ACADEMIC LIBRARIANS' TEACHER IDENTITY DEVELOPMENT THROUGH THE
SCHOLARSHIP OF TEACHING AND LEARNING: A MIXED METHODS STUDY

A Dissertation

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AUTHORIZATION TO SUBMIT DISSERTATION

This dissertation of Lauren Hays, submitted for the degree of Doctor of Philosophy in Education
with a major in Educational Leadership and titled "Academic Librarians' Teacher Identity
Development through the Scholarship of Teaching and Learning: A Mixed Methods Study" has
been reviewed in final form. Permission, as indicated by the signatures and dates given below, is
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DEDICATION

This dissertation is first dedicated to my husband, Chad. He has supported me through three graduate degrees—I promise this is the last one. None of this would have been possible without his support, encouragement, and willingness to listen to my ideas. I also want to dedicate this dissertation to my parents. They instilled in me a love of learning that I have never lost. Last, but certainly not least, I dedicate this to my grandparents. Before I started this process, Papa said he wanted to see me graduate with my Ph.D.—well, I have done it for you.

ABSTRACT

This dissertation was an explanatory sequential mixed methods study that sought to understand academic librarians' involvement and experience in the Scholarship of Teaching and Learning (SoTL). Specifically, the researcher studied academic librarians' teacher identity development through SoTL. Quantitative data were collected from a survey sent to the Association of College and Research Libraries Information Literacy listserv. Semi-structured interviews with seven academic instruction librarians who took part in the survey provided qualitative data that complemented and built upon the survey results. The theoretical framework, Communities of Practice, guided and supported the research. Results from the study indicated that academic instruction librarians are involved in SoTL for a variety of reasons, but primarily because they believe participation in SoTL improves their teaching. Also, the null hypothesis of *if librarians engage in the Scholarship of Teaching and Learning, their identities will be the same as they were before* was rejected, and the research hypothesis was accepted. Engagement in SoTL does impact academic instruction librarians' teacher identity. After involvement in SoTL most research participants reported that their view of themselves as a teacher grew. Participation in SoTL also impacted academic instruction librarians' instructional practices. After participation in SoTL, study participants reported an increase in their attitude toward self-improvement and in their use of active learning strategies. These study findings have implications for Library and Information Science (LIS) graduate schools, academic library administrations, and professional development organizations.

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Chapter I

Introduction

A professional identity is missing from the field of librarianship (Atkins, 2003; Davis, Lundstrom, & Martin, 2011; Freedman, 2014; Walter, 2008). For over a century, the identity of librarians has been ill-defined (Freedman, 2014). Often, scholars view librarians as the caretakers of books. In the past, this view of librarians was in keeping with the responsibilities of the job. Since Alexandria, librarians have housed, preserved, and made the written word available (Battles, 2003; Drabinski, 2016). With the advent of the Information Age, though, librarians' roles have evolved. Specifically, in higher education, the role of librarians has changed tremendously (Drabinski, 2016; Ellis, Rosenblum, Stratton, & Ames-Stratton, 2014; Goetsch, 2008; Jaguszewski & Williams, 2013; Karasmanis & Murphy, 2014).

Today, as part of their job responsibilities, many librarians in colleges and universities teach (Bewick & Corrall, 2010; Davies-Hoffman, Alvarez, Costello, & Emerson, 2013; Hall, 2017; Matlin & Carr, 2014). Despite librarians teaching for over 100 years, the past few decades have led to change in the skills librarians instruct on and the type of educating librarians conduct (Walter, 2005a; Warner & Seamans, 2004). Indeed, the teaching of information literacy skills is a main job requirement for all academic librarians (Houtman, 2010; Julien, Gross, & Latham, 2017). The responsibility of instruction, though, is only one of the many roles librarians must adopt. The traditional job functions of collection manager and reference work remain a requirement for many academic librarians working today, and library schools still teach those traditional skills (Bronstein, 2011; Freedman, 2014; Goetsch, 2008; Westbrock & Fabian, 2010). Therefore, academic librarians struggle with their professional identity due to the many roles they must fulfill. Librarians use the services they provide as a marker of their professional

identity and altering their professional persona is difficult because librarians are connected to their traditional work responsibilities (Freedman, 2014; Hicks, 2016; Stauffer, 2014; Zai, 2014). As a result, the adopted career characteristics of librarians does not always include the role of teacher, despite the fact that teaching is an important requirement for many academic librarians' jobs (Austin & Bhandol, 2013; Hagman, 2015; Julien & Genuis, 2011; Wheeler & McKinney, 2015).

Librarians can grow in their teaching by becoming involved in professional organizations, participating in communities of practice, and asking for feedback from peers (McGuinness, 2011; Osborn, 2017). Perini (2014) and Bradley (2009) recommended that librarians become involved in the Scholarship of Teaching and Learning (SoTL). SoTL is a relatively new field of research wherein higher education faculty members study the learning that takes place in their classrooms. Studies grounded in SoTL research provide strong evidence of instruction and guide the improvement of teaching methods (Kern, Mettetal, Dixson, & Morgan, 2015). Opportunely, engagement in SoTL can have an impact on identity (Mårtensson, Roxå, & Olsson, 2011; McLean, 2009; Roxå, Olsson, & Mårtensson, 2007). Similar to librarians, faculty have discipline-specific identities, and a teacher identity is not a guarantee for those working in higher education (Henkel, 2005; Poole, Taylor, & Thompson, 2007; Trigwell, 2013). However, researchers have shown SoTL to be valuable in helping university professors adopt a teacher identity. There is room in SoTL for librarians' involvement—not only to expand their pedagogical knowledge but also to gain a deeper understanding of their teaching role (Bennet et al., 2016; Bradley, 2009; Mitchell & Mitchell, 2015; Perini, 2014).

Statement of the Problem

      The purpose of this study was to explore the development of librarians' teacher identity through involvement in SoTL. There is a gap between the current mindset of many academic librarians and the reality of their job expectations (Austin & Bhandol, 2013; Hagman, 2015; Julien & Genuis, 2011; Julien & Pecoskie, 2009; Wheeler & McKinney, 2015). Today, many academic librarians serve in the role of instructors but do not identify as educators (Freedman, 2014; Houtman, 2010). Teacher identity is important because researchers have connected an instructor's view of himself/herself to the effectiveness of the educator and subsequently to student learning (Day, 2008; Day & Kington, 2008; Harlow & Cobb, 2014; Mansfield, Beltman, & Price, 2014).

      Many college and university faculty members do not receive formal training in teaching methods (Bok, 2013; Leibowitz, 2015; Oleson & Hora, 2014). However, faculty members trained in specific disciplines are not surprised by the instructional responsibilities of their jobs (Bishop, Boyle, Carpenter, & Hermanson, 2016; Connolly & Lee, 2015; Sare, Bales, & Neville, 2012). Academic librarians, though, do not always enter the profession expecting to teach (Davis, 2007; Hall, 2017; Houtman, 2010; Julien & Genuis, 2011; Oud, 2008). This unanticipated duty can lead to challenges when teaching is part of librarians' professional responsibilities (Hall, 2017; Julien & Genuis, 2011; Slavin & Mead, 2008). Relatedly, there is variation in enjoyment and acceptance of teaching in the library profession (Ariew, 2014; Hall, 2017; McGuinness, 2011). Nonetheless, teaching will remain a job requirement for academic librarians and it is important to find ways for librarians to adopt a teacher identity (Brecher & Klipfel, 2014; Davies-Hoffman et al., 2013; Julien & Genuis, 2011; Loesch, 2010; Roy & Hensley, 2016).

Commonality exists between how higher education faculty members and academic librarians learn to teach (Walter, 2005a). Writers in the college teaching literature suggest that faculty members take advantage of professional development opportunities available on their own campus (Lieff et al., 2012; Thomas & Goswami, 2013; Walter, 2005a). Teaching faculty members frequently use their institution's Center for Teaching and Learning or equivalent division for development opportunities, and SoTL is often supported from within that department (Austin & Sorcinelli, 2013; Bradley, 2009). Teachers grow in their self-assurance when they know that their methods are effective (Bissonnette & Caprino, 2014; Davies-Hoffman et al., 2013; Otto, 2014). Professors who participate in SoTL desire to see their abilities increase to support student learning (Kahn, Goodhew, Murphy, & Walsh, 2013; Michael, 2012). Faculty members' interest in supporting learning is good because the goal of SoTL is to increase student learning (McKinney, 2006).

McCormick (2003) encouraged librarians to follow the path of other teaching faculty to improve their instruction. A commitment by librarians to engage with the pedagogical experts on campus will keep librarians from being lone scholars (McCormick, 2003). SoTL provides an opportunity for librarians to gain knowledge about their teaching, and through an increase in self-knowledge, build confidence in teaching (Elton, 2009). An increased confidence will support the growth of a professional teacher identity in librarians (Hsieh, 2010). This study examined the development of librarians' teacher identity through involvement in SoTL.

Background

The teaching role is not new for librarians' (Walter, 2005a; Warner & Seamans, 2004). However, teaching is irregularly, and often minimally, included in Library and Information Science (LIS) curriculums (Brecher & Klipfel, 2014; Goodsett & Koziura, 2016; Hall, 2017;

Hensley, 2015; Houtman, 2010). Studies have shown that librarians do not learn many of the necessary instruction skills during their library school coursework (Davies-Hoffman et al., 2013; Hensley, 2015; Houtman, 2010; Saunders, 2015; Westbrock & Fabian, 2010). The teacher role is one that librarians sometimes do not feel comfortable inhabiting because they often have limited instruction experience and do not identify as educators (Austin & Bhandol, 2013; Davis, 2007; Goodsett & Koziura, 2016; Houtman, 2010). Still, a teacher identity is critical for effective instruction thereby indicating the need for librarians to adopt the persona of a teacher (Day, 2008; Day & Kington, 2008).

In a study of primary and secondary teachers, Hsieh (2010) discovered that increased confidence supports the growth of a teacher identity. Schepens, Aelterman, and Vlerick (2009) ascertained that the key factor contributing to primary and secondary teachers' self-efficacy was their belief that their teacher education program prepared them well for the teaching profession. Again, librarians do not participate in teacher education programs during their LIS coursework (Brecher & Klipfel, 2014; Goodsett & Koziura, 2016; Hensley, 2015). Researchers have stated that due to education courses not being included as part of LIS coursework, librarians lack the training to be fully prepared for their instruction role and the adoption of a teacher identity (Houtman, 2010; Westbrock & Fabian, 2010). The absence of graduate program support for instruction librarians is concerning because research has shown that teacher identities and teacher effectiveness are linked (Day, 2008; Day, Stobart et al., 2006; Hensley, 2015; Sammons et al., 2007). The connection between how teachers view themselves and their effect on student learning underscores the importance of this study.

