learners" for two reasons. First, LIS programs often lack formal education related to teaching, requiring librarians to learn about and develop these skills after they are already in role. Second, library science is often a second career for librarians, meaning that librarians are typically well into their working life at the point they require training about teaching practice. This training most often comes in the context of professional development activities, including sessions at professional conferences, mentorships with experienced teacher librarian practitioners, training retreats sponsored by professional organizations, self-training through professional reading, and the pursuit of knowledge through the attainment of additional degrees, particularly in the educational field. The effectiveness of this training can vary considerably based on its quality, context, and interaction with the learner, and it can also be measured in part through its alignment with sound andragogical practice.

With this foundation, one can begin to review the potential effectiveness of professional development for training teachers, as well as potentially the overall impact professional development efforts have across fields. Webster-Wright (2009) found the

majority of professional development opportunities are focused solely on the content needed in the field and fail to effectively address the learning needs of participants. In contrast, Pittman and Lawdis (2017) presented a case study where online professional development units using auditory, visual, and kinesthetic instructional techniques were used to address the learning needs of clinical therapy practitioners seeking development on evidence-based practice approaches to integrate into treatment settings. The use of these varied teaching methods was assessed as very valuable to the learning of the participants in the professional development course and aided in their integration of the content into their practice. Mackay (2017) indicated learners gain career capital, the knowledge and skills needed to advance within a given career path, and that these external motivators may provide powerful incentive for adults to engage with professional development opportunities. These conflicting perspectives indicate a deeper look at the meaning any professional development engagement has to the individual learner may help remove disagreement or confusion around the effectiveness of professional development education and best reflect the andragogical nature of the experience.

Librarian Views on Teaching

The ACRL sets forth the expected teaching practices and competencies for academic librarians. In the recently revised *Standards for Proficiencies for Instruction Librarians and Coordinators* (2017), the overseeing taskforce and ACRL governing board identified the multiple roles librarians must master to be effective in their instructional roles in academia. These include advocate, instructional designer, instructional partner, leader, coordinator, lifelong learner, and teacher (Standards and

Proficiencies for Instruction Librarians and Coordinators Revision Task Force, 2017).

These roles were identified through an analysis of job advertisements for academic

librarians with an explicit instructional role. In describing the expectations for academic

library teachers, they state:

> This role emphasizes activity in the classroom or other instructional environments
>
> where the librarian interacts directly with learners. The teacher employs best
>
> practices of teaching and learning for integrating information literacy into higher
>
> education. The teacher engages with learners, partners with faculty and
>
> administrators, and motivates learning with regard to the importance of
>
> information literacy in disciplinary, subject-based, and applied contexts. The
>
> teacher employs a learner-centered approach, encouraging learners to be agents in
>
> their own learning. (Standards and Proficiencies for Instruction Librarians and
>
> Coordinators Revision Task Force, 2017, p. 369)

The other roles are similarly defined, requiring academic librarians in

instructional positions to employ a wide variety of educational strategies with limited

training. While some librarians enter the academic setting with a background in

education, such as those identified by Olivas (2013), where individuals transitioned from

K-12 teaching to academic librarianship, most do not.

The teaching contexts in which librarians work may differ greatly from most

others in teaching professions. The most common form of instruction used by librarians is

that of the one-shot model, a single instructional intervention within a bounded time

period, typically ranging from one to one and a half hours, within the scope of a

disciplinary or general education course. As discussed by Yearwood, Foasberg, and

Rosenberg (2015), librarians may also use a few other models for instruction, including one-on-one teaching, also called library consultations, where librarians meet with learners individually or in small groups outside of scheduled class time; embedded librarianship, where librarians visit a disciplinary or general education class multiple times during a semester; or credit-bearing instruction, where librarians are the instructors of record for courses specifically covering information literacy knowledge and skills. Within the survey, librarians perceived one-on-one teaching, followed by credit-bearing instruction and embedded models as the most effective instructional approaches. One-shot models and materials provided online to support or supplement instruction were identified as least effective instructionally. While this reflected the librarians' perceptions of effectiveness, they did not align with the reality in which librarians worked. In this survey, librarians overwhelmingly participated in one-shot instruction though they deemed it to be ineffective. The content covered by librarians largely related to searching for and locating desired information, though several respondents indicated the desire to move librarian teaching toward critical thinking approaches and to cover search strategy within this broader framework.

Examining teaching within the Canadian library context, Julien and Genuis (2011) undertook a national survey of librarians' teaching roles. Of the respondents, over forty percent worked in academic libraries, most anticipated taking on instructional roles in their library work, and those who took formal coursework in instruction during their LIS education were more likely to feel prepared for their instructional work. Workshop, seminar, or professional conference attendance and reading professional literature related to instruction were also found to correlate with librarian perception of preparedness and

fit with instructional work. As with Yearwood et al. (2015), librarians in the Julien and Genuis (2011) study typically participated in one-shot style teaching as the bulk of their instructional work, but respondents also routinely provided one-on-one style instruction. Respondents working in post-secondary institutions were the most likely to provide credit-bearing coursework in information literacy, though this was limited to only seven percent of respondents, indicating limited opportunity for librarians to engage in such teaching in the Canadian context. Respondents also routinely identified instruction as core to their professional identity as a librarian and an expectation for their work, although a select few felt the increasing instruction role was an imposition to their other work duties and expectations. In general, librarians enjoyed seeing learners engage with and master new information literacy concepts, as well as the simultaneous ability to grow as a professional. When asked to reflect on the challenges of the instructional role, respondents highlighted administrative, technological, and logistical concerns, interpersonal challenges of interacting with teaching faculty and learners, and the lack of preparedness for the teaching role.

Grigas, Fedosejevaitė, and Mierzecka (2016) conducted a survey-based study of academic teaching librarians in Lithuania and Poland, supplemented with integrated online interviews of short duration. One hundred twenty-five librarians responded, with the overall finding that librarian respondents felt positive about their teaching, though not enthusiastically positive. Respondents reported teaching in a variety of ways, including credit-bearing information literacy courses, embedded approaches, one-on-one instruction, and one-shot information literacy sessions. However, the survey found librarians are uncertain about the relevance and impact of their teaching to their learner

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populations. All respondents also ranked seeing teaching as a process as a low response to the survey questions. This indicates a potential misalignment between librarian professional learning related to teaching and librarian views of their own teaching practice, potentially limiting the transfer of skills gained in either sphere. The paper also indicated librarians feel a certain amount of embarrassment related to teaching and their teaching role, though the causes of this were not well explained by the study.

The value of teaching as part of the librarian role has also been of significant debate. Creaser and Spezi (2014) evaluated librarian perception of value in their teaching activities, finding librarians view embedded teaching opportunities and one-on-one instruction approaches to be of value to both librarian and learner alike. Using a case study approach, the researchers identified a number of support tools provided by libraries that allowed librarians to better engage with their teaching roles, including video production and podcasting equipment to employ flipped classroom and asynchronous online instruction, data management tools, and wiki, blog, and surveying resources. Key to librarian instructional engagement seemed to be the faculty status of librarians, present in some cases but absent in others for this study, which librarians felt help solidify their presence in the classroom and justify their call to teaching. In discussions of value of the library, it became increasingly clear that measuring and communicating the value of teaching activities was more difficult than providing use counts and other readily available metrics. As such, it is important for librarians to have a clear sense of how to communicate their worth as teachers, something that would likely grow out of a clear self-conception of that role.

Austin and Bandohl (2013) completed one of the most important studies investigating ways in which librarians navigate the transition to understanding themselves as teachers. Set in the United Kingdom, and small in scale (only two participants), the participants engaged in a curricular redesign project wherein they were given professional development support from their institution related to teaching and instruction on the "new" non-traditional aged students becoming common at that institution. Additionally they were given freedom and administrative support to use embedded instruction models, though they were still required to negotiate the presence and scope of information literacy instruction with their disciplinary faculty partners. Connections between the transition to the possession of a teacher identity and organizational support and change were paramount to the success the two participants achieved in making a transition to participating as teachers. The participants began with little identification of themselves as teachers, and began to see connections to teaching when meeting with students in one-on-one settings. Both participants felt as if they were imposters in their expanded teaching roles, with one navigating the dissonance by seeing teaching as a performance and the other through seeking to better understand the process of teaching. The study sought only to ascertain the participants responses to engagement with the institutionally provided professional development support and to understand their personal identity development related to teaching. In the end, much of the professional development support provided by the institution was found to be disconnected from the realities of librarian teaching practice, and administrative structures ultimately limited librarian effectiveness as teachers. This indicates professional development approaches

supported by the institution may not be the most appropriate or useful supports for librarians seeking to develop proficiencies as teachers.

Wheeler and McKinney (2015) studied librarian self-conceptions through a phenomenological analysis of interview transcripts conducted with six librarian research participants in northern England. Through the study, four categories of librarian self-perception were identified; teacher-librarian, learning support, librarian who teaches, and trainer. The first category, teacher-librarian, describes librarians who view themselves as teachers and feel they do the same teaching as others who teach. The second category, learning support, identified librarians who viewed themselves as teachers but felt the teaching they did was not in the same sphere as others in the teaching profession, lacking complexity and depth. Both librarians who teach and trainers did not view themselves as teachers, but librarians who teach did engage in some teaching activities while trainers did not see any of their professional activities in a teaching context. Some comments highlighted in the study that were of particular importance to the librarian self-perception were the presence of and access to standard professional development training on teaching, an understanding of teaching and learning theory, and the ability to apply varied teaching approaches in the classroom. Other participants highlighted the differences in the teaching contexts librarians typically experience, from library instructions' skill-based orientation to challenges related to developing relationships with students due to limited exposure. Teaching was also viewed as one of many responsibilities of the librarian, not the only or even central responsibility. Finally, some participants were unwilling to label any of their work as teaching because they felt teaching described more advanced interactions and knowledge than exhibited in their interactions with other faculty and

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students. In general, librarians were clearly engaging in teaching activities, though they may not have been engaged in the same scholarship of teaching and learning to definitively link theory and practice as others in the teaching profession. Librarian self-conception of teaching seemed linked to the practical, skills-based nature of the field and some individuals may have particular difficulty reaching out and expanding beyond their previous experiences. The authors highlighted the importance of individual managers in libraries making professional development related to teaching available to librarians.

Hall (2017) investigated the effectiveness of having librarians engage in systematic post-graduate teaching certificate training. One important contribution made by this paper is the observation that the level of connection a librarian feels with their role as an educator has an immense impact on their ability to successfully teach in the higher education environment. The researcher herself had participated in the certification program and found it improved her teaching practice by allowing her to better communicate with other academics using the language of education, use active learning teaching techniques, and reflect on her teaching practice. Based on this, the researcher sought to share the impact of librarian participation in such a certificate program. Though personal reflection, the article sets forth the importance of librarians receiving more training related to teaching and learning in the higher education environment as key to their success in their expanded educational roles.

Teacher Self-Efficacy and Professional Development

The primarily theoretical basis of self-efficacy as addressed in this study is from the social cognitive perspective based on the work of Bandura (1977, 1997), who focused on the theory of self-efficacy - the personal belief that one is able to control the

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experiences of events in one's life and self-regulate the emotional and physical response. The theory of self-efficacy is part of a larger body of the literature on expectancy theories, probing an individual's perceived ability to engage in or complete some task. However, self-efficacy presents a more fulsome picture than other expectancy theories because it recognizes the individual's ability to achieve specific outcomes through the application of the perceived capability and incorporates a recognition and understanding of contextual factors into the theoretical framework (Pajares, 1996). Self-efficacy, therefore, is focused on the idea that an individual is able to execute action or behavior that produces a desired outcome (Wyatt, 2015).

Although it has not previously been presented in the literature in this way, the following theory is a proposed model for self-efficacy that supports a deeper understanding of this concept and its function both for teachers and librarians performing teaching roles.

As closely-stated previously, self-efficacy is an individual's belief in their ability to execute an action or behavior that produces a desired outcome. As such, it means that the concept has, at a minimum, the following elements:

- The knowledge and skills associated with producing an action or behavior (with the quality of this knowledge and skills varying from a "low" to "high" level)
- The *belief* that these knowledge and skills are adequate to effect the production of a desired outcome (self-efficacy)
- The environment in which the actions or behaviors arising from this knowledge and skills cause outcomes to occur

- The feedback from observing the outcomes in the environment that provides the foundation for the assessment of self-efficacy

These elements align with the core theory of self-efficacy as defined and developed by Bandura (1977, 1997) and are reflective of a synthesis of the self-efficacy literature in teaching (Elaldi & Yerliyurt, 2016; McKim, 2017; Tschannen-Moran, Woolfolk, & Hoy, 1998; Woolfolk & Hoy, 1990). Figure 1 provides a visual model of the conceptual process of self-efficacy. In this model, self-efficacy is formed and informed by an estimation of the quality of the set of skills possessed by an individual. These skills are put in to practice through various actions in the environment, which then lead to observable outcomes. The individual's perception of these outcomes then provides feedback to the individual's assessment of self-efficacy.

To illuminate this model with a simple example, consider the case of a cook making a delicious meal. The cook may have developed a set of cooking skills over their lifetime, and so they may have a strong belief that they are able to cook a delicious meal (high self-efficacy with regard to cooking). They gather the ingredients, process them, cook them, and then taste the results. If the meal tastes delicious, this reinforces the cook's high self-efficacy regarding their cooking skill. However, if the meal does not turn out to be delicious, it may lower their self-efficacy and may lead them to consider what in the process may have contributed to a less-desirable result.