Often, professional development that occurs while on the job is where librarians learn how to be effective teachers (Bewick & Corrall, 2010; Westbrock & Fabian, 2010). Engagement

in on the job training is common for librarians and indicates the importance many librarians place on their teaching responsibilities once they start their career (Austin & Bhandol, 2013; Bolan, Bellamy, Rolheiser, Szurmak, & Vine, 2015; Buck, 2014; Maggio, Durieux, & Tannery, 2015; Otto, 2014; Wheeler & McKinney, 2015). SoTL, an area of research on teaching in higher education and a faculty development tool, has been shown to be useful in impacting post-secondary faculty members' professional identities (McLean, 2009; Mårtensson et al., 2011; Roxå et al., 2007). From research conducted using focus groups, formal SoTL training was also shown to impact identities (Mathany, Clow, & Aspenlieder, 2017). Simmons et al. (2013) discovered that SoTL scholars find themselves in "liminal space" with their professional identities (p. 10). With new experiences to navigate, SoTL scholars' identities are not concrete and change over time. A navigation of identities often causes uncertainty in SoTL scholars as they undertake new roles and tasks. Despite uncertainty caused by the role of SoTL in their professional lives, a narrative analysis of SoTL scholars' perspectives showed SoTL created an adaptable professional identity that allowed for growth (Simmons et al., 2013). Consequently, SoTL's impact on the professional identities of librarians is worth further study. With changes in academic library job responsibilities, the adoption of a teacher identity is important (Drabinski, 2016; Hall, 2013; Maata, 2014; Wheeler & McKinney, 2015; Saunders, 2015).

Recently, teaching effectiveness in higher education settings has grown in importance (De Courcy, 2015; Kern et al., 2015). Yet, professors do not always know that their pedagogical practices help students learn. SoTL helps to increase teacher efficacy by having instructors ask questions about the learning that takes place in their classrooms (O'Brien, 2008). When teachers know their instructional methods are effective, they grow in confidence (Bissonnette & Caprino,

2014; Davies-Hoffman et al., 2013; Otto, 2014). Accordingly, engagement in SoTL may influence librarians' effectiveness and identity (Geertsema, 2016; O'Brien, 2008).

Research Questions

In mixed methods studies, the research questions are important to the methodology (Hanson, Creswell, Plano Clark, Petska, & Creswell, 2005; Onwuegbuzie & Johnson, 2006). Quantitative and qualitative methods were necessary in order to provide a breadth and depth of understanding to a topic that had been understudied. The goal of this research study was to understand academic librarians' involvement and experience in SoTL. Specifically, the researcher studied academic librarians' teacher identity development through SoTL. Heretofore, little was known about academic librarians' engagement and participation in SoTL (Bradley, 2009; Perini, 2014). The questions that framed this study were pertinent to the problem and related to the literature (Marshall & Rossman, 2016; Onwuegbuzie & Collins, 2007; Onwuegbuzie & Johnson, 2006; Teddlie & Yu, 2007). Accordingly, the research questions addressed by this study were:

1. What reasons do academic instruction librarians state for their participation in the Scholarship of Teaching and Learning?

2. What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' teacher identity?

3. What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' instruction?

Description of Terms

Multiple definitions exist for each of the following terms in this dissertation. For understanding, clarity of word use is imperative. In this study, to avoid confusion, the researcher relied on the following definitions to inform meaning.

Academic instruction librarians. Librarians whose main responsibility is teaching and coordinating library instruction and information literacy (Association of College and Research Libraries, 2007).

Centers for Teaching and Learning. Higher education department responsible for promoting the Scholarship of Teaching and Learning and conducting professional development (Bradley, 2009; Warner & Seamans, 2005; Otto, 2014).

Communities of Practice. Groups of individuals who "share a concern or a passion for something they do and learn how to do it better as they interact regularly" (Wenger & Wenger-Traynor, 2015, para. 5).

Educational developer. A person who works in the field of educational development (POD Network Executive Committee, 2016).

Educational development. A field in higher education that supports and enhances the teaching and learning that occurs in colleges and universities (Felten, Kalish, Pingree, & Plank, 2007).

Faculty. Instructors who teach in a higher education setting (Faculty, n.d.; Gilchrist, 2007). For the purpose of this study, librarians are not included in the definition of faculty.

For-credit course. A university level course students take for college credit (Davis et al., 2011).

Higher education. Formal education conducted after high school (Higher education, n.d.).

Identity. The parts of a person discovered through learning that comprise how they view themselves (Kelchtermans, 1993; Wenger, 1998).

Information literacy. The ability to access, use, evaluate, create, and share information for a specific need (Association of College and Research Libraries, 2015).

Instructional methods. The teaching strategies used to instruct on a particular subject (O'Bannon, 2012).

One-shot instruction session. A college class session led by a librarian on information literacy skills. The class session is part of a traditional college course in a content area other than information literacy (Grassian, 2004).

Library and Information Science. The academic discipline in which librarians are trained (Goodsett & Koziura, 2016).

Post-secondary teacher. An instructor who teaches at a college or university (United States Department of Labor, Bureau of Labor Statistics, 2015).

Primary teacher. An instructor who teaches at the elementary school level (Primary and secondary education, n.d.).

Professional development. Continued training and education conducted to develop professionals after formal education is completed (Otto, 2014; Professional development, n.d.).

Scholarship of Teaching and Learning. The study of student learning in specific class contexts for public dissemination (Shulman, 2006).

Secondary teacher. An instructor who teaches at the middle school or high school level (Middle school teacher, n.d.; Primary and secondary education, n.d.).

Social learning theory. A theory developed by Lave and Wenger (1991) that proposes that people learn socially. Communities of Practice are included in social learning theory.

Teacher effectiveness. Student learning as a measure of instructional quality (Day & Kington, 2008).

Teacher identity. The professional identity of an educator as that of a teacher (Beijaard, Meijer, & Verloop, 2004)

Teaching faculty. Higher education faculty members whose load includes teaching classes (Hurtado, Eagan, Pryor, Whang, & Tran, 2012).

Significance of the Study

Research findings have informed the higher education community about SoTL's impact on identities and teaching effectiveness (Poole et al., 2007; Simmons et al., 2013). However, based on the review of the literature conducted by this researcher a formal study of librarians' participation in SoTL has not been published. This study may fill gaps in the professional literature on librarians' involvement in SoTL and on how librarians' participation in SoTL affects their teacher identity (Bradley, 2009; MacMillan, 2015; Otto, 2014; Perini, 2014). The research also contributes to an understanding of librarians' involvement in SoTL and adds to the knowledge base by helping readers understand how involvement in SoTL affects librarians' teacher identity. Study results may be useful for members of the academic library community and members of the SoTL community. The findings establish a foundational understanding of academic instruction librarians' participation in SoTL. As previously stated, opinion pieces have

been written about librarians and SoTL, but research has not been conducted (Bradley, 2009; MacMillan, 2015; Otto, 2014; Perini, 2014).

The academic library community may benefit from an increase in understanding instruction librarians' views of their professional identity and how a specific professional development model, SoTL, affects that identity. This outcome potentially fills multiple gaps in the field, including the need for greater understanding of academic librarians' professional identity as a teacher, the need to understand how professional development affects academic instruction librarians, and an identified gap in the literature on librarians' participation in SoTL (Freedman, 2014; Houtman, 2010; Walter, 2005b; Walter, 2008). Previous researchers recommended engaging in further study to understand how often, and under what circumstances, librarians seek out assistance from other librarians and the broader higher education community in order to improve their teaching (Houtman 2010; Walter, 2005b).

In addition to the library community, the SoTL community may benefit from this research because the study will potentially aid in understanding the value of SoTL as a professional development tool and supports the understanding of how involvement in SoTL affects professional identities (Meyers, 2007). A deeper grasp of SoTL's effect on professional identities is a valuable outcome for the broad higher education community and more specifically for faculty developers (Johnson & Goodson, 2015; Meyers, 2007; Roxå et al., 2007; Simmons et al., 2013). Further, the SoTL community gains from learning about librarians' participation in SoTL. This information is important for understanding potential support for SoTL projects (McVeigh, 2011). Despite Trigwell's (2013) finding that SoTL was useful for improving student learning when higher education faculty participated in it, numerous gaps still exist in the

literature on how SoTL influences professional development (Johnson & Goodson, 2015; Mitchell & Mitchell, 2015).

Lastly, the education community may benefit from the results of this study due to the connection between teacher identity and teaching effectiveness. When instructors possess a teacher identity, their teaching methods are often more effective (Day, 2008; Day, Stobart et al., 2006; Sammons et al., 2007). Therefore, the results of Research Question 3 were potentially valuable in understanding the connection between engagement in SoTL and instruction. The definition of teacher identity is not conclusive, and this study may help clarify the makeup of librarians' teacher identities (Beijaard et al., 2004; Beauchamp & Thomas, 2009; Hsieh, 2010). While researchers have studied the impact of mentors and the impact of early career settings on teacher identity there are gaps in research on other influences of teacher identity (Beauchamp & Thomas, 2009; Izadinia, 2015).

This dissertation is also significant because it builds on a theory used extensively in higher education and the library community—the *Communities of Practice* theoretical framework (Wenger, 1998), which strengthened this research study. Communities of practice have framed previous research on teacher identity (Correa, Martinez-Arbelaiz, & Gutierrez, 2014). Nonetheless, research gaps still exist around the theory of Communities of Practice (Nistor, Daxecker, Stancui, Diekamp, 2015; Wenger, 1998), and Nistor et al. (2015) recommended a mixed methods study for further research on communities of practice. Although additional study is needed to understand the conversations around communities of practice in higher education (Ryan, 2015), this study possibly filled research methods gaps because it utilized communities of practice to determine if engagement in SoTL influences librarians' teacher identity (Wenger, 1998).

In summary, this dissertation aids in understanding SoTL's impact on the professional teacher identity of librarians. Through knowledge of the impact of SoTL on teacher identity development, these findings help librarians make decisions about professional development and become better connected to the higher education community. In conclusion, the findings of this study add to the body of literature on librarians' participation in SoTL and on librarians' professional identities.

Theoretical Framework

In Lave and Wenger's (1991) Social Learning Theory, communities of practice are the primary characteristic. In this theory, people learn, create meaning, and form identities through their involvement with others in the community (Lave & Wenger, 1991; Wenger, 1998). Thus, groups of people participating in a system affect how individuals in the group see themselves (Wenger, 1998). Given that identity was a primary focus of this study, communities of practice framed the formation of this study's research methods and the understanding of the results. Wenger's theory has supported research and the actions of many in the library, higher education, and SoTL communities (Clark, Partridge, & Peterson, 2017; Green, Ruutz, Houghton, Hibbins, 2017; Hagman, 2015; Handley, Sturdy, Fincham, & Clark, 2006; Jawitz, 2009; Nistor et al., 2014; Pharo, Davison, McGregor, Warr, & Brown, 2013; Ryan, 2015). Due to extensive use of communities of practice in related publications, the theoretical framework fit the current study.

Overview of Research Methods

A person's identity is individual, yet it is affected by their involvement in communities (Holland, Lachicotte, Skinner, & Caine, 2001; Wenger, 1998). Therefore, due to the complex nature of identity, the researcher sought to understand what influenced identity and why identities were influenced. To answer the study's questions, the researcher conducted an

explanatory sequential mixed methods study. Mixed methods studies include quantitative and qualitative data, thus allowing for a variety of analysis (Creswell, 2014). The researcher determined a mixed methods study was the most suitable design for the proposed study because the mixing of methods allowed for a thorough answering of the research questions (Venkatesh, Brown, & Sullivan, 2016). Additionally, the use of a mixed methods approach acknowledged the benefit of both quantitative and qualitative discoveries to have a well-rounded view of the results (Leech & Onwugbuzie, 2009; Sale, Lohfeld, & Brazil, 2002). By integrating quantitative and qualitative research methods, the researcher improved the value of the research (Bryman, 2006; Ivankova, Creswell, & Stick, 2006). Consequently, conducting a mixed methods study was appropriate for understanding the breadth and depth of the research results (Denzin, 2012; Johnson et al., 2007).

Decisions regarding the study method and design were conducted sequentially in order for results to guide other research design components (Hanson et al., 2005). The primary rationale for a mixed methods approach was complementarity (Bryman, 2006; Greene et al., 1989). In other words, the results from the qualitative data collection complemented, clarified, and expanded on the quantitative data. Complementarity also allows for similarities or overlays in the data analysis. Therefore, the qualitative results complemented the numerical data and added depth to the study (Greene et al., 1989; Tashakkori & Teddlie, 2003).

The second rationale for a mixed methods approach was development (Greene et al., 1989). A development rationale for a mixed methods study means that the findings from the quantitative data aided the researcher in the development of the qualitative data collection tools (Greene et al., 1989; Ivankova et al., 2006). Survey participants were asked if they have participated in SoTL.

If they answered in the affirmative, then the rest of the survey was revealed. Research Questions

1, 2, and 3 were answered with both quantitative and qualitative data.

The theoretical framework directed the development of the survey and interview questions.

The researcher adapted survey questions from the University of Wisconsin's Teaching and

Learning Impact Survey (Meyers, 2007). For Research Question 1, the survey data helped the

researcher determine which librarians were involved in SoTL. Then the data collected from the

semi-structured interviews answered the question. To analyze the ordinal data from the Likert

scales on the survey to answer Research Questions 2 and 3, the researcher conducted a Wilcoxon

signed-rank test (Field, 2013). The statistical test allowed the researcher to test the mean

difference between two observations—before involvement in SoTL and after involvement in

SoTL (Laerd Statistics, 2015b). Moreover, the null hypothesis was that if librarians engage in

the Scholarship of Teaching and Learning, their teacher identities will be the same as they were

before.

In the quantitative data gathering portion of the study, the researcher collected data from

a volunteer convenience sample using a survey sent to the Information Literacy listserv of the

Association of College and Research Libraries (Teddlie & Yu, 2007). At the time of the study,

the listserv had 6,163 subscribers (M. Heuer, personal communication, 2017). Subscribers to the

Information Literacy listserv are typically academic librarians whose job responsibilities include

teaching information literacy, or they are librarians who want to engage in the conversation around

this topic (American Library Association, 2016). To gather the qualitative data, the researcher

conducted semi-structured interviews with seven librarians (n=7) who represented the population

that took the survey. Also, the interviewees participated in the survey and indicated that they

were willing to be interviewed. Initial interview questions were adapted from Walter's (2008)

study on librarians' teacher identity. After reviewing survey results, the researcher modified

Walter's interview questions from findings from the collected quantitative data (Fetters, Curry,

& Creswell, 2013). The qualitative data were coded for themes (Marshall & Rossman, 2016).

Chapter II

Review of Literature

Introduction

A review of the literature found that teaching is now a requirement for academic librarians (Hall, 2013; Maata, 2014; Wheeler & McKinney, 2015; Saunders, 2015). However, the adoption of a teacher identity by librarians in higher education was not a smooth road. A variety of role expectations led to nebulous characteristics for librarians, and now librarians must adopt the role of a teacher (Freedman, 2014; Gray, 2013). In order to fully engage with their role, the development of a teacher identity is important for librarians to adopt (Bullough, 1997; Hagman, 2015). Nevertheless, there are barriers to librarians adopting the identity of teacher. Formal instructional education is rarely embedded into LIS curriculum. Due to this limitation, in the past and currently, librarians learn many of the required teaching skills on the job; the professional development necessary to adopt a teacher identity is sparse (Bewick & Corrall, 2010; Brecher & Klipfel, 2014; Davis, 2007; Goodsett & Koziura, 2016; Hall, 2013; Matlin & Carr, 2014; Walter, 2006, 2008; Westbrock & Fabian, 2010).

The literature indicates that librarians are interested in their teaching (Bewick & Corrall, 2010; McGuinness, 2011; Sproles, Detmering, & Johnson, 2013; Walter, 2008), but there are challenges in creating a common culture for academic instruction librarians that allows librarians to adopt a teacher identity. Academic librarians have stated that multiple demands and an overlap in job responsibilities contributed to the lack of a common culture (Bronstein, 2011; Freedman, 2014; Goetsch, 2008; Seymour, 2012; Westbrock & Fabian, 2010). Librarians have also reported feelings of isolation in their roles (Orbell-Smith, 2012; Seymour, 2012). The factors contributing to a lack of clear identity has led to professional struggles when teaching is a

significant aspect of a librarian's job (Freedman, 2014; Zai, 2014). Teacher identity is important

because a teacher's identity is linked to the quality of his or her instruction (Day & Kington,

2008; Sammons et al., 2007). With academic librarians expanding their teaching responsibilities,

the quality of their instruction is critical (Davies-Hoffman et al., 2013; Houtman, 2010).

Bradley (2009) encouraged librarians to engage in the Scholarship of Teaching and

Learning, an area of discipline-specific research wherein instructors study their teaching and

share their findings. Researchers have shown that participation with SoTL results in the growth

of a teacher identity among university professors (Mårtensson et al., 2011). Much of SoTL work

occurs in communities; humans form identities through shared experiences with a community

(Michael, 2012; Mighty, 2015; Potter & Kustra, 2011; Wenger, 1998). When instructors take

part in SoTL, they often engage with a community of peers (Barnard et al., 2011; Kahn et al.,

2013; Michael, 2012), and despite being an international movement, SoTL has many

characteristics of a community of practice. Members of higher education involved in SoTL have

the same goal of improving teaching to improve student learning. Moreover, Lave and Wenger

(1991) found individuals' identities are connected to their ability to contribute to the community.

SoTL participants regularly share their findings as well as support and analyze each other's

research (Fanghanel et al., 2016; Shulman, 1999). Understanding the work of others in an

individual's community leads to individuals identifying more closely with the group (Lave &

Wenger, 1991).

Identities are composed of many factors (Kelchtermans, 1993). For example, teachers'

personal values and experiences affected their identity as a teacher (Day & Kington, 2008;

Jephcote & Salisbury, 2009). In addition, identities are formed through internal and external

factors (Hicks, 2014; Kelchtermans, 1993; Walter, 2008; Wenger, 1998). Librarians' identity

formation aligns with these statements. Academic librarians have many factors that contribute to their professional identity, and research has shown that circumstances affect librarians' identities (Austin & Bhandol; 2013; Hagman, 2015). However, despite librarians struggling with their professional teaching identities, there is minimal literature on this topic (Davis et al., 2011; Freedman, 2014; Walter, 2008).

Similarly, the literature on librarians' engagement with SoTL is also sparse. Despite the need for many librarians to teach, few librarians have sought to engage in the broad academic discussions on the best practices of teaching (Bradley, 2009; Perini, 2014). As stated earlier, participation in SoTL can have an impact on professional identities (Mårtensson et al., 2011; McLean, 2009; Roxå et al., 2007). Synthesizing the literature is necessary for understanding the background and current setting of this study. The following literature review provides the context and justification for this research on how participation in SoTL affects librarians' teacher identity. Included in the review of the literature are sections that combine information on librarians, SoTL, and teacher identity. The sections in the literature review are an overview of the theoretical framework, the history of teaching by librarians, the instructional proficiencies and responsibilities of librarians, the professional identity of librarians as teachers, the Scholarship of Teaching and Learning, and librarians and the Scholarship of Teaching and Learning. The researcher supported each section with the Communities of Practice theoretical framework.

Theoretical Framework

In this study, the researcher explored the concept of a teacher identity in librarians. This study is rooted in the work of Wenger (1998). Wenger wrote of a social theory of learning and specifically called social learning interactions communities of practice. Through engagement in

social learning settings, members create meaning, engage in practice, build community, and form

identities. Communities of practice are the social structure that allows much of this social

learning to occur. Continued involvement in a community leads to persons identifying with the

community (Lave & Wenger, 1991).

Engagement in communities of practice is complex. Individuals interact with many

people throughout their day, but only a certain number of those interactions take part within a

community of practice. Figure 1 illustrates how individuals interact and engage with

communities of practice (Wenger & Wenger-Traynor, n.d.).

Figure 1. Levels of participation in communities of practice. From "Levels of Participation" by E.
    Wenger and B. Wenger-Traynor, n.d. (http://wenger-trayner.com/project/levels-of-
    participation/). Reprinted with permission (Appendix A).

For this study, the focus was on identity development through SoTL, which is framed as

a community of practice. Additionally, the researcher considered the other attributes of a social

learning setting and applied the theory where appropriate. However, the focus of the study is on

identity development. Wenger (1998) described the component of identity in social learning as "a way of talking about how learning changes who we are and creates personal histories of becoming in the context of our communities" (p. 5).

To understand the conceptual framework of the Communities of Practice social learning theory, one must start with four premises:

1) We are social beings. Far from being trivially true, this fact is a central aspect of learning.

2) Knowledge is a matter of competence with respect to valued enterprises—such as singing in tune, discovering scientific facts, fixing machines, writing poetry, being convivial, growing up as a boy or a girl, and so forth.

3) Knowing is a matter of participating in the pursuit of such enterprises, that is, of active engagement in the world.

4) Meaning—our ability to experience the world and our engagement with it as meaningful—is ultimately what learning is to produce. (Wenger, 1998, p. 4)

These stated assumptions underlie the work of this study.