It is important to note that the feedback informing an evaluation of self-efficacy is often continuous and multi-faceted. To return to the example of the cook – rather than evaluating solely upon the final taste of the dish, the cook will likely have considered the quality of the ingredients during preparation, reflected on the scent of the food as it was
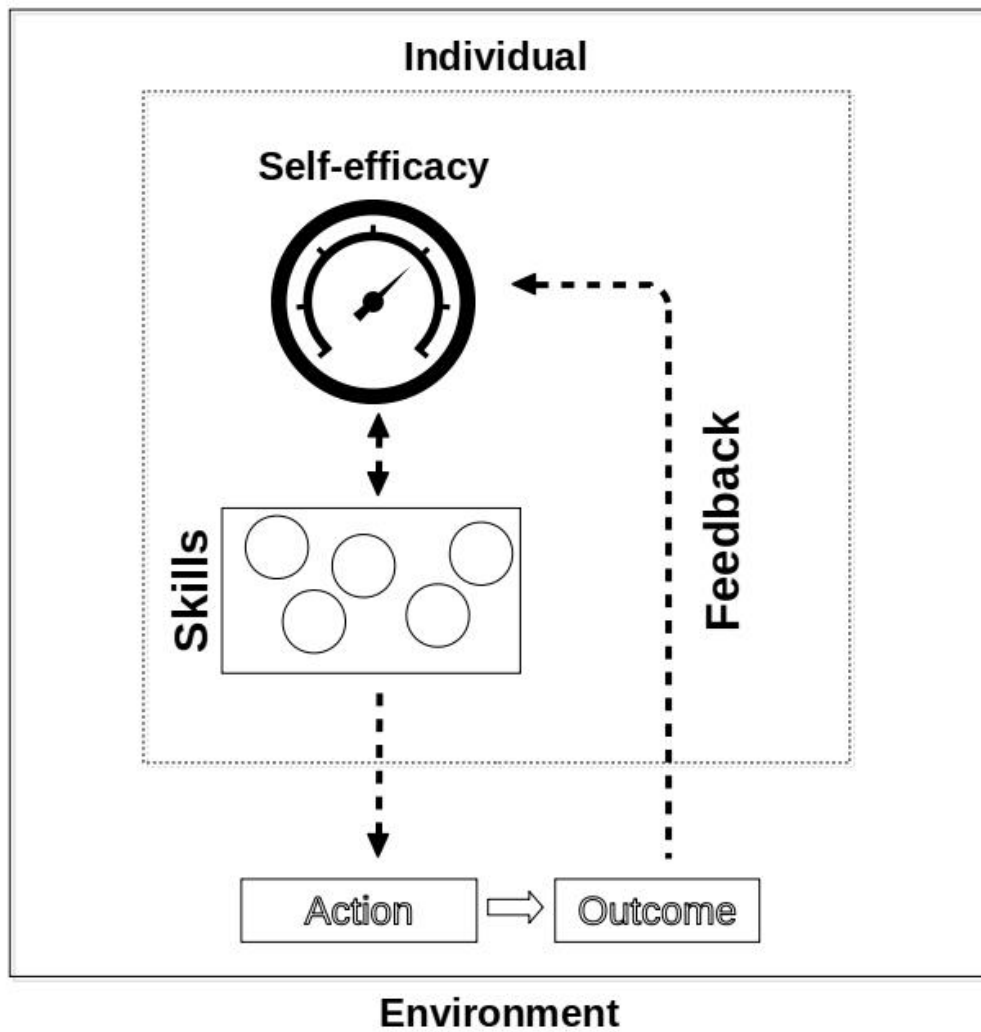
Figure 2.1. Model of the Theory of Self-Efficacy.

cooking, and considered the appearance of the dish as it was plated. In addition, there were likely many emotions experienced by the cook in the process. If the experiences were primarily those of comfort, ease, and satisfaction, those would support an estimate of high self-efficacy. If the experiences included anxiety, dissatisfaction, or surprise, those would support a lower estimate of self-efficacy. A primary consideration in this research will be the many channels of feedback that individuals use for evaluating self-efficacy, as well as the direction (positive or negative) and extent to which each of these channels affect the overall self-efficacy evaluation.

The concept of self-efficacy has been widely applied to teacher training and work (Bray-Clark & Bates, 2003; Elaldı & Yerliyurt, 2016; McKim, 2017; Tschannen-Moran et al., 1998; Woolfolk & Hoy, 1990). The term, situated in the context of education, refers to a teacher's belief in their own abilities to influence or improve student learning, independent of the student and their background (Tschannen-Moran et al., 1998; Powell-Mowman and Brown-Schild (2011); Ware & Kitsantas, 2007). Applications of self-efficacy theory have been justified as necessary and productive in the educational context because a teacher must both understand themselves and their students to be effective, as well as believing in the eventual outcome of the work they are engaged in to be successful in the classroom.

Applying the model described in Figure 2.1 and above to teaching leads to a more specific model of teacher self-efficacy (shown in Figure 2.2) derived from the basic model of self-efficacy. In this model, the evaluation of self-efficacy focuses on the question, "how effective of a teacher am I?" Observations of outcomes prior to, during, and following teaching activities all feed into this evaluation. In particular, three specific
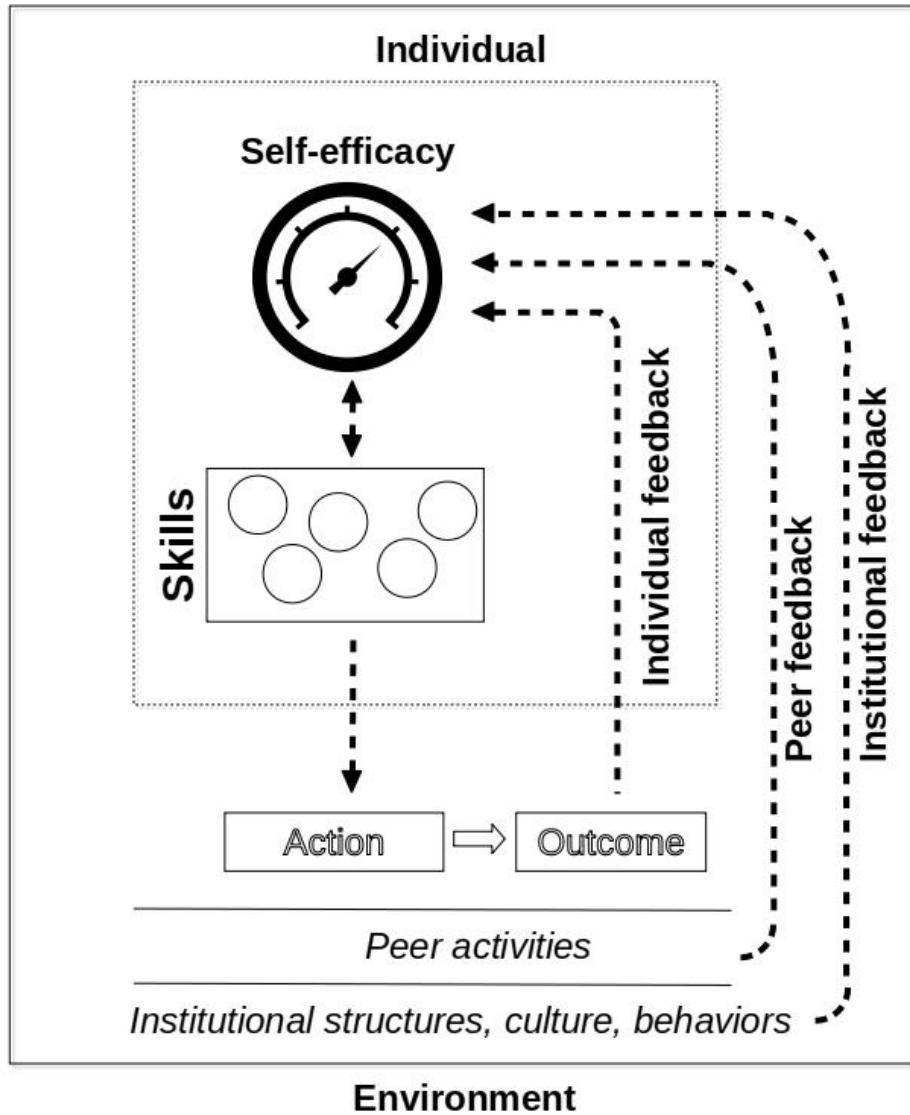
Figure 2.2. Model of Teacher Self-Efficacy in the Teaching Role.

feedback pathways are important to the evaluation of self-efficacy: individual, peer, and institutional.

The individual feedback pathway reflects *the teacher's observation of themselves*. This incorporates both their evaluation of the outcomes through the lens of their professional experience, and also their observation of their emotions through the teaching process, including considerations like anxiety, surprise, comfort, and satisfaction.

The peer feedback pathway reflects *the teacher's peers' observations of outcomes*. If available, this may include direct feedback from the peer to the teacher about the outcomes driven by the teacher's activities. However, it may include more general or indirect information. For instance, if, through a discussion with a peer, the peer recommends a different technique or way of considering an outcome, this gets incorporated into the self-efficacy evaluation. Likewise, if a peer shares their own experiences and the teacher compares their peer's experience to their own, this information can become a part of the self-efficacy evaluation.

Finally, the institutional feedback pathway reflects *the institution's evaluations of the teacher and their outcomes.* Like the peer feedback pathway, this may include direct feedback from the teacher's supervisor or mentor about the outcomes arising from the teacher's activities. More importantly, though, it reflects the structure, culture, and behaviors of the institution with respect to the teacher and teaching activities. If the institution is generally supportive of the teacher and teaching, the teacher may, for example, have more resources, have higher status, receive frequent positive recognition, have a more place very amenable to work, or receive higher pay. If the institution is less supportive of the teacher or teaching, the opposite may be expected – low resources, low

status, little recognition, uncomfortable working environment, low pay. These factors then all contribute to the consideration of teacher satisfaction and, in turn, self-efficacy.

The connection between self-efficacy and teacher performance has been borne out by research. For example, Althauser (2015) found a positive correlation between the self-efficacy of elementary school math teachers and their pupils' test scores on math exams. Carlos-Guzman (2016) has even recommended looking to teacher self-efficacy as one dimension on which teacher performance evaluations might be based in new appraisal models.

Self-efficacy studies have been deemed especially important to understanding teacher commitment to the profession. In a foundational work on teacher self-efficacy, Coladarci (1992) investigated the extent to which a commitment to teaching is predicted by high teacher self-efficacy. Using a random representative sample of elementary school teachers in the state of Maine, respondents were sent and completed a questionnaire related to teacher efficacy. The study found individuals who reported high self-efficacy were more dedicated to the teaching profession. There was also a correlation between women in the study and dedication to teaching as a profession, as well as a correlation between having more experience and a greater dedication to teaching. Context was also important when considering teacher self-efficacy. As such, the authors reviewed school factors in relation to teacher commitment to the profession. Factors including small class size and administrative support were positively correlated with teacher self-efficacy and commitment, while other factors - most notably including salary - were not. The author additionally highlighted the need for more qualitative approaches to studying self-efficacy and general efficacy in the teaching profession to understand the thoughts,

motivations, and personal drivers of these issues for individuals in a deep and profound manner. Building on this work, Ware and Kitsantas (2007) developed two survey-based self-efficacy scales for teachers to measure personal and collective factors of teacher commitment to the profession, finding school culture has in important relationship to self-efficacy through level of commitment to teaching. More recently, Chesnut (2017) used a sample population at a school of education at a large Midwestern university to update understandings and evaluate the relationship between teacher self-efficacy and commitment to the teaching profession. Using four different measures, two standard scales, and two scenario-based questionnaires to address varied aspects of teaching self-efficacy, including student engagement, classroom management, instructional strategies, and understanding of the typical classroom teaching experience at a level reflective of their intended career path. Respondents in the study rated themselves as possessing high self-efficacy and commitment to the teaching profession, though there was a much higher correlation between the two for preservice teachers intending to teach at the secondary level.

It has also been found that teacher self-efficacy can be enhanced through teacher professional development activities. Wyatt (2015) found that studying teacher self-efficacy can help aid subsequent professional development interventions. Lumpe et al. (2015) go further, stating that "teacher quality impacts student learning, involves belief systems, can be improved through professional development, and teacher beliefs should be a target of professional development" (p. 49). The authors go on to establish the connection between adult learning theory, andragogy, and professional development activities, stating there is a strong relationship between personal motivation and the

effectiveness of the professional development. Self-efficacy theoretically relates to andragogy through reflective practice and situated cognition, learning that occurs through reflection on or in practice and learning within specific contexts (Lumpe et al., 2015; Merriam & Bierema, 2014). Powell-Mowman and Brown-Schild (2011) found there was a complex interplay between content knowledge and self-efficacy. Their study of a two-year professional development fellowship for STEM teachers indicated that initial self-efficacy of teachers was determined largely by their perceived content knowledge, but professional development interventions changed individual self-efficacy constructs for participants, and, consequently, at the end of the program participants' self-efficacy perceptions were a combined reflection of their pedagogical awareness and content mastery.

Pre-service teacher training both differs from and mirrors many of the concerns seen with training librarians. Preservice teachers pursue an undergraduate degree and are given opportunities for authentic, guided classroom experiences as a natural course of their education. Though the training initially happens through formalized education, there are a number of different theoretical approaches that focused training programs should emphasize to improve the self-efficacy of pre-service teachers. One approach is to train teachers to improve their social and emotional competence. A second approach is to use self-guided professional development interventions.

Jennings and Greenberg (2009) explored the social and emotional competence of teachers in relation to their effectiveness in their classrooms. They posited teachers with high social and emotional competence have better relationships with students, more effective classroom management, and are able to affect a classroom environment with a

better social and emotional climate. This provides one approach for teacher training that uses teacher reflection and self-awareness to improve the classroom climate and increase student learning. Strahan (2016) addresses a model of self-guided professional development training wherein collaborative interplay between participants is essential to furthering teaching self-efficacy.

In a longitudinal analysis of pre-service teacher training, Harris and Sass (2007) broadly examined different teacher training paradigms including, "pre-service university education, in-service professional development, and informal training acquired through on-the-job experience" (p. 2). Using school administrative records from Florida covering all public schools in the state, the authors were able to determine the effects of each type of the three training options on student learning outcomes. They found professional development training was only correlated with improved student outcomes for middle school grades, with elementary and high school students receiving no measurable benefit from teacher engagement in professional development education. When considering the effects of pre-service university education programs, the authors found some positive effects from completing university education, with the exception of high school math teachers who studied math as a major. They also noted that content specific courses focused on pedagogical principles would be the most useful curricular approaches for training successful teachers.

While it is not unusual to see a confluence between pedagogical knowledge, self-efficacy, and particular instructional strategies in the literature, Depaepe and König (2018) found self-efficacy is associated with the varied use of instructional strategies, while pedagogical knowledge is only associated with the use of a more limited set of

instructional approaches. This indicates training that solely focuses on increasing the pedagogical competence of a teacher is not sufficient to develop self-efficacy. Takahashi (2011) additionally indicated the manner in which self-efficacy develops matters. In a qualitative study of semi-structured interviews with practicing teachers, communities of practice, which can be developed through professional development initiatives, were found to be an important component in teaching self-efficacy growth. Particularly, the manner in which social groups can encourage and reinforce positive associations with teaching help to improve self-efficacy among participants in such communities. These findings indicate professional development initiatives must be of sufficient length to build confidence, but not focus solely on content knowledge as a path toward self-efficacy. Furthermore, professional development situated in what is considered a communities of practice model will be the most likely approach to engender and support teaching self-efficacy amongst participants.

Self-Efficacy and Librarianship

Self-efficacy has infrequently been applied to librarians and never in the context of their work as teachers. The majority of the existing studies relate to the self-efficacy of students in library instruction settings, though a few studies, outlined as follows, relate to the self-efficacy of librarians. Bronstein (2014) investigated self-efficacy in the information seeking behaviors of LIS students, finding students had a strong affective component to their information seeking that was shaped by past experiences and socio-cultural contexts. Pinto and Pascual (2016) conducted a study on self-efficacy in relation to the beliefs of importance for LIS graduate students of various facets of information literacy. Students were surveyed using the Information Literacy–Humanities and Social Sciences (IL-HUMASS) questionnaire, a standard tool where responses are grouped into

four categories of information literacy including: searching, evaluation, processing, and communication-dissemination. Students from an LIS school in Spain were surveyed. They study found LIS students believed all four categories of information literacy knowledge and skill to be very important, but their own self-efficacy to engage in the work or communicate about it to only be at a normal or average level. This study indicates that there may be a disparity between the importance assigned to a particular professional task by a librarian and their own perceived ability to successfully complete the task or engage in the service across the librarian professional role.

Though not strictly calling the concern self-efficacy, Julien, McKechnie, and Hart (2005) researched the affective components of library work, with a focus on how human-computer interaction has changed the behaviors of librarians. The study looked specifically at the issue in relationship to the work of systems librarians, who are primarily responsible for overseeing the databases, online catalogs, and backend functioning of library websites. They concluded systems librarians had low confidence related to the technological changes inherent in their work and that the literature of the field has seldom taken these aspects into account. In a related study focused on self-efficacy specifically, Oyieke and Dick (2017) investigated the effectiveness of e-services by measuring academic librarian self-efficacy with social media and web 2.0 tools in South Africa. The study, conducted through the analysis of responses to a mixed-methods questionnaire, sought to understand the levels of competency with those e-communication tools. The study found librarians have intermediate competencies with them, and perform with new technologies at a level lower than their patrons. By working

to actively train librarians on social media and web 2.0 tools, librarian self-efficacy could be increased, allowing librarians to provide better services for their constituencies.

Considering self-efficacy as a factor, in conjunction with work locus of control, of librarian commitment to their job, Igbeneghu (2012) sought to test the hypothesis that librarian commitment was unrelated to either factor. Using as a sample all academic librarians at institutions in Western Nigeria, and adapting a self-efficacy rating scale from the health psychology literature, the author concluded self-efficacy and work locus of control both increase librarian commitment to the work of librarianship, but are unrelated to one another. The study indicates self-efficacy is reasonable to use as a measure of librarian perception of their work, but may not be an effective measurement to use when considering issues like work locus of control that may be dictated by policies or structures outside of the individual librarian's purview.

Existing Training Approaches for Librarians

In the research described by this dissertation, the focus is on the self-efficacy of librarians with respect to teaching. To that end, the following provides one further refinement of the self-efficacy model as described for teachers. Figure 2.3 represents a model for librarian self-efficacy in teaching that builds from the model of self-efficacy for teachers presented in Figure 2.2. Many aspects are carried over from this model – evaluation prior to, during, and following an education event, and feedback channels via the individual, peers, and institution. There are also three important changes to note prior to moving forward.

First, there is an additional feedback pathway that reflects a librarian's

interactions with faculty with respect to teaching. In the teacher version of the model, the
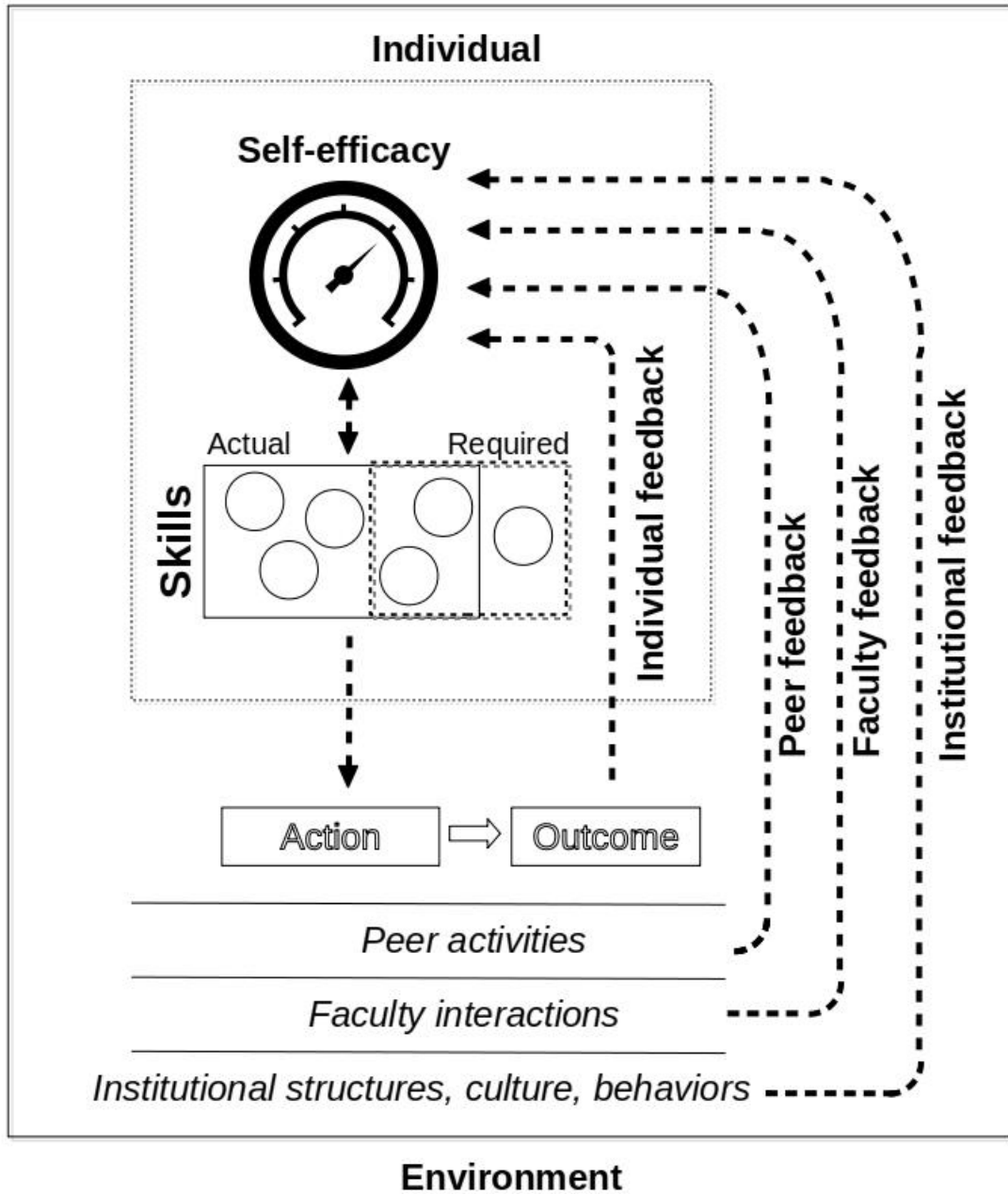
Figure 2.3. Proposed Model of Librarian Self-Efficacy in the Teaching Role.

teacher themselves is the teaching expert, whereas, in the librarian model, the librarian must consider their expertise with respect to faculty, who perform a significantly larger amount of teaching than librarians and who also carry greater domain expertise than a librarian. In the context of librarians providing one-shot instruction, the librarian is operating as a guest within the faculty's class, and so must be considerate of their work with respect to the faculty and the class overall. Like the peer feedback pathway, this pathway can potentially incorporate direct feedback from the faculty member to the librarian regarding teaching. It also incorporates the librarian's observations and emotions when interacting with the faculty with respect to teaching, such as planning a class, discussing strategy, or assessing outcomes.

The next difference arises from the librarian's definition of self-efficacy in this instance. Like a teacher, a librarian will consider the question of, "how effective of a teacher am I". However, given that teaching is only one portion of a typical librarian's role, the self-efficacy evaluation in this model may also consider, "to what extent am I teacher", with the potential evaluations ranging from "I am not a teacher" (low self-efficacy) to "I am primarily a librarian who teaches" (medium self-efficacy) to "I am a librarian and a teacher" (high self-efficacy). These categorizations build upon the work of Wheeler and McKinney (2015) and draw connections between the internationalization of the teaching role and the relationship to self-efficacy in teaching.

Arising from this, the final difference comes with the assessment of the alignment between the librarian's conception of their own teaching skills and those skills which they consider to belong to "a teacher." In the teacher model of self-efficacy, even if the teacher's skills may be poor, they likely have some level of skill in all areas that may be

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needed to be an effective teacher. However, in the context of a librarian, given that MLIS education often provides little to no education regarding effective teaching skills, a librarian's self-efficacy with regard to teaching may also include some estimation that they are not a teacher (low self-efficacy) due to the fact that they do not know all of the skills that they may expect a teacher to know. This belief on the part of librarians – that they know or have developed all of the skills required to be effective teachers – is important for evaluating their self-efficacy in this context. This consideration is of interest in the higher education context, where the disciplinary faculty with whom librarians most frequently collaborate on teaching tasks also lack an educational background in teaching and have learned on the job or perpetuated teaching approaches experienced during their own education. Given that broader faculty perceptions of librarians' teaching appear to influence self-efficacy, professional development training, even in short form, may offer a reasonable avenue to develop these skills at a level at least equivalent with disciplinary faculty.

Brecher and Klipfel (2014) outlined a variety of training approaches in education for librarians. One option they highlight is to pursue coursework in education while simultaneously studying library and information science. Another option is mentoring while working as an intern or co-op student in a library for LIS course credit. While this option may be reasonable for those still in library school, the authors acknowledge it may not be reasonable or financially feasible for individuals who have already graduated and find themselves in need of further training in the field of education. To address the costs of further education, the authors suggest seeking out Massive Open Online Courses (MOOCs) that cover teaching and learning offered by a variety of institutions. They then

go on to highlight a number of relevant professional blogs intended both for librarians and for educators in the higher education sector. While these resources require little effort beyond time to engage with, they may not be suitable for addressing the overall deficiencies or addressing the contextual factors that permeate educational approaches appropriate at disparate institutions. They suggest seeking out sessions at professional conferences that highlight teaching, especially those that preference interdisciplinary approaches to teaching and learning. Finally, they point to educational psychology and LIS professional books related to teaching which librarians can use to develop as teachers. While the authors outline a number of different approaches librarians might use to develop their acumen as teachers, their work does not address how effective these different approaches are for librarians and the extent to which different librarians need differentiation in their professional development engagements to develop self-efficacy as teachers.

Bliquez and Deeken (2016) presented a case study investigating professional development approaches related to teaching and learning in the online environment. They identify a number of concerns, some especially acute when librarians prepare to teach in the online environment, including lack of training, time constraints, lack of administrative or financial support, concerns of sustainability and scalability, lack of expertise in instructional design or learning theory, experience with the course management systems in use, and challenges collaborating with disciplinary faculty. Many of these aspects appear in other discussions related to the professional development needs of librarians who teach in non-online contexts, indicating the findings of this case are important considerations for developing librarians with teaching self-efficacy. Beyond the number

of options highlighted by Brecher and Klipfel (2014) for professional development, Bliquez and Deeken (2016) additionally identified institutional supports for teaching and learning, including presentations at departmental meetings and workshops at institutional faculty development events, as potential growth and support opportunities for librarians working to increase their knowledge of teaching and learning.

In the case studied by Bliquez and Deeken (2016), the involvement of librarians in instructional development for online courses grew out of the campus strategic plan and was supported by a campus-wide course design program meant to train individuals on teaching and learning in online contexts. Librarians in this case were aided in their involvement by their status as faculty and their ability to hire an additional librarian dedicated to supporting the growth in online instruction. Out of their case, they identified several themes for others looking to engage in teaching development and support for online learning. First, librarians must connect their work to institution-wide priorities and strategic initiatives. Second, professional development related to teaching must become a focus for the whole library. With these two aspects in place, librarians were then free to develop strategic relationships inside and outside of the library related to teaching and learning, periodically reevaluate library-wide professional development offerings and approaches, be creative and experimental in their instructional approaches, and successfully showcase their work. Due to the case design, the findings for this study focused on offerings available within a single ecosystem of a defined campus environment, limiting integration or discussion of professional development opportunities available to or undertaken by librarians during the study. This may have impacted the findings, though were only loosely referenced by the authors of this study.

Summary of the Literature

In review, while librarians believe that instruction is core to their identity as a librarian, they face a number of challenges to performing this role effectively. Training on effective teaching is only intermittently available in LIS curricula, and professional development opportunities are both limited due to time and financial constraints and provide mixed results, although those that are best aligned with andragogical principles tend to be most effective. The range of activities librarians must perform to be effective educators is very broad - including teacher, leader, collaborator, and instructional designer - while the opportunities to educate tend to be very limited and considered ineffective or insufficient educational interventions. In addition, librarians face barriers due to technology, administration, and lack of faculty status, which both arises from and causes challenges communicating the value provided by education from librarians. Some lessons may be learned from the training of teachers. High teacher self-efficacy has a positive effect on student outcomes, and can be nurtured through administrative support, communities of practice, and small class sizes. In addition, professional development can help develop self-efficacy, but the training must address both pedagogical competence and the use of varied instructional techniques.

This information leads directly to the goal of this research - to understand how librarians view themselves as teachers, as well as their self-efficacy in instructional work. Starting from an understanding of development approaches used for pre-service teachers, this research explores what approaches are currently used to develop librarians' self-concept as "teachers", how the full range of training techniques can be applied to librarians, and which techniques from this set will be most effective. The results of this

research can then begin to illuminate how academic libraries and library schools can

better develop the educational skills needed by academic librarians.

Chapter Three: Methods

Site Selection Strategy

As found by Applegate (2007), a majority of academic librarians work at large research institutions and it is common to find multiple librarians with specializations, including for the teaching role, at these institutions. As such, the site for this study was selected to be representative of a number of the issues around librarianship that limit the development of teaching self-efficacy. The site, a large research university in Canada, has thirty-three librarians in the library who participate in teaching activities as a routine part of their job. While the librarians are recognized as professionals, they are classified as staff members and do not regularly engage in any form of scholarly activity. The site has a variety of libraries, with two main locations and teaching librarians placed at six alternate satellite locations throughout the campus. The library offers limited professional development training to support teaching, preferring to send librarians to workshops offered for faculty through the campus center for teaching excellence, or to available teaching development programs offered by professional organizations. The libraries are in a state of leadership change, having hired, or in the process of hiring, all new senior leadership due to retirements and natural attrition.

This information suggests the use of a "typical" sampling strategy, where the intent is to highlight common findings among participants who are in typical circumstances with respect to others in the area of study (Glesne, 2016; Patton, 2002).