Researchers have suggested that communities of practice were useful models for higher education to utilize to encourage collaboration, interdisciplinary teaching, and complex problem solving (Kissel et al., 2016; Pharo et al., 2013). At Loyola Marymount University, researchers found that communities of practice help build community involvement to support SoTL (August & Dewar, 2010). In addition, librarians have used communities of practice to foster identity development (Belzowski, Ladwig, & Miller, 2013). Communities of practice were able to affect identity through both formal and informal settings (Correa et al., 2014).

Despite the use of communities of practice for identity development, not all communities have consistent identities. Multiple identities can exist within one community of practice. The occurrence of more than one identity in a community can cause tension to arise among the participants. Character choices also create options for career paths, and those too can lead to tension. In effect, a single community of practice does not guarantee a cohesive identity (Jawitz, 2009). Nonetheless, when members of the same social group work together in similar pursuits, common identities form (Wenger, 1998). Still, both individual and group identities exist in communities and that leads to the need for individual and collective negotiation as individuals determine how they view themselves (Wenger, 1998). Some have written that the primary way identities are developed is through discourse. Discourse allows for negotiation of those conflicting identity components (Correa et al., 2014). Wenger (1998) wrote that engaging in a practice with a group was the primary conduit to identity development. Thus, in terms of identity in communities of practice, identity is

- negotiated experience

- community membership

- learning trajectory

- nexus of multimembership

- a relation between the local and the global (Wenger, 1998, p. 149).

Of particular relevance to this study is when identity is formed through community membership a person's view of themselves creates a sense of ability and proficiency in the shared practice (Wenger, 1998).

History of Teaching by Librarians

For many years, a need for library instruction within higher education did not exist (Hopkins, 1982; Salony, 1995). Academic programs were extremely specialized, and scholars knew the literature in their fields. As institutions of higher learning opened their doors to more students and offered more general education courses, the need to instruct on library usage became a necessity (Hopkins, 1982; Salony, 1995). Additionally, the changes in curriculum, student demographics, and technology expanded the role of librarian to one wherein a librarian is also a teacher (O'Connor, 2009; Walter, 2008).

Originally, library instruction equated to bibliographic instruction. Academic librarians were often faculty members with part-time appointments in the library. Due to this fact, the focus of librarians in higher education contexts was on teaching the academic uses of library collections (Hopkins, 1982). Academic librarians taught classification schemes and bibliographic organization (Hopkins, 1982). Included in bibliographic instruction were the teaching of research skills and instruction on how information was organized (Shill, 1987). Bibliographic instruction was a precursor to the information literacy instruction librarians provide today (Julien & Pecoskie, 2009).

Information literacy was a term first used by Paul Zurkowski in 1974 when he was president of the Information Industry Association (McGuinness, 2011; Zurkowski, 1974). The Association of College & Research Libraries (ACRL, 2015) defined information literacy as "the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning" (para. 7). The

responsibility of teaching information literacy now falls within the purview of librarians (Albrecht & Baron, 2002; Brecher & Klipfel, 2014; Rader, 2002; Walter, 2008; Zai, 2014).

In 1977, ACRL established the Bibliographic Instruction Section (Dudley, 1981). Today, the ACRL Bibliographic Instruction Section has been renamed the ACRL Instruction Section. In recent times, academic librarians began to teach information literacy, and librarians pushed for its addition to college curriculums (Davis, 2007). Of course, librarians are not the sole teachers of information literacy; like writing, it crosses all disciplines (Elmborg, 2003). Nonetheless, librarians were, and are still currently, often the primary supporters of information literacy on campus and are optimistic about its future (Saunders, 2009). Additionally, librarians believed that they should engage with teaching faculty and work to embed information literacy more fully into the curriculum. Unfortunately, despite the overall positive outlook for the future of information literacy, there are barriers to its growth including faculty autonomy and the time required to teach skills (Saunders, 2009; Saunders, 2018).

As stated, the role of librarians has changed, and now a focus on teaching and learning is important to the job (Julien & Genuis, 2011; Vassilakaki & Moniarou-Papaconstantinou, 2014). With transformations in the traditional roles held by librarians, such as collection management and circulation, teaching has become an area where librarians can demonstrate their value (Creaser & Spezi, 2014). Teaching skills have been important for librarians to possess for many years (Avery & Ketchner, 1996). Results of Avery and Ketchner's (1996) study indicated that in 1993 and 1994, 75% of employers of the reviewed librarian jobs preferred candidates to have instruction skills. However, the listed job requirements did not always include teaching skills. Nonetheless, over 50% of the hiring managers stated that instruction skills were an important consideration in making hiring decisions. Since Avery and Ketchner's study, teaching skills

have increased in importance for librarians (Brecher & Klipfel, 2014; Davis, 2007; Shank & Bell, 2011). In fact, teaching has become the most significant part of many librarians' jobs (Hall, 2013; Rose, 2003). Emphatically, employers have wanted librarians with teaching skills (Hall, 2013).

Recently, Townsend, Hofer, Hanick, and Brunetti (2016) determined that threshold concepts were a useful approach to understanding information literacy. Through four rounds of interviews, the researchers identified six threshold concepts for information literacy. Originally, the researchers started with 50 possible thresholds. Then the researchers narrowed their findings to the final six thresholds. The six threshold concepts are authority, format, information commodities, information structures, research process, and scholarly discourse (Townsend et al., 2016). Previously, researchers had identified seven threshold concepts—namely, "metadata = findability, good searches use database structure, format is a process, authority is constructed and contextual, 'primary source' is an exact and conditional category, information as a commodity, and research solves problems" (Hofer, Townsend, & Brunetti, 2012, p. 402). The discovery of these many threshold concepts for the field of information literacy framed librarians as subject matter experts in a discipline (Hofer et al., 2012; Townsend et al., 2016). This position for librarians differed from earlier classifications where the academic community viewed librarians as academic support or technical experts. Indeed, some have said librarians should strive to teach critical skills needed for students to become information literate (Hagman, 2015; Townsend, Brunetti, & Hoffer, 2011; Townsend et al., 2016). Despite the view that librarians are experts in information literacy, the identification of threshold concepts for information literacy and the subsequent publication of the *ACRL Framework for Information Literacy in Higher Education* led to strong discourse. Many librarians did not agree with the

ACRL Framework or agree with threshold concepts. The conversations that occurred around the framework and threshold concepts pointed to questions of professional identity in librarians. In fact, the strong opinions held by many librarians had a direct effect on their professional identities (Drabinski, 2016).

Because information literacy is now seen as an important skill, a requirement for many librarians today is to teach for-credit and/or one-shot information literacy courses (Davis et al., 2011; Hall, 2013; Hurley & Potter, 2017; Zai, 2014). One-shot classes occur when a librarian teaches one session of a course. During the one-shot class, the librarian often introduces students to library resources that will support a particular project (Davis, 2007; Zai, 2014). Both for-credit classes and one-shot information literacy courses are times where librarians engage in a formal teaching setting.

In 2007, ACRL released *Standards for Proficiencies for Instruction Librarians and Coordinators: A Practical Guide.* This guide was a list of competencies librarians with instruction responsibilities should possess. The *Standards for Proficiencies for Instruction Librarians and Coordinators: A Practical Guide* included 12 categories of skills. The categories highlighted the range of abilities needed by librarians who teach. The importance placed on the teaching role in this guide indicated the importance of developing librarians' instruction skills (Buck, 2014; Westbrock & Fabian, 2010). This update prompted Westbrock and Fabian (2010) to recreate a study conducted by Shonrock and Mulder (1993) to determine where librarians obtained the teaching skills required of them. In the literature review, Westbrock and Fabian highlighted the lack of studies on the training of librarians as teachers. Study results indicated that despite library school being the preferred place to learn many of the necessary skills, librarians learned 37 of the proficiencies included in the ACRL list at work and not in library

school. Many librarians reported a desire to learn expected proficiencies through continuing education opportunities.

In 2017, an ACRL task force identified seven roles that academic instruction librarians must fulfill. The seven roles are: "advocate, coordinator, instructional designer, lifelong learner, leader, teacher, and teaching partner" (Standards and Proficiencies for Instruction Librarians and Coordinators Revision Task Force, 2017, para. 11). As changes have come to higher education, librarians' instruction responsibilities have continued to increase (Hopkins, 1982; Julien & Genuis, 2011; O'Connor, 2009; Salony, 1995; Walter, 2008). Librarians have not always been teachers (Hopkins, 1982; Salony, 1995), but the increase in teaching responsibilities has led to a need for librarians to be teachers (Hall, 2013; Hurley & Potter, 2017; Rose, 2003).

The Instructional Proficiencies and Responsibilities of Librarians

Instruction is a skill all librarians need; therefore, it is vital to ensure that the instruction is effective if librarians want students to learn (Davis et al., 2011; Hall, 2013; Julien & Genuis, 2011). Many books and articles are available to help librarians plan lessons and develop exercises for information literacy courses (Bravender, McClure, & Schaub, 2015; Burkhardt, MacDonald, & Rathemacher, 2010). In addition, there are many resources available to help librarians gain skills in teaching and managing a class (Blackburn & Hays, 2014; Buck, 2014; Matlin & Carr, 2014; Polger & Sheidlower, 2017). Further, librarians have experience with assessment of student learning as well as with self-reflection on their teaching (Corrall, 2017; Greer, Hess, & Kraemer, 2015; Maggio et al., 2015). However, when librarians have written about their teaching, the majority of their works have been descriptive articles (Sproles et al., 2013), which do not examine the effectiveness of teaching methods. In recent years, there has been a greater emphasis placed on teacher effectiveness in higher education. Lists of

instructional requirements or lesson examples do not indicate the ultimate success of instruction given by librarians (De Courcy, 2015; Kern et al., 2015; Walter, 2005b). Descriptive articles, while useful, are not sufficient because researchers have linked teacher effectiveness to teacher identity (Day, 2008; Day, Stobart, Sammons et al., 2006; Sammons et al., 2007).

In addition to librarians teaching one-shot or for-credit courses, they collaborate with faculty on teaching projects (O'Clair, 2012; Shank & Bell, 2011). Librarians engaged in curriculum design and evaluation as well as participated in co-teaching assignments with faculty (Julien & Genuis, 2011; Maggio et al., 2015; Shank & Bell, 2011). Thus, librarians needed to understand the teaching and learning process even if they are not engaged in formal instruction (Shank & Bell, 2011). Unfortunately, though, librarians did not necessarily have the skills required to act as instructional designers for information literacy in the curriculum (Saunders, 2009). Therefore, for librarians to fully engage with faculty in these new roles, the development of a teacher identity might be useful (Hensley, 2015; Walter, 2008).