While "typical circumstances" is difficult to define quantitatively, the circumstances for the participants in this study are frequently representative of Canadian academic librarians performing teaching activities, as well as librarians in similar positions in the United States. The study methodology went through extensive ethics review, receiving a waiver from the University of South Carolina Institutional Review Board after being assessed as a low-risk to participants and through the more overt review process required at the institution that acted as the research site.

Participant Selection Strategy

The participant sampling strategy follows an intensity sampling approach (Patton, 2002). Participants were selected based on observations conducted at the site over a number of months prior to the study, as well as with the help of the heads of instructional services at the institution based upon an assessment of significant need for growth in teaching performance. The sample included participants with limited and extensive lengths of experience teaching, but all who had teaching as a core expectation for their role. Individuals were invited to participate by email after they expressed interest in participation in the short professional development workshops on teaching core to this study. Initially, eight librarians meeting the selection criteria volunteered to participate in the study. Two withdrew during the course of the study, and the remaining six participants completed full participation in the study.

Intensity sampling was selected for this study because the participants selected would have the greatest distance between their current performance and expected performance as teachers. For some participants, this meant they had relatively little teaching experience, for others, this meant they had significant teaching experience, but

little in the library context, or had struggled in past teaching endeavors. As such, out of all potential librarians available to participate in the study, their journeys toward self-efficacy will likely be the most extensive and most illuminating of the phenomenon under examination. Other sampling approaches were also unlikely to yield greater understanding of the phenomenon or would be difficult to implement at the chosen site. Given how little research there is related to these particular research questions, there is not a sufficient foundation of research to be able to assess variability or lack thereof in librarian populations, limiting the utility of any sampling strategies based upon variability.

Professional Development Interventions

Participants in the study attended four one-hour professional development courses on the topics of learning theory, lesson planning, classroom management, and assessment. The trainings were led by the author of this study and attendees at the workshops were open to all individuals working in the libraries at the research site with an interest in teaching. This included the research participants, other librarians with teaching responsibilities, and para-professional staff members in the process of pursuing a credential in library science. The workshops were held in a classroom space in one of the libraries at the research site on two days in August, with one topic being offered in the morning and a second in the afternoon, prior to the start of the most intensive period of teaching for librarians at the site. The workshops were all designed using the same structure where the researcher introduced the core ideas or theories on the topic under consideration and then asked participants to apply the concepts through in-class activities. The workshops concluded

with time to share individual work and ask questions both of the researcher and other attendees in the room.

Data Collection Methods

Data were collected using a variety of qualitative methods, including self-efficacy questionnaires, semi-structured interviews, and self-reflective journaling. Those data collected were then transcribed and coded using Nvivo version 12 software provided by the institution. They were analyzed using a thematic coding approach and tested against the theoretical construct of teacher self-efficacy to identify the major tenets of librarian self-efficacy and to develop a theoretical model of librarian self-efficacy in teaching. Member checking was used twice during the analysis process. Initially, participants were provided copies of their interview transcripts to review and provide clarification or comment on their thoughts and perceptions. Participants were also provided copies of the findings and discussion for review and comment to ensure accuracy of analysis and proper representation of participant thoughts and ideas.

Self-efficacy questionnaire. A self-efficacy questionnaire was used prior to the beginning of the professional development intervention and following a period of approximately six to eight weeks of heavy teaching workload completed by the study participants. The questionnaire was an adapted version of the Teacher Self-Efficacy Scale developed by Schwarzer, Schmitz, and Daytner (1999) and was used in this study to provide an objective measure of perceived self-efficacy as a teacher. The questionnaire was chosen because of the relatively short length, the availability of the instrument, and the willingness of the authors to allow adaptations for other fields. For the purpose of this study, only one question was altered to address concerns of working with teaching faculty

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as opposed to parents, though the structure of the question itself did not change. The questionnaire also serves as the overall framework of the major tenets of pre-service teacher and teacher self-efficacy for this study. These elements included ability to negotiate relationships in difficult settings, questions that probed confidence in teaching, and questions about the influence of students, administration, and colleagues on teaching perceptions and behavior.

Semi-structured interviews. All participants completed semi-structured interviews prior to beginning the professional development intervention and following a period of approximately six to eight weeks of heavy teaching workload. The interviews occurred in a variety of locations, including off-site locations, a private office space on a floor in the library without other staff members, and private offices within one of the alternate library spaces at the study site. The locations were selected independently by each participant to meet their individual scheduling needs and comfort levels. Both pre and post interviews were scheduled for a hour, though actual interview time ranged from seventeen minutes to approximately forty minutes in length. The interviews explored each participants' experiences and affective constructs regarding their teaching activities and roles as teachers, and the post-interview asked participants to reflect on how their teaching practice was impacted by the professional development workshops in which they participated. Interviews were transcribed by the researcher and verified by participants through member checking prior to thematic coding and analysis.

Self-reflective journaling. Throughout the professional development interventions, the participants were asked to keep regular self-reflective journals and were provided with instructions for journaling at the beginning of the study. They were asked

to complete a journal entry addressing each of the professional development workshop topics. To ensure each participant was reflecting in depth, they were asked to write on each professional development workshop for approximately thirty minutes and provide copies of their journals to the researcher for analysis.

Researcher Positionality and Subjectivity

I am a teacher. I am a librarian, and I am someone who has been embedded with my research participants working with them on their teaching for the past year. I became a librarian over a decade ago, with the express intention to pursue a career as a teaching librarian. Upon completing my M.L.I.S. qualification, I taught as a faculty librarian at a small liberal arts college in the rural United States and was a tenured associate professor of library and information science at the liberal arts campus of a large state public university system in a second state. Through my teaching experiences and my desire to know more, teach more effectively, and communicate more fully with my faculty colleagues about who librarians are and what they do, I chose to pursue the very degree, an Ed.D. in curriculum and instruction, for which this dissertation is a requirement. I recognized through my professional work, and through substantial professional association service mentoring new instruction librarians, that my experiences and background had somehow led me to feel greater autonomy, effectiveness, confidence, and ability within my teaching work. I had grown from describing myself as a librarian who teaches, to describing myself as a teacher who happens to be a librarian.

Through a series of random events, I ended up being afforded the opportunity to move from the United States to Canada and take a position at a major research institution in Canada. Part of my professional responsibility in this role was to help the group of

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thirty-plus teaching librarians in my care undergo the same transition I had and help

them, essentially, to develop self-efficacy in their teaching role. I spent a year embedded

with my research participants and others learning about them, their teaching practice, and

expectations of academic librarianship in the Canadian context before embarking on this

research. Because of this unique relationship I have to my research participants, and

because I am organizationally positioned with them as a colleague, I have been able to

conduct this research as a known entity. There has very much been a spirit that this

research will help me to more effectively address their needs and to provide professional

development support for them on teaching to improve their work going forward. This has

led to an openness and a level of trust with my research participants that I would have

been unable to find in another setting.

Summary of Methods

The study for this research took place at a large Canadian research university,

selected based on a "typical" strategy to be reflective of the environment and context

commonly found for teaching librarians in the United States and Canada. Participants for

the study were volunteers from a diversity of backgrounds selected based upon an

"intensity" strategy, with the intent to develop a greater understanding of this topic from

those with the most potential for growth. Data were captured through three approaches.

Self-efficacy questionnaires were used to quantitatively assess teaching self-efficacy

based on several potential measures using a previously accepted instrument. Semi-

structured interviews were used to gain greater insight on the subjective experience of

this process and provide further detail than quantitative measures can easily provide.

Finally, self-reflective journaling was used to enable participants to document their

experiences as they took part in the study and provide a perspective on the journey

participants undertook through this process. Chapter four will synthesize these data into

the key themes found in the study, using selected quotations directly from the data to help

illuminate the study findings.

Chapter Four: Findings

Participant Demographics

The participants of this study consisted of six working professional librarians employed at the same large research university in Canada. They represented a wide swath of experiences, backgrounds, ages, and time working as a librarian. Some participants had careers outside of libraries before returning to university for their master's degree in the library and information sciences (LIS) field, while others moved directly from undergraduate studies to the pursuit of librarianship as a career. Participants studied in two different LIS programs, both accredited and available in the province in which the research setting was co-located. They came from a wide variety of backgrounds in study before, and, in some cases, in addition to their library degree. Some had only worked in libraries for a short amount of time, while others had been working in the library context for well over a decade. Some had teaching experience outside of their current institution, while others had only worked in the single library they now inhabited. Despite these varied backgrounds, all of the librarians in this study were required to engage in instructional work as a core component of their professional role and articulated their position as such.

As a condition of the study, and pursuant to Canadian research ethics requirements at the research site, participants were told that their exact statements may be shared, but that their personal details would remain anonymous. Thus, through the review of findings, the statements from participants are presented anonymously. The set of

potential participants for the study is relatively small, and the demographic information

sufficiently specific, that connecting their statements throughout these findings through

the use of pseudonyms would be sufficient to render them identifiable to others at the

research site. The experiences of the participants were also distinct, meaning that

composite models of participants were not a viable alternative to preserve data accuracy.

Independent of these constraints, the perspectives of the participants provide strong and

informative insights into the self-efficacy of teaching librarians.

Self-Efficacy Questionnaire Results

Participants completed a standard self-efficacy questionnaire before and after

participation in the professional development workshops. Table 4.1 on the following page

provides the pre-participation and post-participation questionnaire results for the self-

efficacy questionnaire for each of the six participants in the study. Approximately eight

weeks passed between first and second completion of the questionnaires. The values in

the table below represent response scores using the following scale: (1) not at all true, (2)

barely true, (3) moderately true, and (4) exactly true. All of the questions in the

questionnaire are phrased so that a higher score (4) indicates higher self-efficacy and (1)

indicates lower self-efficacy. The full questionnaire may be found in appendix A.

The results of the standard self-efficacy questionnaire show that for most

questions, there was limited to no movement in participant perceptions of self-efficacy.

The question that demonstrated the greatest self-efficacy improvement was Question 2,

which examined the ability to maintain a positive relationship with teaching faculty even

when there are tensions in that relationship. This particular finding indicates professional

development training may help librarians better navigate issues of teaching and learning

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Table 4.1

Participant Responses to Self-Efficacy Questionnaires.

	Participant #1		Participant #2		Participant #3		Participant #4		Participant #5		Participant #6	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Question 1	4	4	3	3	3	3	2	2	3	3	2	3
Question 2	4	4	3	4	3	4	4	3	4	4	3	4
Question 3	4	4	2	3	3	3	3	2	3	3	2	3
Question 4	4	4	3	4	4	4	4	4	4	4	4	4
Question 5	4	4	3	4	3	3	3	3	3	4	3	3
Question 6	4	4	2	3	3	3	3	3	4	4	4	4
Question 7	4	4	3	3	4	4	4	4	4	3	3	3
Question 8	4	4	3	4	3	3	4	1	2	2	3	3
Question 9	4	4	2	2	2	2	3	3	3	3	2	3
Question 10	4	4	3	4	3	3	2	2	2	2	2	3

with others who are also engaged in the same pursuits, and that this issue may be of particular importance to understand when examining librarian self-efficacy in teaching more broadly. Question 3, Question 5, and Question 10 all identified increasing self-efficacy in two of the six participants per question, particularly among Participant 2 (improvement on all three questions) and Participant 6 (improvement on two of those three). These questions focused on overcoming obstacles to successfully complete their teaching goals, including reaching the most challenging students, recovering from disruptions, and overcoming resistance from colleagues, and these two participants had encountered challenging situations repeatedly in their teaching history. This suggests that the professional development intervention helped provide a more supportive foundation for making quality educational decisions and managing challenging situations.

The questionnaire also indicates there is no direct connection between the various dimensions of self-efficacy and a variety of demographic factors, including the amount of time an individual participant had been a teaching librarian, age, or gender. There was also no connection to self-efficacy identified based on the individual's educational background, as all participants held the same terminal degree, the institution from which they attained that degree, or the specific subject areas with which they worked at the institution in their liaison roles. In short, there seemed to be no apparent characteristics attributable to the individuals themselves that indicated increased self-efficacy in the teaching role.

Results from the First Set of Interviews

As part of the study, participants engaged in two semi-structured interviews, one before the initial training, followed by another six to eight weeks after the training. The

following sections highlight key themes identified by the participants in the first set of interviews.

Am I a Teacher as a Librarian?

Participants in this study universally identified as and claimed the title of teacher. "…I think that by definition as people whose job it is to communicate information, our job is to teach, and whether we identify communicating information as teaching or not, it is still teaching." Another described choosing librarianship as a career specifically because of the teaching component of the work explaining,

> So, I specifically chose librarianship because I thought of it as a teaching profession, that my teaching load didn't have to be as heavy as if I was, you know, a public school teacher, or if I would, like, to become and teach as a tenured faculty member.

Despite this identification of themselves as teachers, they felt a great deal of conflict when they applied this title to themselves, or to the idea that all librarians are teachers, not just those who have teaching as a core job responsibility. When asked if they believed librarians are teachers, one participant stated, "Not necessarily by nature, no." The same participant went on to state, "I think it kind of depends on your position." Another stated, "I think most of the time, I think they should be teachers. I would imagine it would depend on the role that they are in within their profession." A third participant claimed, "I mean, I don't know that all librarians are teachers. I mean, if you're like a cataloguer, maybe less so. But I think librarian, the role, the librarian role that I have is a teaching role."

Independent of the role, the participants universally recognized that their teaching occurred not just in classroom settings, but in individual in-depth, in-person meetings with library users and researchers, called consultations, and through interactions occurring at reference desks still available in some of the libraries in the university system in which the participants worked. One participant described the expectations of their job as it relates to teaching as follows, "So I explain to people that I essentially teach research to students, so, going into a lot of classes or working in one-on-one settings through consultations with students, or faculty, for helping them find materials for their research." Another described the more affective relationship between teaching and their overall work stating, "the core of my belief between librarianship and teaching is respect, honesty, clarity, and, and a true desire to try and help the student, person, with what they're going through with regards to their learning." A third observed, "Even if you're not teaching in a classroom, when you're working with someone on a, on a request, there's so much one-on-one instruction and teaching anyway."

Despite this connection to the label of teacher, and the self-identification of teaching behaviors in multiple contexts across their work, many participants struggled to connect their teaching work with the rest of their duties, often expressing them as quite separate responsibilities. This included duties such as collection development and liaison responsibilities with individual academic departments, which could rightfully be seen as an extension of teaching since an understanding of student and faculty research needs in the classroom could inform purchasing decisions or build relationships, and collections work could offer the opportunity to improve or increase teaching, or provide a stronger liaison support role to individual departments through the use of new materials,

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resources, or information brought to the classroom setting. Instead, librarians, though they described themselves as teachers, felt tension and stress in the varied components of their work and most viewed these components as being at odds with one another. One participant summed up these disparities by observing:

> In our jobs, like, I see three portions, right, the teaching, collections, and then this general bubble of liaising. And teaching has its certain demands throughout the year, and then the other two pieces I find kind of fall into place around that schedule. But it also means that once you're, you know, in the middle of a spring term and you're sinking your teeth into a major collections project, then you have to find a ways to put that on hold so you can make room for the teaching throughout the year.

Why Do I Teach?

When asked why they, as a librarian, stayed in the profession and continued to work on teaching, the participants gave an almost universal reply exemplified by one individual who stated, "Oh, students. It's so easy. That's, that's exactly why. I love working with students." Another stated,

> I love it. I love it so much. Because it [teaching], I find it really exciting…It's wonderful, I think, when you may have an impact on how a person thinks, or thinks about things, or approaches things, or takes a different perspective into consideration" Another participant shared, "I really enjoy teaching when it's, when I feel like it's been a success. It makes me feel really good when students come and talk to me afterwards to ask more questions, or to follow up, I find that really invigorating.

While the participants observed that teaching was part of their responsibilities, the professional development workshops allowed them to make more personal connections with the act of teaching and connect that personal interest to working with students. Reflecting this sentiment, one participant shared,

…I feel like, being able to actually make the connections here or there and see where, whether it is with teaching or collections or whatever aspect of your job, you're truly furthering someone's research, or even just doing more personal, like knowledge growth for yourself.

The same participant went on to state,

…I was comfortable for me to go in the classroom and have a deck of slides and teach from that at the beginning, and I want to work on my teaching so that I am more comfortable with translating the concepts that are sort of second knowledge to me at the, in this position to actually have an interesting conversation with the students.

Another participant who felt a strong pull to their reference work and viewed it as an act of one-on-one teaching connected with, "…People's appreciation for you and the, the help [you] provide them is one of the motivating factors in this job."

What Is My Place in the Academy?

Participants saw the need for their teaching work and identified their educational contributions as distinct from the contributions of disciplinary faculty. One participant articulated this role as follows,

I think of the research process in three steps. The first being gathering information, second being using and analyzing information, which is to say

reading, and the third being producing information, writing. I would say

professors and faculty members are responsible for the second two of those, in

terms of helping students, they teach them how to read, to analyze arguments and

then how to write and produce new scholarship, which we're not responsible for.

While professors can teach students how to find information to a certain degree,

that's by no means their area of expertise.

Beyond the instruction needed to fill gaps in knowledge provided by faculty in specific

disciplines, another participant connected the need for librarians to teach with gaps in the

entire educational experience prior to and during higher education stating, "There's

certainly a place to be teaching about critical appraisal and the development of

information. Those sorts of higher level concepts that, I think, can be missed, especially

along the way through the education system." Building from these ideas, a third

participant posited,

Critical appraisal is generally not taught in academic settings by non-librarians,

and so I think it's a pretty important role for librarians to fill. You know, critical

appraisal, information literacy, whatever you wanna frame it as, it's a gap in

teaching. It doesn't really fit nicely into any one course, and so I think that that's

the teaching.

Beyond connecting the specific content of librarian teaching to gaps elsewhere in

the curriculum, participants expressed the desire to see higher education recognize their

unique and important contributions by integrating it fully into the student's educational

experience, noting, "I certainly wish that library instruction would be, either part of a

course, or a course onto itself. And that students would have to learn how to use the library effectively, right from the get go." Another mused,

> ..Everything we do is by request an whether the students receive the library workshop is at the discretion of the professors…It would be nice on the university's part if we had some kind of mandatory library component for first year students, whether it's just a short tour or a workshop on the different resources we have. That would show the students the place of the library and librarians in the research process, and I think it would be valuable for them and it would sort of give them an indication earlier on what we can do, what our area of expertise is, how we can help them now and throughout their degree.

Participants felt this lack of recognition and integration of their unique content into the curriculum was a hindrance and, even if they saw themselves as teachers, often meant others with whom they regularly interacted did not.

In few ways was this feeling of being misunderstood in the teaching role as vibrant as in librarian discussions of faculty status. In North America, the majority of academic librarians possess some version of faculty status, whether tenure-track or administrative (Applegate, 2007; Gremmels, 2013; Stewart, 2010). At the research site for this study, librarians do not possess faculty status, and are thus categorized as staff. Furthermore, in this specific context, librarian salaries and merit increases are not part of faculty bargaining as at other comparable Canadian institutions (DeLong, Sorensen, & Williamson, 2015). These issues were brought up repeatedly by participants as a concern affecting not only their self-perceptions, but dictating to them the nature, terms, and value

of their work. One participant, when asked whether or not the university or library administration helps them to feel more effective in their ability to teach opined,

> And that might go to the status of librarians on campus, being staff and not faculty. I know that there's been an ongoing discussion, and I've heard from a number of people that old saying, if it isn't broke, don't fix it, or don't try to fix it. Something like that. And, obviously, librarians as staff is fine for everyone on campus, with the exception of librarians.

Another participant directly connected innovative teaching practices and teaching effectiveness to faculty status observing, "my American colleagues at [similar institutions working in similar programs] seem to be far more advanced in what they are teaching…because they all have faculty status." A third participant noted that administrative support for teaching is, "…different on the faculty, on the faculty level," from the university. Participants perceived this lack of status as being something that connoted them as not teachers in the eyes of the university, and without the support or relative prestige afforded to those with faculty status. Even though, they still viewed themselves as teachers, these external factors led them to question their own value at the institution and their ability to work with or negotiate with others who possessed such status as true partners in teaching and learning.

Negotiating Relationships with Faculty Members

There was significant discussion around the difficulties experienced by librarians who teach in negotiating relationships with faculty. Most participants explored the need to accommodate the expectations of the faculty member, reflected in the statement of one participant who, when describing how they planned a lesson, shared,

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Ok, well I look at all the particulars in terms of the instructor, the year, the actual

class, the title of the course, the times, and the task that they have their class. How

much time I've been given for the presentation and think of their, in their

syllabus, think through their assignment, and what this, where I am and how that

fits in with their schedule.

This constant level of negotiation meant that librarians felt limited amounts of autonomy

in their teaching, and often perceived an inability to engage in actual negotiation based on

their specific expertise and knowledge, even if they had been teaching for long periods of

time or had long-term established relationships with faculty.

This difficulty stemmed largely from factors external to the individual librarian

participant, including the lack of knowledge many disciplinary faculty seemed to possess

about the role of the librarian, described lack of support or recognition of the teaching

role of librarians from either university of library administration, and the general

expectation that faculty were trained in and operated as highly effective teachers in ways

the librarians could not. One participant described the library and university

administration support for teaching by stating that teaching in their work, "it's honestly

self-driven" and that their involvement was by, "…force of will alone." Another

participant took a softer stance in describing these external factors noting, "I do feel like

the university supports teaching, certainly the library supports teaching, and those are sort

of statements that they put out here in to the world. I haven't seen anything to negate

that…" In short, most of the participants suffered from a version of imposter-syndrome

around their teaching role at the beginning of the study.

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Through the professional development workshops and subsequent teaching experiences, the most significant change was reported in the ability of librarians to more positively negotiate these relationships. This relationship between self-efficacy and the negotiation of teaching was described by one participant who had relatively high self-efficacy as,

I think that there's this weird perception among a lot of my colleagues that faculty members kind of have it together, and, in my experience working with many faculty, you know everyone is creating their course content the night before. Right? Like, the second the slides have to go up is the second you're done.

Another described an experience directly negotiating with a faculty member over a workshop, stating,

So, yeah, I don't think I would have done that as well, before, without that. I'm like, I have authority, and I can make these decisions. And, also, the faculty member also said, you know, that I want them to do five [citations], and I'm like, no, we actually don't have time to do five. Four is a good enough number of, um, you know, sources to actually cite that will give me enough. Right? Just tell them to bring in books and articles.

These insights point to the idea that professional development training on teaching allows librarians to see themselves as sharing in the same experiences and struggles as others who teach, and to more effectively advocate for themselves and their needs in the classroom environment, whether those needs be appropriate amounts of time to cover certain concepts, or how much practice an individual student would need to grasp the basics of something like citations in the example above.

Adaptability of Instruction to Meet Student Needs

The participants in this study were intimately invested in their students and frequently reported that relationships with students were the primary driving factor of their connection to their teaching work. They expressed the desire to focus their instruction in ways that benefitted students and found such approaches to teaching felt more authentic and required less preparation work with more impact for the learner. When discussing such a circumstance, one participant stated,

> …I did zero preparation for a session purposefully and I came in to the classroom and just did a think pair share of what are your questions for the library and instead of trying to run an orientation session that I spent time, you know, developing a scavenger hunt for the library and developing a thirty minute session for them to, you know, hear about all of our facilities, that sort of thing, it was literally just student questions.

This type of approach indicates a growth in the individual's ability to self-regulate in the classroom environment and adapt to the expressed needs and questions of the learners in real time. The participant went on to share that, "I really think it was a more valuable experience for us both [the librarian and the students]. I learned a lot, they learned a lot." Another participant connected understanding the students to greater effectiveness by helping them reign in the amount of content presented saying,

> What we do is very hands-on…identify outcomes or things I want to achieve, determining how I'll go about explaining these tools or concepts to them [the students], and then leaving time for them to practice hands-on and ask further questions about this.

Such hands-on approaches to teaching require the librarian to feel a certain level of competence and confidence to troubleshoot and flexibly address the needs of individual students as they circulate around the classroom environment.

As participants came to possess higher amounts of self-efficacy, they started to reflect and report on their ability to be more consistently relaxed and adaptable in teaching situations. One participant observed,

> My way of teaching is very, like, I would say adaptive based on how the class is responding. My way is to make them [the students] curious on their own, and then being the one there, supporting them and then filling in the gaps.

Another, who saw improvements in self-efficacy after the professional development trainings stated, "…having done a couple of classes where I've done some very different things and really kind of turned it over to the students and give them more opportunities," led the participant to observing, "I leave the class feeling like really invigorated and really, like, excited and feeling great about myself."

Lack of Training and Social Support for Instruction

The participants universally referenced the overall lack of training and focus placed on teaching in their library school curricula, even though they, like many librarians, stepped into roles that included teaching as a required component. One participant stated this experience quite bluntly saying, "…In my MLIS training there wasn't a lot of instruction training." Another observed,

> I don't think necessarily we've all had the same interest in teaching and that aspect of the job, or had the same training. And certainly through library school,

like, the only thing that we all, sort of, might have the same background on, there

isn't a ton of development on your instructional skills in library school.

The lack of training while in library school appeared to create some personal conflict for

participants who identified as teachers, but felt unsure about the importance their work as

teachers should have. This lack of clarity was perpetuated in messaging from university

and library administration, or lack thereof, related to the importance placed on the

teaching work of librarians, but was articulated as an overall lack of confidence going

into teaching situations because of a lack of educational knowledge or training. One

participant who possessed relatively high self-efficacy noted this about their colleagues

stating, "…I think it does come down to confidence in abilities, because I think that most

people have the actual abilities, maybe just the perceived confidence."

Beyond simply confidence, librarians, as staff, do not participate in curricular

decision making at the university where the study was conducted. This led to some level

of uncertainty for librarians around what was appropriate for learners at different levels.

Addressing this directly, one participant observed, "I wish that, that we were more on a

similar page, if not the same page, with respect to expectations for students. Given the

year that they are in their career, their academic career." While desiring an understanding

of expectations on a curricular level and needing more support on that front, there was

also a perceived lack of social support within the library from peers to address issues of

teaching and learning. Some participants were encouraged by shared lesson plans and

activities designed to support a first-year course initiative that had come to fruition during

the fall term in which these data were gathered, including one participant who stated,

I've also found like the [shared first-year course] materials have been really

helpful. In terms of like kind of having a buffet of ideas to choose from, then then

also I'm looking forward to hearing how other people have approached [teaching

within the shared first-year course].

Another described the lack of social support within teaching by stating, "I've found

everyone in the department is fairly independent in teaching and we don't, or at least not

yet, I, I haven't really collaborated with them on ideas or talked things over about

different approaches to doing classes."

One of the greatest benefits most participants described to participating in the

professional development training was related to spending time speaking with their

colleagues while all focused on the same topics and to understand that they were not as

isolated as they might have originally perceived. Describing this benefit, one participant

observed, "like for everybody it seemed to have been a refresher in things people had

forgotten. So, I wasn't the only one in that type of situation. It did make me feel less

alone." Most described a desire to share more fully with colleagues and develop an

intentional culture around teaching, similar to what they felt existed within other portions

of their responsibilities, especially collection management work. One participant

addressed this issue head on stating, "To be honest, I don't feel like, I don't feel like

teaching has the same relationship, like I don't have the same relationship with my

colleagues, necessarily, about teaching as I do about other things like collections." After

the professional development training and subsequent teaching experiences, the same

participant grew to see greater importance in discussing teaching, especially as a way to

process experiences where they felt lower levels of effectiveness in the classroom noting,

…Maybe it's just change in a mindset and modifying from feeling like, you

know, maybe something didn't go well, but talking to another librarian, I realize

that maybe that wasn't, I have to take it away from how effective I feel while

teaching to recognizing sort of the other constraints that are out of my control.

Addressing Stress in the Teaching Role

Participants in the study, though they varied in age and length of teaching

experience, ran the gamut in describing stress associated with their teaching activities and

how they manage it. Several articulated a sentiment described by one participant as being

an introvert who has, "learned to perform extroversion." Another observed that stress

levels fluctuate and, "I feel like stress levels are somewhat predictable in terms of

calendar year," with periods of intense teaching representing times of higher stress. To

cope with the stress, the participants in this study employed a number of coping

strategies. One found physical exercise to be the best option describing their strategy as,

"I walk…I'll walk around the campus. I'll walk around different buildings. It doesn't

really matter where I walk, I just need to walk. And breathe. I need to concentrate on my

breathing." Others found they needed a combination of time to reflect or felt the need to

interact with others to debrief from the teaching experience. Describing this behavior,

another participant stated,

I guess [I] reflect or talk to a colleague about how it went. Especially if it's a

colleague that I've been talking about it [the class] with as I'm planning…So I

usually debrief with a colleague or two about, you know, just sort of acknowledge

how it felt or how I may have felt. I think over it in my head a bit about how I

might, might of, or what I liked and what I might have changed.

Other participants noted the desire to speak with specific individuals, including their supervisor, visiting MLIS students working in the department, and the researcher in this study about their teaching as a way of reflecting on the experience and considering changes for future iterations.