The instructional settings where librarians teach can affect their professional identity (Davis et al., 2011; Hagman, 2015). Many librarians engaged, and still engage, in teaching one-shot instruction sessions and credit-bearing information literacy courses (Davis, 2007; Hoseth, 2009). Researchers found that the instructional setting was important to professional identity. If librarians taught a for-credit information literacy course, they were more likely to identify as a teacher. The teaching model affected the development of librarians' teacher identity (Davis et al., 2011). However, the instructional setting of a one-shot session or a credit-bearing course can often be determined by a librarian's professional status, meaning librarians do not always have control over their instructional settings. For example, if librarians hold faculty status, then teaching a for-credit course is not outside professional responsibilities, but the professional status

of librarians is inconsistent. Librarians can hold the position of faculty, staff, professional staff, or administrative faculty (Freedman, 2014; Walters, 2016).

Information literacy is a subject librarians will continue to teach (Saunders, 2009; Townsend et al., 2016). Therefore, because teaching is a role in which librarians will likely remain, the professional identity of teacher is important for librarians to embody (Avery & Ketchner, 1996; Houtman, 2010; Loesch, 2010; Rose, 2003). Academic librarians spend a considerable amount of their time teaching (Bewick & Corrall, 2010; Matlin & Carr, 2014; Wheeler & McKinney, 2015). Even librarians who were somewhat averse to their teaching role admitted the importance of teaching for their current job (Bewick & Corrall, 2010).

In two case studies, Austin and Bhandol (2013) found that despite teaching being an important role for librarians, it was surrounded by uncertainty. A majority of librarians enjoyed teaching, but most felt anxiety before teaching a class (Davis, 2007; Houtman, 2010; Julien & Genuis, 2011). Feelings of nervousness did not change based on career length. Librarians who have been working many years still felt anxiety at similar rates to new professional librarians (Davis, 2007). The perception of the role of a librarian by faculty members had an effect on the anxiety felt by librarians (Creaser & Spezi, 2014; Davis, 2007). Julien and Pecoskie (2009) conducted a qualitative study of Canadian librarians to determine how they experienced their role as a teacher. Through a phenomenological approach, the researchers discovered that the relationship between the librarians and teaching faculty was one of the most important aspects of a librarians' teaching role. There was a power differential between librarians and teaching faculty, with faculty holding the power. Some teaching faculty did not see librarians as possessing the same status. Consequently, finding ways to overcome the challenges posed by

librarians' lack of power in higher education was important for effective teaching (Hagman, 2015; Julien & Pecoskie, 2009).

Not all faculty, though, are confused about librarians' roles. Some faculty did understand and value librarians' contributions to teaching (Doskatsch, 2003; Manuel, Beck, & Molloy, 2005). Manuel et al. (2005) interviewed faculty members to understand why they used library instruction and what they valued about it. Many faculty members stated that they used library instruction because students did not have the necessary research skills to be successful. Faculty members also used library instruction to help students rely on sources other than exclusively Internet resources. The third reason faculty stated for using library instruction was to help students evaluate sources. The majority of faculty members saw librarians as the expert in these areas, and the faculty listed librarians' expertise as the reason they invited librarians to teach. Nonetheless, while librarian and faculty collaborations were fruitful, at times, confusion was shown to exist about librarians' roles and that diminished productivity (Fliss, 2005; Library Journal Research & Gale Cengage Learning, 2015; Manuel et al., 2005; Otto, 2014).

Moreover, confusion regarding librarians' roles led to anxiety in librarians (Davis, 2007). The main areas that caused anxiety for librarians are "isolation (due to faculty confusion or lack of understanding of the librarians' teaching role), coverage, performance (public speaking), and lack of training" (Davis, 2007, p. 92). Four of the recognized causes of teacher anxiety aligned with causes of anxiety felt by academic librarians (Davis, 2007). Showalter (2003) identified seven causes of teacher anxiety in higher education: "lack of pedagogical training, isolation, stage fright, the conflict between teaching and publication, coverage, grading, and student or peer evaluation" (p. 3). The acknowledged causes of teacher anxiety in librarians demonstrated a need for librarians to have access to more training, support, and professional development

opportunities (Davis, 2007; Hensley, 2015; Hoseth, 2009). In a three-year qualitative study on school librarians, researchers found professional development to be a key moment during the first 3 years of employment, and there was a connection between identified key moments and identity development (Branch-Mueller & de Groot, 2016). In higher education, professional development has increasingly focused on student learning (Fanghanel & Trowler, 2008). Involvement in professional development helped librarians support their teacher identity (Hoseth, 2009).

Librarians often realized their need for further development of teaching and instruction skills (Brecher & Klipfel, 2014; Davies-Hoffman, 2013; Matlin & Carr, 2014), and there are many ways to promote professional development leading to instructional improvement among librarians (Buck, 2014). For example, administrators can provide opportunities for librarians to communicate with each other; they can host workshops, conduct assessment, engage in peer review, and conduct on the job training (Walter, 2006; Zanin-Yost & Crow, 2012). One specific example of a professional development opportunity for teaching librarians was at Loyola University New Orleans' Monroe Library. The instruction coordinator developed a community of practice to help librarians develop as teachers. An important part of the community of practice was open discussions about topics of interest and needs. The group also supported each other by one-on-one mentoring, sharing relevant literature, and engaging in active learning activities. Additionally, members of the group shared their experiences with librarians at other institutions. Results of the community of practice indicated that it was a beneficial model and librarians at Monroe Library developed in their role as teachers (Willey, 2014). This community of practice is an example of the professional development that other studies have indicated are needed. For librarians to adopt a teacher identity, administrators and professional developers

will need to consider the institutional culture and the change process. The culture of an institution can determine what is accepted and what members of an institution do not accept (Kezar & Eckel, 2002; Roxå, Olsson, & Mårtensson, 2008). When instructional changes do occur for librarians, Gilchrist (2007) wrote that is important for faculty to collaborate with the librarians in focusing on teaching and learning.

In summary, not all librarians have been comfortable in the role of a teacher, nor do they desire to become teachers (Austin & Bhandol, 2013; Davis, 2007). However, teaching will remain a job expectation for many librarians (Davis et al., 2011; Hall, 2013; Julien & Genuis, 2011; Vassilakaki & Moniarou-Papaconstantinou, 2014). Consequently, it is important that librarians develop and expand their professional identity to include that of teacher in order to facilitate student learning.

Professional Identity of Librarians as Teachers

A professional identity is not the same as the role a person fills (Day & Kington, 2008), but due to interplay between a person's role and his or her perceived identity, identity often influences roles (Burke & Reitzes, 1981). The professional status of librarians has been debated over time. These debates led to specific perceptions about the roles of librarians. As the roles and responsibilities of the job have changed, professional identities have changed too. This development led to resistance by many in the library profession to changes because they saw those changes as an attack on their professional identity (Stauffer, 2014). However, professional identities are not static; individuals can be open to change and transformation as new responsibilities and roles are placed on them (Clegg, 2008; Coldron & Smith, 1999; Volkmann & Anderson, 1998). In fact, even new technologies have been shown to change occupational identities (Nelson & Irwin, 2012).

Throughout their career, primary and secondary educators continually negotiate their professional identities as teaching contexts change (Hsieh, 2015). The experience of primary and secondary educators is comparable to the adapting academic librarians' must do as their jobs change (Ellis et al., 2014; Goetsch, 2008). Lupton (2002) recommended academic librarians begin to see themselves as educators comparable to the teacher identity of primary and secondary school teachers. Primary and secondary teachers, similar to librarians, have multiple roles they must fulfill and often struggle to maintain a strong professional identity (Day, Kington, Stobart, & Sammons, 2006). Primary and secondary "teacher librarians see themselves as teachers first, librarians second" (Lupton, 2002, p. 76). Additionally, there are parallels between how teachers and librarians learn new skills. Both teachers and librarians need mentors and a strong support system in their roles (Sare et al., 2012; Seymour, 2012). The relationships that occur through mentorship can influence identity (Izadinia, 2015; Volkmann & Anderson, 1998; Wenger, 1998). Research has shown that pre-service teachers with a strong mentor relationship gained confidence in their teacher identity. Although mentors helped teachers grow in their teacher identities, it is important to be aware that negative mentor relationships caused a decrease in the confidence of pre-service teachers' identities (Izadinia, 2015).

Recently, professional identity has been a topic of discussion in the teacher education literature (Chong, Ling, & Chung, 2011; Correa et al., 2014; Hsieh, 2010; Izadinia, 2013; Lamote & Engels, 2010). Horn, Nolen, Ward, and Campbell (2008) found teacher education programs were important for teacher identity development. It is important to understand the growth and creation of a professional identity in teachers through professional development, because as previously stated, professional identities influence teachers' effectiveness (Day, 2008; Day, Stobart et al., 2006; Sammons et al., 2007). Elementary and secondary student teachers'

methods evolved as they engaged in their own teaching during their coursework. The evolution of their teaching methods affected their sense of themselves (Horn et al., 2008). As found in a case study of eight English teachers with 3-5 years of experience that were part of a collaborative inquiry group, there were complexities to creating and sustaining a teacher identity because new teachers created their professional identity from multiple sources (Hsieh, 2010).

Moreover, the local context matters in identity formation. Local events affect how a person viewed himself or herself (Hsieh, 2010; van Lankveld, Schoonenboom, Volman, Croiset, & Beishuizen, 2017). Likewise, the words a person used to describe him- or herself were important for the adoption a specific identity (Hicks, 2014). Identities evolve over time and consist of multiple parts. Included in a professional identity are "self-image, self-esteem, job-motivation, task perception, and future perspective" (Kelchtermans, 1993, p. 444).

While an agreed-upon definition of a teacher identity does not exist, the idea of a teacher identity is well documented in the literature; many researchers pointed to its significance for teachers (Beauchamp & Thomas, 2009; Beijaard et al., 2004; Izadinia, 2013; Olsen, 2008; Roy & Hensley, 2016; Walter, 2008). A teacher identity is more specific than a broad professional identity; it is open to change and has many factors contributing to its creation (Beauchamp & Thomas, 2009; Beijaard et al., 2004; Harlow & Cobb, 2014; Izadinia, 2013; Olsen 2008). A teacher identity is composed of many of the same parts, though, as a broad identity, and it has been shown to influence teachers' effectiveness and job commitment (Day, Kington et al., 2006; Day, Stobart et al., 2006; Day & Kington, 2008). The emphasis on primary, secondary, and post-secondary educators' teacher identity draws attention to the need to pay attention to librarians' teacher identity (van Lankveld et al., 2017; Walter, 2005b). Paying attention to the identity of librarians as teachers is important because librarians' identities as teachers affect their

job performance as well as their motivation to continue improving when teaching is an important part of their jobs.