Not all participants found their teaching work to be stressful, especially in comparison to other positions or jobs. In describing why this was so, one participant shared, "There's a lot more kind of autonomy, where I can kind of decide on my own what is, how to kind of schedule my day, or how to prioritize my, my tasks." Another participant stated, "I actually don't find teaching super stressful…I genuinely do not find teaching at all stressful, it's a really nice break." Taken together, these observations indicate stress associated with teaching in and of itself is not a major factor in librarian self-efficacy in the teaching role. The need to balance responsibilities, however, especially when teaching must necessarily take precedence during certain time periods throughout the year, was difficult for participants to manage and feel confident in their described autonomy.

The most impactful stressor related to teaching appeared to be the presence or absence of a private office. Some participants in the study possessed private offices with lockable doors, while others worked in open office or cubicle environments. For those with private office spaces, comments included,

> …One of the things I'm thankful for is that we have offices here…I'm grateful to be able to close the door and come back into a space where I can kind of unwind, even if it's just, you know, sitting here and checking emails and kind of feeling like I'm getting caught up or sitting here and having a snack for a second.

Individuals without access to private office spaces made comments including,

> One thing that I find would be interesting would be to have a different type of
>
> office space where you can close the door and you're not hearing different sounds
>
> or different people. I would like to explore a different, possibly different
>
> environments, with respect to concentration and output.

Those with such office spaces found they were able to reflect on their teaching

experiences afterward, and generally expressed lower levels of stress or frustration with

teaching, related to their ability to reflect on those experiences in a safe, quiet

environment.

Professional Development Approaches Favored by Canadian Librarians

At the outset of the study, the participants heavily described the importance of

participation in conferences and other lengthy professional development training as a

source of teaching development. The benefits of such professional development

engagement were described by one participant as,

> Because some of the things that have been most helpful to me have been some of
>
> those training sessions that are sort of taking away from work, that sort of thing,
>
> and I think part of it, at least for me, part of it has also been being in a new space
>
> or with a new group of people. Sometimes I find the training that we do at the
>
> library is, you're stuck with the same group of people, so you're only going to
>
> learn so many new things because you have the same pool to keep drawing from.

This sentiment was shared by other participants, even those who found value in longer

professional development training away from the library were somewhat critical of the

value of those offerings to fundamentally changing teaching practice. One participant

described this difference between local training and conference-based professional development by observing, "…You've given examples when you teach." This was seen to be in contrast to what happens at longer conferences and workshops where, "…I've gone to so many conferences and someone describes what they do, and I'm just like, but what did you actually do? Can I see the assignment? Can I see how you ran through it?" Another librarian observed what they really needed was, "…training on strategies," and "…having a good toolbox so we're not, you know, reinventing all the time."

Independent of the individual perceptions of how professional development training could best be provided, there was a consistent recognition that more training and support was needed for librarians within this specific context, and for librarians who teach more generally in the field. There was a great desire to form more effective communities of practice, or to give librarians the space to share experiences teaching with one another. One participant described this need, stating, "so opportunities to maybe share with each other more formally about successes AND pitfalls, because I think we do tend to talk about our successes a bit more, but it's important to hear what doesn't work, too." Another, when asked what might make them feel most effective in their teaching role, observed, "I think to answer that question effectively I should really be within a group of my colleagues. And explore different aspects that they're struggling with, perhaps." These statements indicate the main roles of professional development on teaching may be to build a sense of community and to provide support for working through teaching difficulties. This further implies professional development on teaching and learning conducted in the local context has an important, supplementary role to professional development that may take place at larger conferences, workshops, or

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retreats. Librarians have a need to feel more connected and open to engagement with one another in their instructional work through the professional development training in which they engage.

Key Responses from Participant Reflective Journals

Participants in this study worked actively in their reflections to consider directly how they might use the ideas and concepts covered to modify and improve their existing teaching practices. While not all of these ideas made direct changes to their practice, as discussed in the upcoming section, they represent important representations of connections the participants were making to their current teaching experiences and how applying best practices in teaching and learning might differ from those approaches.

In reflecting on how learning theory might alter their approach in the classroom and necessitate renegotiation of teaching constraints with faculty partners, one participant wrote:

I think I often feel constrained by the requirements a faculty member puts on my one shot sessions, and I let it affect my teaching style as well. In order to get the "right" content into the class, I might have to lessen the time spent on activities and discussions and structure the class as a lecture/behavourist approach. In the past few years, I've tended to move away from that approach, finding that both the students and I are more engaged if I include activities, discussions, and explanations about why we're learning something in the first place. But it does mean that I have to ignore some faculty recommendations in order teach what I think is more valuable or appropriate at the time. I'm leaning away from over-

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teaching toward teaching what I hope is just enough: planting the seeds so that

they can expand their knowledge further if they feel it's important to them.

In contrast, another participant interpreted the content in a different manner,

stating,

My educational background is in the humanities, and thus I am partial to the

cognitivist approach to education. However, I am not sure how relevant it would

be to the type of instruction we librarians do. Library instruction is very much

technical: we are here to teach students where and how to find information.

Although this process does, in some cases, involve critical thinking and analysis,

it is at its core a technical skill.

A third participant identified the importance of thinking primarily of the students and

student needs reflecting, "we are in a funny space between pedagogy and andragogy

since university students aren't fully formed adults. Our teaching needs to address this

and moving to using more constructivist and cognitivist approaches in upper year

students versus first-year undergrads." An additional participant, who identified

themselves as someone who had actively taught using different learning theory

approaches, even if they did not articulate them as such before the training, observed,

"when I push into cognitivist theory the instruction feels more rewarding. Even if I fail, it

feels more exciting than teaching to behaviourist theory. I feel more confident in the

skills I am imparting to students."

While there was an overall level of consensus that training on learning theory

helped the participants consider their approaches to teaching and the needs of their

students in potentially more impactful ways, the same was not true of the training provided on lesson planning.

Participants journaled insights about lesson planning including, "I really appreciated the lesson plan review. I have tried and failed to employ formal lesson plans a number of times," and,

> One of the things I've been thinking about is knowing how much information to put into a lesson plan. I typically shy away from teaching too much content, but when a class ends under time I often wonder if I should have used up more time, or if I should feel satisfied with what I taught, especially if it means that students concretely understand the concepts we were talking about during the lesson. I suspect that I could probably stretch out the time and help those concepts sink in further by incorporating more activities into my lesson plans.

These statements indicate the participants generally had prior experiences with lesson planning but had not found ways to effectively incorporate lesson planning into their teaching practice.

The participant reflections on classroom management were the most varied of the reflections on any content. One participant made a number of personal notes about how they could directly implement some of the strategies in their practice. When considering creating collective class rules for the day, for example, the participant noted, "We agree to put phones away to focus on learning. We will make sure everyone has a chance to speak," as potential options to propose to students in upcoming class settings. Another participant felt somewhat disconnected from the ideas of classroom management observing,

The difference between the latter two philosophies [choice theory and student-directed learning] was somewhat unclear to me. Both center on the relationship between students and teacher, and use positive feedback and reinforcement. These approaches, it seems, work better when a teacher is with students for a longer period.

In direct opposition to this mindset, another participant stated,

Rarely, are librarians given formal training in classroom management, in my experience. Many of us overlook this because we don't have a steady class to work with. However, it's often more important for us, as one-shot instructors, to be capable of managing a class. We are often invited to classes where students are used to, and expect, a particular way of instruction and we often come in with different techniques and expectations of our students.

The participant went on to write that, while they could see the value in classroom management, that, "It also feels as though you are assuming students won't act like adults and be respectful. I'm not interested in coming into the class with that assumption." These tensions identified by the participants indicate new information can sometimes create dissonance for librarians, especially when they do not make direct connections with how to effectively implement such approaches and consider classroom management on a theoretical rather than practical level.

Finally, participant reflections on assessment practices indicated a great deal of enthusiasm for the topic itself. One participant wrote, "I've been looking forward to the session on assessment," while another stated,

Assessment was the final workshop and probably the most highly anticipated, I think. As librarians we always want to assess student learning and skills development in order to promote ourselves and evaluate ourselves, find out what works and what doesn't.

Despite the enthusiasm, the participants reflected more struggle when considering how to directly make changes to their teaching to allow for more formative assessments. One participant made a strong overall note indicating, "Your phone is your friend!" in thinking about how to more easily incorporate assessment into teaching practice. Another considered,

Perhaps the best way for librarians to evaluate students during a workshop is to incorporate structured exercises that have definite outcomes. For example, we can get students to search for a specific article, or build a search phrase that if done properly will yield a definite number of results. Exercises that have correct and incorrect outcomes allow us to see whether students grasp what we teach.

Another participant considered how they might alter an activity for an upcoming class, but struggled with their design work to incorporate an assessment component to the activity sharing, "The biggest challenge I face is the large class sizes… trying to make activities that are relevant and interesting for a large group is a bit more challenging."

Looking at the participant reflections collectively throughout the workshops, while there was a great deal of enthusiasm for participating in training itself, the participants felt a general struggle to take the introduced concepts and identify places and approaches to directly apply them in practice, with the exception of the topic of learning theory, where there was broad consensus about the value and impact to individual

participant thinking and planning. These findings indicate short trainings, which allow only limited time for application of concepts, have distinct limitations for librarians when transferring knowledge to practice. Despite these concerns, the journals also clearly indicate the training, outside of that on lesson planning, was new information for the participants. This strongly demonstrates the education they received in their master's programs and additional training they received from conferences and local trainings provided by the campus Centre for Teaching Excellence failed to incorporate foundational information on teaching and learning that could effectively influence librarian teaching practice.

Key Responses from the Second Semi-Structured Interviews

Most participants stated they felt a certain degree of affirmation based on hearing the topics discussed in the training sessions and considering those ideas in the context of their own teaching practice. This was expressed well by one participant who mentioned, "It's nice to hear what I'm doing is what you are supposed to be doing, I guess…" Another participant noted,

> It, one of the things I've found beneficial was to be able to hear that a lot of the
> other librarians, librarian teachers, experienced the same things I did in classes
> and that the problems I have to deal with are the same types of things they have to
> deal with. So, as a newer librarian, it was reassuring to hear that…

A third participant mentioned the impact of the professional development workshops by saying, "Some of those things reinforced ideas that I'd already been sort of mucking around with on my own…"

Beyond the general reassurance and affirmation that communal professional development training offered participants, the impact and integration of the content from individual lessons varied widely. Two participants spoke at length about adopting more intentional lesson planning techniques, while a third had not yet, but recognized a new approach to lesson planning they thought might be a change they would make to practice in the future. In discussing the value of adopting standard lesson planning stating,

> …[I've] probably devoted more time now to lesson planning than I did before --- and thought about some of the techniques we'd talked about in the session so that I'm not just, you know, writing a bunch of stuff down that I want to cover, but actually, thinking about how to put it together strategically…

Another participant who already had some exposure to using lesson plans for teaching still found the lesson planning workshop was helpful because:

> It was nice to be able to spend some time focusing deliberately on instruction before the fall semester. I usually before any classes and before a busy semester, usually block off some preparation time in my calendar to do whatever, X, Y, and Z and, just of or update my lesson plans, but it helps. I think the teacher training helped me to be more intentional with specifically what I wanted to change, modifying activities, for instance, or modifying the way I would approach something.

The participant who had not fully adopted lesson planning, but found knowing about different lesson planning approaches noted,

> I am thinking more intentionally, and it was good to see that there was one. There was a lesson plan that like, fit with the way that I work already a little bit more,

because I've tried BOPPPS [Bridge in, Outcomes, Pre-assessment, Participatory learning, Post-assessment, Summary – a common lesson-planning model] so many times and it just never seems like a good fit for how I'm trying to plan things out.

Discussions of learning theory also had a profound impact on the participants and their confidence in their own teaching. In describing the influence of knowing more about learning theory on their teaching, one participant noted,

I've thought a lot more about that. That wasn't something I had really considered before I started teaching, the different ways that they would absorb or take in information. So, if, again, try to think from the students' perspective when I'm planning a class and what the best ways would be for them to receive information and retain what I'm saying.

Another referenced learning theory stating,

That whole conversation about pedagogy versus andragogy really stuck with me. And, so modifying things based on the level of the students that I might be teaching and what expectation I could have for them at that point in time. Those were two things that really sort of stood out for me as being different than me just sitting in my office and preparing for the fall semester by myself.

Still, a third, interpreted the importance of being knowledgeable about learning theory in their teaching by stating, "The emphasis being, primarily the, paying closer, more attention to the way in which people learn. And, picking up more, perhaps, on the language that is used by the learner. Perhaps, not to have certain assumptions or expectations." Connecting with how people learn seems to have helped many of the

participants in this study incorporate more active learning strategies into their instruction and feel open to trying new pedagogical strategies in the classroom.

While lesson planning and learning theory seemed to have the greatest impact on participants when they reflected on their mindset toward teaching, classroom management and formative assessment were most important engendering direct changes to teaching practices in the classroom. One participant had started to regularly use formative assessments in the classroom stating, "It was good to see like how easy it could be, and such a little time investment to get, like, actually a lot of value." Another had directly opted to combine the use of entrance tickets, a formative assessment technique, as a way to manage a classroom that regularly suffered from social loafers in group work used throughout the workshop. The same participant went on to describe the profound impact discussing classroom management had had on their teaching when saying,

> I had to manage a class last night, and I felt, you know, it's alright. I can do this. I'm actually a teacher. I have some authority in this classroom and I can say things to students like, please don't come up and ask me questions when you haven't even looked at the sheet I've given you with the examples. It's right there.

These observations indicate professional development interventions related to teaching can, and are, impactful to librarians. The format of these workshops, and the individual reactions to them, mean intensive amounts of time, money, and other resources do not need to be expended to see direct impacts in both teaching practice and self-perceptions of teaching effectiveness by librarians. While each librarian will receive and prioritize different information based on their own experiences, their time teaching, and what they perceive to be their greatest personal limitations, there is a strong indication

from this study that the foundation provided through the formal education of teaching librarians is inadequate to support a fully-developed self-conception of the individual as a teacher. Furthermore, while the participants in this study did view themselves to be teachers, the messaging and indications they received from those around them and from the institution at large seemed to negate any personal feelings they might have developed about their own self-efficacy. One participant, opining about this very issue, stated, "I think it's a marketing issue. I think there's not a clear enough understanding of what librarians do." While this sentiment rings true, without a strong and confident individual sense of what it means to be a teacher in the library, and a feeling that each teaching librarian has the same knowledge and shared responsibilities as others that teach, as recognized by all in the academic environment, it will be difficult to see significant gains in librarian self-efficacy in the teaching role.

The Perceived Effectiveness of Short Professional Development Interventions

Participants in this study were asked to comment on the perceived effectiveness of the one hour format for professional development training on teaching. The reactions and responses to the format ranged widely. Several participants appreciated the format as it did not take away too much time from other duties and represented a reasonable commitment as half of the participants indicated taking a day or two days off for a training retreat is something they find difficult. One participant shared, "I think that one hour is, is a really good amount of time" as the old adage applies that meetings should be no longer than one hour. The participant expounded on this idea to note, "Now, when you're learning something new…then I think it's still a very good amount of time." A

second participant indicated they preferred a shorter workshop to a longer retreat-style professional development offering observing,

> Sometimes…when you try to cover too much information in a session, it can all disappear. So, it was nice to be able to just think about one or two things at once, discuss those with other people, hear from you what some of the key aspects of them were, and then come back later.

While the response was generally positive, another participant, who generally appreciated the one-hour format, stated, "It was nice [the one hour format] because it wasn't, like, a huge commitment." With that shared, the participant went on to indicate they would have appreciated more time spent on assessments to provide more time to practice with the included content and methods as attendees only had the opportunity to develop one formative assessment for use in practice during the workshop. Not all participants were in agreement regarding the short format of the professional development training, with the critique largely connected to the need to interact with one another at greater length. Addressing this feeling, one participant stated, "I would have loved day long training. Because, maybe then, we could have had more time to talk with each other." Another found the time away from their typical work to be more valuable than short format approaches to professional development.

Summary of Findings

The findings from the study provided a number of insights. The self-efficacy questionnaire did not identify any effects connected to demographic factors, and limited strength in the quantitative results. From the semi-structured interviews, it was found that librarians view themselves as librarians first and teachers second. Each of the librarians

came to teaching with different levels of interest and success, and each had different motivations for continuing to teach. The participants viewed their one-on-one consultations as part of their teaching work. The participants believed that their place as educators in academia is not clear-cut, and this is further complicated by their status as staff instead of faculty. A major point of the participants efforts as teachers, as well as their own assessment of self-efficacy, arose from their interactions and coordination with faculty. Training helped the participants become more comfortable teaching in a classroom for a variety of reasons, but they did not feel that they received adequate training or social support to become teachers. Indeed, they felt that overall institutional support for their roles as teachers was lacking. Managing stress and finding time for reflection were both important to self-efficacy and perceptions of success. Further semi-structured interviews found that the professional development interventions were valuable for the participants, and that each had different learnings from the event that improved their performance as teachers. Based on self-reflective journaling, participants highlighted that there was no one right way for librarians to teach, although training on educational theory is helpful regardless of preferred teaching strategy. Chapter five will present a further synthesis of these findings and use them to address the research questions outlined in chapter one of this dissertation.

Chapter Five: Discussion and Conclusions

This study intended to examine the impact of short professional development interventions related to teaching on academic librarian self-efficacy. This research focused on answering three questions regarding librarian self-efficacy: the main tenets of librarian self-efficacy as teachers, approaches associated with a self-identification as a teacher, and the impact of professional development activities on the development of librarian self-efficacy as teachers.

This chapter will proceed as follows. First, the research questions and their associated findings will be reviewed. Next, the implications for practice will be discussed. Recommendations for further research will be provided. Finally, this dissertation will be summarized in the conclusion.

Discussion of Findings

Research question #1 asked: What are the major tenets of librarian self-efficacy?

For this discussion, consider the "librarians as teachers" model of self-efficacy (shown in Figure 3 previously). As mentioned in Chapter 2, self-efficacy in this model is measured by the response to two main questions: "to what extent am I a teacher?" and "how effective of a teacher am I?" The feedback on which these self-efficacy assessments are based arise from four main feedback pathways - individual, peer, faculty, and institutional – and inform the self-efficacy assessment for both questions. The following provides a review of the impact and insight each feedback pathway provides on the assessment of self-efficacy.

Considering the individual feedback pathway, the self-identification with being a teacher started high and remained high throughout this research. This is in direct contrast with what had been anticipated based on the existing research in this area, including Wheeler and McKinney (2015). The basis for this assessment was that the participants identified teaching as being a core component of their work as a librarian. While some of the participants felt that this was specific to the type of role they had, and not all librarians may feel this connection with teaching, they felt that they did. This basis varied by individual. Some made this connection due to experiences with previous positions. Others identified that this was an explicit component of this position, and noted that this is something that librarians broadly do. To some extent, participants also viewed the interactions with individuals outside of the classroom through in-depth research consultations to also be teaching work, and so identified that much of this work also had a strong teaching dimension.

To the self-efficacy question of "how effective of a teacher am I?", the participants all began the research at different levels of self-efficacy, but all generally improved to some small extent through the short professional development interventions conducted for the research. The foundation of this enhanced self-efficacy was a greater confidence in the basis of their work and in the range of skills that they could use in the classroom, in particular through classroom management and assessment. The participants also had more positive feelings about the content of their teaching sessions and the outcomes of their teaching sessions. Participants reported lower levels of stress, fewer negative feelings, and faster recovery time associated with teaching sessions following the professional development intervention sessions. While there is no evidence available

to say whether student outcomes did or did not improve, the *perception* among participants was that their performance had improved with respect to addressing student needs based on the participants' enhanced understanding of learning theory, which positively supported their self-efficacy in this dimension.

The peer feedback pathway was not studied directly in this research, but did arise through conversations with some of the participants and was judged to have a positive impact on the assessment of self-efficacy with respect to quality of teaching. There were no direct peer observations of teaching mentioned through the course of this study. However, multiple participants shared the value they gained from discussing teaching with peers. Part of the value came from additional insight into techniques or strategies the participants may use in the classroom to become more effective. Further value came from recognition of common challenges faced by librarians in teaching contexts, reducing anxiety through the recognition of shared issues ("it's not just me") and increasing their own appraisal of their skills with respect to their peers. Participants also expressed the desire for mechanisms or contexts to engage in those sorts of conversations more frequently, raising the possibility that these sorts of interventions could have a further positive impact on self-efficacy.

The faculty feedback pathway was found to be generally supportive of increased self-efficacy both with respect to self-identification as teachers and assessment of teaching quality. This arose from two different perspectives. First, with the increased knowledge of teaching skills developed through the professional development interventions, participants felt more confident in their discussions of teaching and learning with faculty. In addition, this increased knowledge allowed the participants to

recognize that the faculty themselves were primarily domain experts and generally had not received specific training in teaching techniques in their formal education either. This enabled participants to view themselves as peers with the faculty in teaching contexts and so did not always need to defer to the faculty with respect to teaching decisions, allowing the participants to potentially set or negotiate teaching expectations in the classroom. Although each of the participants engaged in different behavior based on this realization, this latter change was the most significant observed through the course of this research and had the greatest impact on librarian self-efficacy.

The institutional feedback pathway was the only pathway that had a primarily negative effect on the librarians' responses to both dimensions of self-efficacy. There were numerous factors driving this. Participants in this study were highly concerned about the lack of support for their teaching from both library and university administration. This was particularly evident when looking at three of the major concerns outlined by participants, including the requirement of a formal review process to receive professional development funding, coupled with the limitations of those funds to provide direct professional development opportunities for teaching, the lack of private office space for all librarians who teach, and the lack of faculty status for librarians. This is consistent with the findings from Chan and Auster (2003), who examined factors leading to librarian professional development in public library settings included support from management to participate in professional development, and that structural or institutional barriers limited the participation in such training. These elements combined seemed to be issues that the participants saw and largely internalized as de-emphasizing the importance or impact of their teaching practice. For those who had developed high

levels of self-efficacy in teaching, they reflected the sentiment that they had done so in spite of these structural barriers to their success, but that they worked in an environment that did not support nor facilitate this work beyond general lip service. Librarians were not encouraged or rewarded for their teaching activities above or beyond their other activities.

As a final point for this question, it is interesting to note that, even among those librarians with high self-efficacy as teachers, none of them viewed themselves *innately* as teachers; it was always viewed as an acquired skill to some degree. They may view their skills as on a path of improvement or as the result of significant development efforts, but none described teaching skills as coming naturally. Multiple participants noted their own orientation toward introversion, as well as that of their peers, and the associated stress arising from engaging in a strongly extroverted activity despite an inclination to introversion.

Research question #2 asked: What teacher development approaches are associated with the development of the self-conception of "a teacher" by Canadian librarians in academic libraries?

This study considered participant development experiences among four different avenues. The first set of experiences were short professional development interventions around four core topics covered in pre-service teacher education, including learning theory, lesson planning, classroom management, and assessment. The next set of experiences were professional development activities participants had engaged in outside of this research, including attending seminars, workshops offered by the institutional center for teaching excellence, and professional conferences. The third set of experiences

were from informal communities of practice, where library colleagues discussed, focused on, and mutually supported teaching activities among themselves. The final set of experiences was the formal and informal training participants had received through the course of their MLIS education. Each of these professional development activities had an impact on librarian self-efficacy as teachers in the perceptions of the participants, each activity to varying degrees and somewhat dependent upon circumstance.

First, the professional development interventions generally had a neutral-to-positive effect upon participants, with each of the topics having a different type of impact upon the participants. This will be explored further under the discussion of research question 3.

Next, the impact of both formal training and formal professional development activities were neutral-to-negative. Although the participants were not asked specifically about their training on teaching skills during their MLIS programs, it was frequently raised unprompted that their MLIS education did not prepare them for becoming effective teachers. Formal professional development activities were more beneficial but of limited impact for two main reasons. First, it was often difficult for participants to translate those ideas presented in the formal professional development activity into the specific context of library teaching at their institution. In addition, it appeared that many of the practices presented as successful at other institutions seemed to be due to specific environmental factors unique to that institution and thus limited the potential effectiveness at the participants' home institution. However, one benefit that was consistently identified was the exposure to varied perspectives on teaching practices, even if it was not readily apparent how to translate those practices to the participants' own circumstances.

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Finally, the study participants generally found engagement in communities of practice to be influential to their self-efficacy as teachers. Most beneficial was the fact that, in these communities, librarians often heard about challenges their peers had encountered in the classroom, and so both learned about strategies to overcome these challenges and found validation in the fact that they alone were not experiencing the same sorts of challenges. The sense of isolation in teaching appeared to have a profound corrosive impact on self-efficacy, and so the opportunity to connect with others on these issues was very important. The general emotional support and validation offered in these communities also helped buoy perceptions of self-efficacy.

Ultimately, it appears that librarian self-efficacy as teachers benefits most from a combination of these professional development strategies. First, the professional development interventions helped provide a strong and uniform foundation of knowledge and skills for librarians to build on as they developed their own teaching strategies. Professional development activities, such as seminars or workshops, help expand the participants' awareness of other teaching tools and strategies, potentially opening up new directions for participants' own teaching practice, especially when connections can be made from the strategies presented to the realities of librarian teaching engagements. Finally, communities of practices serve as peer learning, support, and validation through the teaching process, helping reduce the isolation librarians may feel in their teaching practice and helping them build the confidence they need to feel successful in their teaching.

Research question #3 asked: Do short professional development approaches on topics currently applied to preservice teachers effectively help academic librarians develop self-efficacy as educators?

As mentioned previously, the professional development interventions focused on four core topics covered in pre-service teacher education, including learning theory, lesson planning, classroom management, and assessment.

Overall, discussions of learning theory were found to be most consistently effective in supporting the self-efficacy of the participants. Participants regularly responded that they found this portion of the training most informative, and reflected on it frequently when developing their own classes. It encouraged them to think more about their learners and their learners' needs, as well as what backgrounds, experiences, and expectations their learners would have coming in to the classroom environment. By doing these things, they felt that they were able to design and deliver teaching interventions of greater impact, which, in turn, made them feel more effective. It was even beneficial for participants that had relatively high self-efficacy or some previous awareness of learning theory. Because these participants' previous education on these topics had not been formalized, this training confirmed their implicit concepts of learning that they had developed through trial and error. This also helped them feel more effective because it reinforced their existing confidence in the area, and suggested that their activities were correct and defensible to their faculty partners.

However, when it came to examining which topics actually changed practice, the most significant were the discussions of classroom management and assessment. While some participants did not gain much from these lessons, those that did noted that these

lessons had a significant impact on their educational practice. Those that experienced significant impacts also reported that it made them feel more effective in their teaching. Those that implemented classroom management strategies reported feeling more in control and carrying greater authority in the classroom environment, increasing their confidence. For those that implemented assessment practices, assessment had previously been a stressor since their primary mode of assessment had been summative assessment, which is time-intensive. Learning how to implement formative assessment activities in ways that were not time-intensive enhanced feelings of comfort and effectiveness because it increased their understanding of the learning that was happening in the classroom environment.

Of all of the topics, lesson planning seemed to have the least impact. While most of the participants recognized the value of this activity, few actually implemented it in practice and tended to continue with their existing approaches for designing materials for the classroom. This was also one of the topics that the participants had most often had exposure to through other professional development activities like conferences, workshops, or seminars. The participants reported that they had been aware of the other three topics previously, but had not been exposed to or explored them in depth previously.

With regards to the larger research question, the findings were mixed. While the standard questionnaire indicated library self-efficacy is, at best, only slightly impacted by short professional development interventions, analysis of semi-structured interviews with participants suggests that librarians can and will make direct changes to their teaching practice based on professional development interventions. Furthermore, one of the most

vexing issues in the teaching work of the librarian, negotiating the time, place, and scope of teaching with disciplinary teaching faculty with whom they work, was a dimension of self-efficacy that was positively impacted through the provision of professional development training on teaching.

Beyond impacting librarian relationships with disciplinary teaching faculty in a positive manner, the results of the study become more nuanced and complex. The participant reaction to and integration of the professional development content in this study ranged from minimal tweaks to significant changes to practice. No one professional development topic was universally embraced by the participants in their practice, and there was disagreement over the format and length of time that was most useful for professional development offerings. This indicates there is no one-size-fits-all solution to librarian professional development on teaching and that a combination of long and short offerings, coupled with formal and information solutions, are the most likely professional development activities to improve librarians self-efficacy in the teaching role.