The literature confirmed multiple components of a professional identity. Perceived roles impacted how librarians view their identity as teachers. Librarians and library users constructed librarians' professional identities (Davis, 2007; Hicks, 2014; Polger & Okamato, 2010). Researchers have also written about how faculty and student perceptions of librarians affect a librarian's identity (Feldman & Sciammarella, 2000; Polger & Okamoto, 2010). Moreover, the professional identity of librarians adapted to the changing work environment (Gray, 2013; Miller, 2015; Sare & Bales, 2014). The library profession is one where change is a prime theme (Sare & Bales, 2014). As previously stated, today librarians must fulfill many roles (Corrall, 2010; Freedman, 2014; Saunders, 2012; Vassilakaki & Moniarou-Papaconstantinou, 2014; Walter, 2008).

To gain an understanding of the professional identity of academic librarians, Freedman (2014) sent a survey to academic librarians and library administrators in the New England area to determine their professional status, how they self-define their role, role expectations, and the relationship between identity and role. The study results indicated similar findings to those found by Walter (2008). Academic librarians struggled with their professional identity due to the many roles they were required to fulfill. The most common role expectation was an *information professional* and the second most expected role was an *educator*. The new roles of an *information professional* and an *educator* were often in combination with more traditional librarian roles such as reference and collection development (Freedman, 2014). Frequently, these unrealized expectations led to a reexamination of professional identities (Flores, 2006). Often, the expectations librarians had of the profession when leaving library school did not align

with their experiences (Houtman, 2010). Many librarians started their careers with unrealized expectations in the areas of flexibility, workload, diversity of work, and the campus community's feelings about the library (Oud, 2008).

The multiple professional roles are important to be cognizant of because it can lead to indistinct professional roles. Moreover, fulfillment of different roles led to stress in many librarians (Vassilakaki & Moniarou-Papaconstantinou, 2014). Librarians have still been engaged in many of their traditional core functions, but they have had many additional responsibilities added to their jobs (Bronstein, 2011; Saunders, 2012). These different roles indicated a need for administrative support to aid librarians in adopting new identities. In fact, multiple expectations for some librarians led to more than one identity forming. The existence of multiple identities in one individual led to stress (Colbeck, 2008).

Furthermore, there was a relationship between institutional structure and the professional identity of librarians (Freedman, 2014; Jephcote & Salisbury, 2009; Sare et al., 2012). Librarians often spent the beginning stage of their employment understanding expectations in order to meet those expectations (Sare et al., 2012). If employers asked librarians to fulfill multiple roles, then indistinct identities formed, thus leading to strain in professional identity (Colbeck, 2008). A specific workplace context mattered greatly to how librarians view themselves. This is also true for academics broadly. Workplace culture and context affected academic identities (Roxå et al., 2008).

With all the components affecting a teacher's identity, the creation of one has been shown to be challenging. There is a complex relationship between identity and pedagogical knowledge. When librarians do not have strong pedagogical knowledge, it posed a potential problem for librarians in adopting the role of a teacher (Austin & Bhandol, 2013; Julien &

Pecoskie, 2009; Wheeler & McKinney, 2015). Many librarians eventually learned about pedagogy, but that was not always their first area of training (Bewick & Corrall, 2010). Traditional librarian roles, such as the reference interview, have been shown to have minimal impact in a class setting. Nevertheless, the reference interview was, and is, still an important part of librarians' jobs (Polger & Okamoto, 2010; Powers, 2010; Saunders, 2012). Today, librarians use different tools in their reference work, but the core work of reference remains the same (Bronstein, 2011; Saunders, 2012). Additionally, many librarians wanted to engage in instruction at the reference desk, but were often unable to do so (Powers, 2010). Therefore, when librarians tried to continue with the typical models of teaching they employed in a reference interview, they were not successful teaching in a class setting. This, coupled with the fact that many academic librarians did not receive the necessary training to teach, created barriers for the development of a professional teacher identity (Davies-Hoffman et al., 2013; Davis et al., 2011; Walter, 2008). The multiple voices, job requirements, and lack of preparation for their teaching responsibilities can create a challenging environment for librarians trying to create a strong professional teacher identity.

In the 1990s, a shift occurred from librarians who teach to librarians as teachers (Doskatsch, 2003). Nevertheless, not all librarians viewed themselves primarily as teachers, and they were hesitant to take on that identity (Austin & Bhandol, 2013). Walter (2008) conducted an exploratory qualitative study to investigate the professional identity of teacher in academic librarians. Walter interviewed six librarians during the spring of 2004. The participant group was composed of five females and one male librarian, all from the same doctoral/research-extensive institution. From the semi-structured interviews, Walter identified five themes that affected librarians' professional identity as that of a teacher. The identified themes are:

1. The centrality of teaching.

2. The importance of collegial and administrative support.

3. The stress of multiple demands.

4. The problems with professional education.

5. The stereotypes and misperceptions (of librarians) (Walter, 2008, pp. 61–63).

The conclusions of Walter's (2008) study were not definitive due to the exploratory nature of the investigation, and further research was recommended to determine how librarians develop a teacher identity. However, the findings were important to understanding the complex issues surrounding the development of a teacher identity among academic librarians.

Researchers have identified four ways that librarians regard their identity. The categories are *teacher-librarian*, *librarian who teaches*, *learning support*, and *trainer* (Wheeler & McKinney, 2015). Librarians who fell into the teacher-librarian category viewed themselves as teachers. They also knew that they taught. Librarians in the librarian who teaches category did not see themselves as teachers in spite of the fact that they taught. Librarians in the learning support category did view themselves as teachers, but they did not see their work as teaching. Last, librarians who viewed themselves as trainers did not think they taught and did not consider themselves teachers (Wheeler & McKinney, 2015). Therefore, many of these librarians needed support to make the shift from trainer, or solely a librarian, to a librarian with a teacher identity (Lupton, 2002). The various ways librarians viewed themselves and the many actions they performed as part of their jobs signified their identity was not set (Freedman, 2014; Miller, 2015; Sare & Bales, 2014). Librarians are "*always becoming* librarians" (Sare & Bales, 2014, p. 580).

Due to constant growth and change in how librarians viewed themselves, researchers recommended increased support for librarians to develop their teacher identity (Austin &

Bhandol, 2013; Flores, 2006; Wheeler & McKinney, 2015). Similar to librarians, the identities of primary and secondary teachers adapted due to changes in their teaching situations. To reiterate, researchers recommended further study on the identity development of these instructors because identity and effectiveness are linked (Hsieh, 2015). Future studies can be framed using the theoretical framework of Communities of Practice, because these communities provide a setting for librarians to cultivate a strong professional identity (Belzowski et al., 2013; Wenger, 1998). Hicks (2016) found that the importance of community was crucial to librarians' identities. The discrepancy in librarians' views of their teaching status meant that they rarely participated in outreach for teaching and learning (Wheeler & McKinney, 2015). As previously stated, identity has been shown to have an impact on teaching effectiveness (Day, 2008; Day, Stobart et al., 2006). Additionally, a teacher's perceived competence also influenced his or her identity (Sammons et al., 2007; van Lankveld et al., 2017). Faculty in post-secondary classrooms indicated that they desired community around the topic of identity. As roles and responsibilities changed, faculty found identity to be an important aspect of this shift (Terosky & Heasley, 2015). Terosky and Heasley (2005) noted that an example in higher education of faculty shifting from face-to-face instruction to online teaching had similarities to changes in librarians' roles from reference work to classroom instruction. One study that examined higher education faculty member's teacher identity found that faculty who transitioned into a faculty role from a professional career struggled with their new identity as an educator more than faculty who became a professor immediately upon completion of graduate school (van Lankveld et al., 2017). Post-secondary faculty members' experience with online teaching and transitioning from a professional career track underscored the importance of considering identity when roles and job responsibilities change (Terosky & Heasley, 2015; van Lankveld et al., 2017).

Freedman (2014) identified a gap in the literature and recommended further studies be conducted that are focused on professional development opportunities and career development. This recommendation echoed an earlier one by Walter (2008) for further study in the specific way that professional development affects teacher identity. The literature revealed room for research that studies the effects of professional development opportunities for librarians as a way to develop their teacher identity.

The Scholarship of Teaching and Learning

During his time as president of the Carnegie Foundation, Ernest Boyer (1990) introduced the scholarship of teaching in *Scholarship Reconsidered: Priorities of the Professoriate.* The scholarship of teaching was one of the four areas of scholarship Boyer proposed for faculty participation. During Lee Shulman's tenure at the helm of the Carnegie Foundation, he founded the Carnegie Academy for the Scholarship of Teaching and Learning and expanded the scholarship of teaching to the Scholarship of Teaching and Learning (Bradley, 2009; Georgia Southern University, 2013). Shulman (2006) defined SoTL as:

> The scholarship of teaching and learning invites faculty…to view teaching as serious, intellectual work, ask good questions about their students' learning, seek evidence in their classrooms that can be used to improve practice, and make this work public so that others can critique it, build on it, and contribute to the wider teaching commons. (p. ix)

Shulman's definition, however, is not the sole definition, and some confusion has surrounded the meaning of SoTL (Miller-Young & Yeo, 2015). A second definition of SoTL is "the systematic, literature-based study of processes and outcomes involved in teaching and learning intended for peer-reviewed publication and dissemination" (Secret, Leisey, Lanning, Polich, & Schaub, 2011,

p. 2). Despite multiple definitions, SoTL can be framed as a coherent field (Miller-Young & Yeo, 2015).

As these different definitions of SoTL indicate, there are still questions surrounding SoTL as a discipline of study. Numerous scholars have given varied definitions, which has led to questions about how academics should practice SoTL (Felten, 2013; Hutchings, 2000; Kreber, 2002a). Although confusion regarding SoTL exists, a strong international community and local cohorts have grown in the past 25 years (Kern et al., 2015). Geertsema (2016) recommended that SoTL be viewed as professional development instead of as solely a research discipline. This view corresponded with connections made between SoTL and faculty learning communities; SoTL and faculty learning communities have been shown to be closely connected (Beach, 2015; Richlin & Cox, 2004). Researchers have argued that SoTL offers a valuable approach to faculty development by creating spaces for faculty in local contexts to discuss, share, and learn in their resident communities (Cambridge, 2001; Fanghanel, 2013; Geertsema, 2016). Through new kinds of faculty development, faculty learning communities have proven useful in advancing SoTL on college and university campuses (Hubball & Albon, 2007; Michael, 2012). In fact, SoTL has already influenced faculty development offerings at institutions of higher education (Beach, 2015; Saylor & Harper, 2003).

For those who participate in SoTL, they typically have framed SoTL research around a problem they notice or experience (Bass, 1999). Hutchings (2000) proposed a taxonomy of four types of questions that encompass SoTL research. These questions are "What works?, What is?, What's possible?, and Theory-building questions" (Raffoul, n.d., para. 9). These questions and the ensuing research conducted to answer the questions has led to differences between excellent teaching and SoTL (Kern et al., 2015).

O'Brien (2008) emphasized the differences between excellent teaching and SoTL in four specific attributes. SoTL is "an overarching concern for students and their learning" (p. 1), "deliberate design for how teaching and learning may proceed on the basis of these initial concerns" (p. 2), "systematic implementation, analysis and evaluation of the design" (p. 2) and "contribution to the SoTL knowledge and practice" (p. 2) while excellent teaching is instruction provided by a good teacher (O'Brien, 2008). Together the attributes create a field of scholarship focused on the study of teaching and learning. Higher education practitioners have debated the differences between scholarly teaching and SoTL (Gingsberg & Bernstein, 2012; Potter & Kustra, 2011; Secret et al., 2011). Understanding the distinctions between excellent teaching and SoTL is necessary for full engagement in the field (Kern et al., 2015).

The SoTL Compass has helped SoTL scholars focus their inquiries (O'Brien, 2008). The Compass includes four questions: "What do my students need to learn and why is it worth learning? Who are my students and how will they learn effectively? What can I do to support my students to learn effectively? How do I know if my teaching and my students' learning have been effective?" (O'Brien, 2008, p. 4). To address these questions, researchers of professional development programs and initiatives have recommended a multi-factor development program (Williams, Nixon, Hennessy, Mahon, & Adams, 2016). Researchers also suggested professional development facilitators listen to their attendees and adjust curriculum to meet needs because external factors and teachers' perceptions of their teaching affect their involvement in professional development (Barlow, Frick, Barker, & Phelps, 2014). Therefore, participants in SoTL research can engage with multiple questions about teaching and learning.

Previously, many educational professional development programs failed; yet, they were, and are still, central for the growth of teachers (Bissonnette & Caprino, 2014; Lieberman, 2000).

In traditional professional development, educators have not been active in their development (Bissonnette & Caprino, 2014). Some campuses have now started to use SoTL for professional development (Fanghanel et al., 2016; Roxå et al., 2008). In contrast to other professional development programs, SoTL encourages teachers to be engaged scholars in their professional teaching growth. Additionally, SoTL urges faculty to share the experiences of teaching and the lessons learned from the study of teaching (Fanghanel, 2013; Kreber, 2002b; O'Brien, 2008; Roxå et al., 2008; Shulman, 2006). As Brookfield (1995) wrote, "silence surrounds us as teachers" (p. 247). Often, there are few opportunities to discuss, share, and critically evaluate teaching with a direct focus on student learning. The need to engage in thoughtful conversations about teaching in the higher education environment supports the emphasis Boyer (1990) placed on teaching as a scholarly activity. It is important that professors view themselves as part of a community, especially since much of the work done in the classroom is done in seclusion (Shulman, 1993).

Similar to librarians, not all academic identities fit a specific mold (Bennet et al., 2016). An increasing number of faculty members in higher education engage in SoTL (Bennet et al., 2016; Kern et al., 2015; Miller-Young & Yeo, 2015). Through an analysis of personal narratives, Bennet et al. (2016) identified three identities study participants possessed: "the teacher, the discipline scholar, and the educational researcher" (p. 221). The researchers were not surprised that teaching was their participants' most prominent identity. Study participants, who were academics that worked in an Australian university in the academic support center, had a workload focused on teaching, and SoTL was an important part of each of their positions. Nonetheless, the three identities caused anxiety and confusion; consequently, the researchers

balanced and reconciled participants' identities through negotiation and involvement in a peer

community (Bennet et al., 2016).

Academics have shown to need a community to develop and maintain strong identities

(Henkel, 2005). Engagement in SoTL can create community (August & Dewar, 2010). For

example, writing group participants found community to be so beneficial that Marquis, Healey,

and Vine (2014) hypothesized that being part of a community engaged in SoTL might contribute

to the creation of an SoTL identity. Academics involved in writing groups valued diverse

perspectives because it opened more learning opportunities. Participants also valued learning

through experience (Marquis et al., 2014). The experience of academics participating in writing

groups demonstrated the benefit of engaging in professional development for identity

development. Communities of practice have been ideally created to promote the growth of SoTL

(Poole et al., 2007; Roxå et al., 2007). Indeed, communities of practice support SoTL

internationally (Clark et al., 2017). Relatedly, as stated previously, librarians experience

isolation in their teaching and they are often "lone scholars" (McCormick, 2003, p. 214) in their

work (McCormick, 2003; Orbell-Smith, 2012; Seymour, 2012). Librarians have combatted

feelings of isolation through interactions with peers such as in a community of practice

(Sinkinson, 2010). The participants in Houtman's (2010) study desired increased support and

more opportunities to discuss their teaching. Community allowed for the shared engagement and

support librarians seek (Belzowski et al., 2013; Henkel, 2005). The SoTL community is a place

where librarians can develop their instructional skills through engagement with others seeking to

become better teachers (Perini, 2014).

SoTL is also useful for professional development (Mitchell & Mitchell, 2015). One

specific example of this is at Miami University, where faculty learning communities supported

the development of SoTL on their campus. Participants in the faculty learning communities

conducted research and published and presented on their findings (Richlin & Cox, 2004). When

connecting to communities of practice, SoTL proved to be successful for professional

development and identity formation when collaboration occurred (Cambridge, 2001; Kahn et al.,

2013; Saylor & Harper, 2003). In another example, Mitchell and Mitchell (2015) found that

SoTL methods were also useful for identity formation when SoTL was practiced in one teacher's

class. In both scenarios, SoTL impacted professional identities.

   As previously mentioned, SoTL has been shown to grow through faculty learning

communities (Dees, Niesz, Tu, & Devine, 2009; Hubball & Albon, 2007; Richlin & Cox, 2004).

Even if faculty were at different stages in their use of and participation in SoTL, faculty found

the learning communities beneficial (Hubball & Albon, 2007). At Kent State University, faculty

who engaged in a learning community spent a year discussing and learning about an aspect of

teaching. Faculty participants attended meetings; worked with mentors, peers, and students; and

had to present at two conferences that focused on college teaching. Faculty determined that the

best part of the learning community was the community; it was not the SoTL projects. The

participants in Kent State's faculty learning communities assisted each other in placing focus on

student learning (Dees et al., 2009). Furthermore, faculty who participated in the Wisconsin

Teaching Fellows & Scholars Program saw the program as beneficial for teaching and learning.

The participants remarked that they had new appreciation for the learning process; it renewed

them as teachers, and they now saw their job as helping students learn (Voelker & Martin, 2013).

The community created through faculty learning communities assisted in identity formation and

influenced faculty members' ideas about teaching effectiveness (Voelker & Martin, 2013;

Wenger, 1998).

Through communities of practice, identities are formed (Wenger, 1998). However, despite communities of practice affecting identity development, the process of creating a professional teaching identity was shown to be complex (Correa et al., 2014). Researchers identified SoTL as helpful for many graduate students in growing their teaching and their professional careers. Moreover, graduate students also found SoTL useful in their development as an academic (Schram & Allendoerfer, 2012). Similar to librarians, teaching faculty have many demands on their time, including research, teaching, and advising. Due to these demands, faculty must also negotiate their professional identities (Bennett et al., 2016). Study findings pointed to SoTL being beneficial for librarians to grow in their teaching and careers and in their development as academics (Bennett et al., 2016; Correa et al., 2014; Schram & Allendoerfer, 2012; Voelker & Martin, 2013; Wenger, 1998).

Local contexts are also important for SoTL growth. The local context was shown to influence how SoTL was developed and supported (Williams, 2004). In addition to local context, the curricular context is of particular importance in SoTL work (Fanghanel, 2013). Research conducted on SoTL focused on the curricular context and sought ways to increase learning by students in their own setting (Gale, 2008). Scholars cannot ignore the importance of content, and it should not be divorced from pedagogy (Shulman, 2013). Information literacy is the content of librarians, and the pedagogy they use should be driven by research in this pedagogical content area. Whether in a for-credit course or a one-shot session, librarians are teachers of information literacy (Albrecht & Baron, 2002; Rader, 2002; Saunders, 2018; Walter, 2008). The *ACRL Framework* (2015) highlights the usefulness of the framework for librarians' involvement in SoTL, thus underscoring librarians' expertise in information literacy.

SoTL provides a framework for engaged teaching, reflection, and scholarship. Once the framework is established, educators link their SoTL work with professional development (Elton, 2009; Fanghanel, 2013). Participation in professional development often resulted from concerns faculty had about their abilities or questions they had about their work. Similarly, SoTL inquiries often start with a problem (Bass, 1999). As the literature makes clear, librarians have not always been confident in their teaching abilities; faculty members' perceptions and students' perceptions of librarians' role as a teacher influenced librarians' professional identities (Austin & Bhandol, 2013; Manuel et al., 2005; Polger & Okamoto, 2010; Sammons et al., 2007; Slavin & Mead, 2008; Wheeler & McKinney, 2015). Engagement in a SoTL network affected higher education faculty members' professional identities (Kahn et al., 2013). At times, SoTL might affect academics' identities negatively because of campus culture, norms, and expectations (Roxå et al., 2008). Nonetheless, both formal and informal networks have proven useful in helping teachers and librarians build their teaching skills (Kahn et al., 2013; Sare et al., 2012). SoTL has been shown to be useful for improving student learning when instructors build their instruction on theory, make their teaching public, participate in peer review, and engage in inquiry regarding their teaching methods (Trigwell, 2013). Peer work has also been shown to be effective in developing SoTL (Barnard et al., 2011). Further, communities of practice create space for faculty and librarians to collaborate (Belzowski et al., 2013). Communities of practice also provide librarians with the opportunity for participation and inclusion in a group that they might not feel they are naturally a part of, thus impacting librarians' identities (Wenger, 1998).