It is also important to note the distinct difference in results between librarian performance and librarian self-efficacy. As discussed previously, while the participants in the study all benefited from the professional development intervention, the overall findings of the study do not indicate a significant corresponding shift in the participants' self-efficacy. Understanding this disconnection is important. After all, the theory of andragogy posits that adult learners are largely problem-focused and concerned with the immediacy of the application of their learning – both aspects which should have been addressed by the professional development intervention. In fact, the interviews with the participants suggest that their overall performance as teachers was improved through the

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professional development intervention, but this did not necessarily translate into an improvement in their self-efficacy as teachers. To determine a reason for this, again consider the model of librarian self-efficacy of teachers. While there are multiple points of feedback – peer, faculty, institutional, individual – that provided positive support for self-efficacy, the institutional feedback pathway had a significantly negative impact on librarian self-efficacy. The interviews with participants suggested that this negative impact had been largely internalized, and that, while they did see themselves as teachers, they did not view teaching as a particularly valued part of their role. While the andragogical learning gained by the participants provided incremental, intermittent support for their self-efficacy from their individual classroom experiences, this positive effect was overwhelmed by more consistent, long-term, negative feedback from the institutional pathway reducing their self-efficacy. This research suggests that professional development interventions can make a significant positive impact on the performance of librarians in teaching roles, but to address librarian self-efficacy in teaching, the institutional factors that negatively impact librarian self-efficacy must be addressed.

Implications for Practice

This study presents a number of implications for library and librarian practice, especially as academic librarians grow to have a more intensive and concerted teaching role.

The first recommendation is for the American Library Association, the accrediting body for LIS programs in North America, to recognize that teaching has become an essential part of work in a variety of types of libraries, and especially within the academic library specialty. The organization could require changes to curricula in LIS

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programs to directly address this issue, as they do with other "core" areas of librarianship, including reference work and collection development and management. While the current accreditation standards outline that the curriculum in such programs must promote a, "commitment to continuous professional development and lifelong learning, including the skills and competencies that are needed for the practitioner of the future," the findings of this study indicate academic librarians entering the field feel ill-prepared for their teaching role, generally ineffective in that role without continuous additional training, and a great deal of uncertainty about the importance of the role of teaching in librarianship as it receives generally short shrift during the required training of the recognized terminal degree in the field (American Library Association, 2015, p. 5). At the heart of improving academic librarian self-efficacy in teaching is providing the language, practice, and knowledge of the educational field to librarians before they enter practice and are forced to develop it through trial and error.

Beyond changes to the core curriculum of LIS programs across North America, individual libraries and librarians in leadership roles have an obligation to communicate the importance of teaching to new librarians who join their organizations, as well as to find ways to provide mentorship and training for those individuals. As professional development training in this study was found to positively impact librarian self-efficacy in the teaching role, pre-arranging opportunities for new individuals and setting aside funding, coupled with the expectation that librarians continue to work on the development of their teaching prowess would go a long way to improving the messaging to librarians and removing questions they might have regarding the emphasis and importance they should place on their teaching work. Recent research on faculty retention

in higher education indicates this focus on and support for professional development is crucially important to retaining faculty members (Masterson, 2018; Mathews, Scungio, & Benson, 2018). It is a reasonable leap to guess, especially as librarians with faculty status have been included in this research, that such an emphasis may also help support retention of well-qualified teaching librarians at an institution, perpetuating cultural gains from professional development work. Furthermore, library leaders need to have a strong understanding of the teaching work that occurs in their libraries and be more effectively telegraphing the impact of this work on their campus communities. Librarians should not feel like they are alone on an island and that they receive limited support or encouragement from the administrations at either library or university levels with regard to their teaching. Simply standing back and not getting in the way of teaching or giving general lip service by including teaching amongst the varied responsibilities in a librarian position is not enough. Librarians need and deserve more recognition of their teaching role from the communities they serve to feel comfortable, confident, and effective in the work they do.

The way in which librarian job expectations are articulated should also be viewed with some scrutiny. While productivity is important, participants in this study desired time to reflect and improve upon their teaching practice as a way to improve their self-efficacy in teaching. As the other expectations of their roles often impinged upon this time, this caused stress and limited their sense that teaching was a continuous personal learning and development process. Libraries should strongly consider establishing policies or work expectations that allow for librarians to engage in the down time needed to decompress from their teaching work, and should be advised to ensure work spaces

reflect and support the need for this time away from continuous interaction and interruption with library users. This may include revisions to policies so individuals in less-than-ideal office environments feel free to leave the office or campus and complete this work elsewhere, while still having these decompression activities recognized and honored as an essential portion of their time at work.

Finally, librarians who are motivated to improve their abilities and effectiveness at teaching should seek out and form communities of practice as a way to collaboratively and cohesively work on teaching. These efforts do not need to be formalized, as many of the participants in this study perceived informal versions of these groups to have positive impacts on their teaching pursuits. Such communities would offer two important elements identified by this study: the time and space to reflect on teaching experiences, and the ability to share with other librarians who are engaged in teaching. There is some indication from this study that looking at communities of practice across institutions, through professional organizations or library consortia, could be a strategic way to approach providing these supports to librarians. This could be an especially important consideration for academic librarians who are the lone teaching librarian at their institution, or for whom are at a different point in their career and need different advice and support than their peers.

Future Research

There are several possibilities for future research to address the core research questions in greater depth and more fully impact practice. First, this study is limited to a small population of teaching librarians at a single institution and may not represent the relationship between professional development interventions and self-efficacy in the

teaching role for academic librarians more broadly. A larger-scale study based in quantitative methods, but seeking to answer the same or similar research questions, would probe these issues and provide more broadly generalizable results. The same methods could also be expanded to a multi-site qualitative study using the same methods. This approach could provide a particularly rich comparison with a carefully designed site sampling approach, perhaps interrogating institutions across Carnegie Classification, or within a particular geographic region including a single United States state, or Canadian province.

Second, the professional development interventions in this study were conducted as in-person trainings to the participants. Many librarians receive a large amount of their professional development training through synchronous webinars or asynchronous online courses. This research provides a framework to study the impact of professional development conducted in the online context on teaching librarian self-efficacy. Future research in this area may also lead to direct changes in practice, as findings from such a study could determine whether or not synchronous or asynchronous professional development approaches have greater efficacy.

Third, the impact of institutional support, or lack thereof, as well as remedies to poor support should be studied further. For instance, the librarian participants in this study all worked at an institution that did not afford faculty status to librarians. As the participants identified this lack of status as an issue connected to their feelings of self-efficacy, additional research should be conducted to examine the degree and extent of the influence faculty status has on librarian self-efficacy in teaching. This research should be further delineated to examine differences in tenured, tenure-track, and administrative

faculty statuses, as are seen across the profession. This builds off other research that has examined the role of faculty status in a number of factors in academic librarian work, and appears to be an area for rich exploration and further study. Other institutional factors, such as recognition for teaching, processes associated with professional development, cultural attitudes regarding teaching, and other elements of support related to teaching, should be considered further.

Finally, additional research should be conducted to examine the impact of librarian involvement in professional development training outside of libraries that relates to teaching in the higher education context. Many of the participants in this study described participating in such opportunities at the institutional level through workshops offered at the Centre for Teaching Excellence, or through trainings offered by professional organizations. Participants in this study noted, in general, that they found such workshops to be of limited utility as the scope and context of library instruction is generally quite different than what might be offered to disciplinary teaching faculty focused on designing and delivering full courses, and the opportunities to pursue new teaching approaches vary widely by institution and academic program. The extent to which opportunities for professional development related to teaching can improve academic librarian self-efficacy in the classroom is a topic that deserves greater investigation, especially in the current higher education climate of shrinking budgets, staff, and increasing accountability for how individuals invest their time.

Conclusions

Over the last few decades, the importance of teaching for academic librarians has grown significantly. However, most LIS programs include little to no training on core

educational topics to future librarians, and it is challenging for librarians to find quality training on these topics once they begin their library careers. In addition to leaving them unprepared for the teaching necessary for their roles, this can impact the self-efficacy of academic librarians, causing further challenges as time goes on. The focus of this research was to gain a better understanding of librarian self-efficacy with respect to teaching and understand how a professional development intervention with topics common for pre-service teachers can help improve librarian self-efficacy as teachers.

The first research questions sought to find the main tenets of librarian self-efficacy as teachers. Overall, the professional development interventions were found to have a positive effect on self-efficacy due to supporting feedback from individual, peer, and faculty pathways. From an individual perspective, librarians felt greater confidence in their knowledge and skills, as well as feeling more confident that they were achieving the desired educational outcomes with students. From a peer perspective, librarians increased self-efficacy through learning from their peer librarians, as well as from an increased understanding that they alone were not encountering challenges with teaching. From a faculty perspective, librarians felt empowered to have more productive teaching conversations with faculty, in addition to gaining a better understanding of faculty educational knowledge with respect to their own. Institutional feedback was found to be the primary negative influencing factor on self-efficacy due to an overall climate unsupportive of librarians as teachers, including lack of faculty status, complicated and limited support for professional development, and inadequate provision of resources needed for reflection and preparation for teaching. These negative factors also appeared to be internalized, serving to mute the benefits to self-efficacy of the professional

development intervention even as the training itself seemed to improve librarian teaching performance.

The second research question sought to determine what professional development activities were supportive of development of self-efficacy for librarians as teachers. Ultimately, all professional development activities were found to be positive to some degree, although the manner in which they supported self-efficacy varied. The professional development interventions provided strong foundational knowledge and skills that empowered librarians to be more effective in the classroom. The informal communities of practice librarians used to discuss teaching provided a support network for developing librarians' teaching skills and providing validation of librarians' activities as teachers. Finally, formal professional development activities, such as conferences or seminars, provided some support for self-efficacy through greater exposure to a variety of techniques, but it was often challenging to determine how these techniques could be translated to the unique circumstances of librarian one-shot training.

The third research question sought to identify what pre-service teacher educational interventions best supported librarian development of self-efficacy as teachers. Training on learning theories was found to be the most beneficial, building librarian self-efficacy through making participants more confident in their teaching techniques and outcomes. Training on classroom management and assessment had the most significant impacts on librarian teaching practice, along with some positive impact on self-efficacy. Training on lesson planning was valued but largely unused by the participant group as they continued to follow their previous strategies for developing their lessons.

Academic librarian self-efficacy in the teaching role is a complex interplay of experience, training, support, and self-perception. It is possible to improve certain dimensions of self-efficacy, most notably communication with disciplinary faculty and confidence in teaching techniques and learning outcomes, via focused short professional development intervention activities. Other activities, such as engaging in communities of practice and participating in other professional development activities, can also support the development of self-efficacy. However, lack of institutional support was found to be a significant negative influence on self-efficacy, and the absence of wide-spread educational training for future librarians in LIS programs has a negative impact on librarian readiness for teaching activities. Many challenges remain in helping prepare librarians for their growing roles as educators in the 21st Century, but this research has provided an important first step in identifying ways to help bridge this gap.

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Appendix A: Self-Efficacy Questionnaire

Rate the following on a 4-point scale as outlined below.

(1) not at all true, (2) barely true, (3) moderately true, (4) exactly true

1. I am convinced that I am able to successfully teach all relevant subject content to even the most difficult students.

2. I know that I can maintain a positive relationship with teaching faculty even when tensions arise.

3. When I try really hard, I am able to reach even the most difficult students.

4. I am convinced that, as time goes by, I will continue to become more and more capable of helping to address my students' needs.

5. Even if I get disrupted while teaching, I am confident that I can maintain my composure and continue to teach well.

6. I am confident in my ability to be responsive to my students' needs even if I am having a bad day.

7. If I try hard enough, I know that I can exert a positive influence on both the personal and academic development of my students.

8. I am convinced that I can develop creative ways to cope with system constraints (such as budget cuts and other administrative problems) and continue to teach well.

9. I know that I can motivate my students to participate in innovative projects.

10. I know that I can carry out innovative projects even when I am opposed by

    skeptical colleagues.

Appendix B: Pre-Training Interview Question Protocol

1. How many years have you been a librarian? At how many libraries have you worked?

2. What is your highest level of education?

3. Do you think that your stress level was different at each school? If yes, what is different about each school? Why do you think that one job was more or less stressful than the others?

4. Do you believe that librarians are teachers?

5. Do you believe that librarians should be teachers?

6. Why do you think that this is so?

7. Do you feel that other librarians around you and how they feel about teaching, affects your personal feelings of self-efficacy in the classroom?

8. How do you prepare a lesson for a class?

9. When you finish teaching, what do you do to decompress and relieve your mind from the stressors of the experience? Do you feel that this helps you to feel effective in your teaching role?

10. Do you think that the library administration helps or do they worsen your self-efficacy level or beliefs in your ability to teach? Why? How? What can administrators do to improve your self-efficacy in teaching?

11. What convinces you to stay in the profession and continue to work on your

teaching?

12. Is there anything else you want me to know about your teaching role or what

helps you to be effective in that role?

Appendix C: Post-Training Interview Question Protocol

We have a series of interview questions. Please respond to the following interview questions based on what you learned from your participation in the Teacher Training Days professional development workshops and your experiences in the classroom since.

1. You stated in your original interview that you believe librarians are and should be teachers. Have your feelings changed, grown, or been modified in any way based on your participation in the training workshops or your classroom experiences since that time?

2. Do you feel that other librarians around you and how they feel about teaching, affects your personal feelings of self-efficacy in the classroom?

3. Could you walk me through how you prepare a lesson for a class and discuss whether or not this approach has changed at all after taking the professional development workshops?

4. When you finish teaching, what are you doing to decompress and relieve your mind from stressors?

5. What convinces you to stay in the profession and continue to work on your teaching?

6. Thinking back to those professional development workshops, how has participation in those workshops impacted your self-efficacy in your teaching?

7. Could you comment on the format of the workshops where you spent one hour intensively thinking about a particular topic?

8. Is there anything else that you want me to know about your teaching role and what you feel helps you be effective in that role that we haven't already discussed or that has come up for you out of the training or out of the teaching that you have been doing since?

Appendix D: Directions for Reflective Journals

Please spend a minimum of 30 minutes thinking about and recording how the information covered in the professional development workshop you participated in this week might impact your teaching. Responses may be written, drawn, or in additional formats.

It is recommended you keep the following thoughts[1] in mind while journaling:

- **Be present.** Journal entries are opportunities for you to reflect and to give the learning a chance to emerge out of yourself. You will get out of these exercises what you put into it. Be present when you write - give yourself the time and space for reflective learning. Far too often, we do assignments just to get them done. With journal writing, rushing through the assignment in order to meet the deadline is a wasted opportunity. Your time is valuable. Don't waste it.

- **Be honest.** This journal is for YOU, not for me. Tell the absolute truth – YOUR absolute truth. Don't worry about what you think I want to hear or what you think sounds good.

- **Be you.** Speak using your own voice, use your own words and write whatever comes to mind. Let your thoughts flow freely and do not censor yourself.

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[1]   Recommendations on reflective journal writing from http://alameda.peralta.edu/mary-shaughnessy/files/2012/05/Directions_for_Writing_Journal_Entries.rtf

- **Go deep.** Learning comes in layers. Sometimes our most profound learning is behind our initial judgments and perceptions. This process can help you uncover things about yourself and your work which you may never have articulated. Be open to the possibilities of what you may learn by going deep.