Academics who engaged as a community in a SoTL program discussed the effects of the work at the "individual, department-level, institutional-level, and discipline-level impact" (Miller-Young, Yeo, Manarin, Carey, & Zimmer, 2016, p. 59). New faculty members at Mount

Royal University spoke about the SoTL program's impact in individual terms. Faculty with a lengthier tenure at the university spoke about the program's impact on the department, institution, and discipline levels (Miller-Young et al., 2016). This finding was telling regarding "the macro/meso/micro model of institutional culture" (Miller-Young et al., 2016, p. 60). For SoTL to continue its growth on college campuses, culture changes might need to occur. At Eastern Michigan University, Ginsberg and Bernstein (2012) sought to ingrain SoTL on their campus. In order to promote SoTL, they created a cohort that promoted self-awareness for individual cohort participants and self-awareness of the university. When cohort members understood their personal history and the history of the university, making a cultural shift was easier. SoTL seminars, supportive leadership, a change agency, and a facilitator were also integral parts of creating a SoTL culture at Eastern Michigan University (Ginsberg & Bernstein, 2012). Other universities have found mentor/mentee relationships, community, and institutional support vital for the growth of an SoTL culture (Marquis et al., 2014; Michael, 2012). Creating and maintaining a SoTL culture are challenges facing those involved in the field. Nonetheless, the differences in language used to describe SoTL's impact and the many people involved in growth efforts point to the numerous areas for growth in librarians (Ginsberg & Bernstein, 2012; Miller-Young et al., 2016).

In review, through professional development, communities, and collaboration SoTL can help promote teacher identity (Cambridge, 2001; Kahn et al., 2013; Saylor & Harper, 2003). Some faculty who participated in SoTL programs engaged in more collaboration, while other faculty studied teaching on their own (Voelker & Martin, 2013). Nonetheless, all who participate in SoTL are engaged in the international movement that includes studying and sharing teaching and learning. This community helps shape identities and helps academics make sense of their

place in higher education when their identities do not fit comfortably within a disciplinary field (Bennet et al., 2016; Wenger, 1998).

Librarians and the Scholarship of Teaching and Learning

Librarian involvement in a teaching program led to improvement of librarians' instruction skills (Buck, 2014; Sinkinson, 2010). When skills are improved, confidence levels increased and anxieties decreased (Hoseth, 2009). Librarians' engagement with teaching and pedagogy is important, thus underscoring the applicability of participation in SoTL (Bewick & Corrall, 2010). SoTL is the active researching method in the area of teaching and learning encouraged by Wheeler and McKinney (2015). Campus teaching centers house the experts in teaching and pedagogy and are good places to start exploring SoTL (McKinney, 2006; McVeigh, 2011). In the past, there have been partnerships between instruction librarians using the resources available to them in their respective university's centers for teaching. Partnerships included librarians teaching workshops, librarian and faculty co-teaching ventures, and web development (Jacobsen, 2001; Marcum, 2012). Librarians' engagement with SoTL is important because research has shown a relationship between a professors' effectiveness in helping students learn and their involvement in SoTL (Kern et al., 2015; Trigwell, 2013). As previously stated, a link has been shown between teaching effectiveness and professional identity (Day, 2008; Day, Stobart et al., 2006; Sammons et al., 2007). Thus, this finding linked SoTL and identity. Indeed, faculty who participated in the Wisconsin Teaching Fellows & Scholars Program who saw improvement in their teaching became more involved in SoTL (Voelker & Martin, 2013). The figure below shows the impact of the Wisconsin Teaching Fellows & Scholars Program and includes specific SoTL activities.

Figure 2. Scope of impact of Wisconsin Teaching Fellows & Scholars. From "Wisconsin Teaching Fellows & Scholars Program Assessment Project: Final Report" by D. Voelker, and R. Martin, 2013. (https://www.wisconsin.edu/opid/wisconsin-teaching-fellows-scholars-program/). Reprinted with permission (Appendix B).

A teacher's effectiveness is associated with his or her resilience (Day & Kington, 2008). When some faculty see their teaching as effective, they seek more learning opportunities in SoTL (Voelker & Martin, 2013). Involvement in communities of practice assisted in building resiliency, thereby leading to increased effectiveness and a stronger identity (Le Cornu, 2009).

Despite the demonstrated importance of librarians engaging with centers for teaching, librarians have not rated their collaborative experience with faculty development centers high. Instead, some librarians indicated that they felt in competition with faculty development centers (Johnson & Goodson, 2015). However, benefits were also shown to exist in collaboration between faculty development centers and libraries (Johnson & Goodson, 2015; Walter, 2006). Still, there is minimal literature about librarian involvement with campus centers for teaching, and more studies should be conducted (Hoseth, 2009; Johnson & Goodson, 2015).

Librarian involvement in campus teaching and learning activities promoted a teacher identity in librarians. Involvement with campus teaching centers also helped librarians improve

their instruction (Hoseth, 2009). One challenge that librarians participating with centers for teaching face, which Hoseth (2009) acknowledged, is the nontraditional teaching librarians often conduct. As stated earlier, the majority of instruction given by librarians was, and is, a one-shot session where they work with a class for one session (Davis, 2007; Zai, 2014). Therefore, many librarians do not have the same teaching responsibilities as traditional faculty members. However, centers for teaching must accommodate the needs of multiple types of faculty— adjunct, non-tenure, tenure-track, and online instructors. Indeed, flexible communities of practice have been proven to work with another type of nontraditional faculty—adjuncts (Webb, Wong, & Hubball, 2013). Consequently, overcoming the challenge of librarians' instructional settings can occur when teaching centers focus workshops and training on the type of teaching librarians conduct.

Teaching faculty are encouraged, at times pressured, to improve their teaching (De Courcy, 2015). Researchers have found that forced improvement of teaching can negatively affect faculty members' perceptions of the quality of their teaching and student learning (Cheng, 2010). Conversely, some faculty found benefit in teaching reviews (Cheng, 2010). Nonetheless, in both scenarios, improvement in teaching and the study of that improvement was the starting place for many teaching faculty members' engagements with SoTL (O'Brien, 2008).

Despite SoTL being a field ripe for librarian involvement, little was known about librarians' current engagement with the field (Bradley, 2009; Perini, 2014). Librarians have an expertise and a level of comfort working outside of their discipline, but researchers have not yet studied librarians' participation in SoTL (Jaguszewski & Williams, 2013). Nonetheless, Jaguszewski and Williams (2013) acknowledged that librarians possessed a greater role in supporting teaching and learning on college campuses. Despite minimal literature on librarians'

involvement in SoTL, librarians' roles in supporting teaching and learning and their engagement in teaching indicate that librarians' did engage at some level with SoTL (Hagman, 2015; Houtman, 2010; Jaguszewski & Williams, 2013; Loesch, 2010; McVeigh, 2011).

Warner and Seamans (2004) wrote an article on librarians' involvement with SoTL. The article was a description of a collaboration between Notre Dame's library staff and teaching center staff. The collaboration was SoTL work. The Center for Teaching and Learning developed a workshop to help librarians improve their teaching skills. The collaboration was beneficial for both the librarians and the staff of the Center for Teaching and Learning. The Center for Teaching and Learning staff were not familiar with the work of librarians, and this collaboration provided an opportunity for the center staff to learn about librarians' roles. A separate project through the Center for Teaching and Learning at Notre Dame involved a librarian and a professor applying for a research grant from the Carnegie Foundation. The grant supported the study of instructional methods—an example of early librarian involvement in SoTL (Warner & Seamans, 2004). This early type of collaboration was an example of what set the stage for the increase in librarians supporting the teaching and learning that occurs on college campuses today (Dewey, 2005; Jaguszewski & Williams, 2013; Otto, 2014).

The Association of College and Research Libraries offered many opportunities for librarians to grow in their SoTL knowledge and practice (Otto, 2014). Explicitly within the teaching skills category of the *Standards for Proficiencies for Instruction Librarians and Coordinators: A Practical Guide* (ACRL, 2007) were two skills that align with SoTL. The skills were "reflects on practices in order to improve teaching skills and acquires new knowledge of teaching methods and learning theories" (Teaching skills, para. 7) and "shares teaching skills and knowledge with other instructional staff" (Teaching skills, para. 8). These needed abilities are

SoTL practices and a place for librarians to begin their professional development through SoTL. It should be emphasized, though, that the *Standard for Proficiencies for Instruction Librarians and Coordinators* is not an evaluative tool; instead, it was a guide for understanding what is required of successful instruction librarians (ACRL, 2007; Otto, 2014).

ACRL's focus on instruction highlighted the importance of teaching skills for librarians, yet the organization's efforts have not been sufficient (Hensley, 2015; Otto, 2014; Westbrock & Fabian, 2010). Regardless of library school being the favored place to learn instruction skills, a majority of librarians learned teaching skills on the job (Maggio et al., 2015; Sare et al., 2012; Westbrock & Fabian, 2010). Many librarians did not feel they were adequately prepared for the required responsibilities of the job during graduate school (Larrivee, 2014). Often, librarians did not learn teaching strategies, pedagogy, and curriculum development before their first time teaching as a professional librarian. As mentioned earlier, librarians acquired 37 of the proficiencies included in the *Proficiencies for Instruction Librarians* from the ACRL list on the job and not in library school (Westbrock & Fabian, 2010). As a result, librarians reported that they wanted to learn proficiencies through continuing education opportunities (Westbrock & Fabian, 2010). Therefore, the need for librarians to participate in professional development activities centered on teaching was important. The results indicated that support structures needed to be in place for librarians to continue acquiring instruction skills while on the job (Westbrock & Fabian, 2010). Teaching instruction skills during LIS education and implementing institutional support once librarians are employed would be very useful in helping librarians gain the necessary teaching skills (Brecher & Klipfel, 2014; Hensley, 2015; Houtman, 2010). However, it remains the responsibility of librarians to learn those necessary skills (Houtman, 2010; Walter, 2006). Librarians have found collaborative professional development

to be a useful tool for increasing their own instruction abilities (Buck, 2014), and many librarians want to engage in professional development once they start their career as a librarian (Maggio et al., 2015).

Early teacher identities have been shown to be fragile, and challenges experienced during teaching can lead to a reshaping of professional identity (Beltman, Glass, Dinham, Chalk, & Nguyen, 2015; Flores, 2006; Lamote & Engles, 2010). Participation in a group provides support for identity development (Wenger, 1998). For group participants, it was important for academic librarians to understand the values and requirements of SoTL communities (Holland et al., 2011). Individuals who are active in their participation in a community developed common identities (Handley et al., 2006). Moreover, campus teaching centers can be instrumental in introducing librarians to the SoTL community (Otto, 2014). Importantly, collaboration and partnerships are key themes in research literature on librarians. In addition, the literature reveals that librarians want to work within a community (Sproles et al., 2013). Ultimately, when librarians participate in SoTL, they engage with a community of practitioners who teach and are interested in developing their abilities for effective teaching and thereby affecting their identities.

Conclusion

Communities of practice support teaching and learning (Ryan, 2015). Jawitz and Perez (2015) discovered that higher education faculty engage in professional development in order to be part of a community. Participating in development opportunities and feeling connected to other teachers can lead to a stronger teacher identity (van Lankveld et al., 2017). Thus, this researcher framed this study around the theory of Communities of Practice. Wenger (1998) identified communities of practice as being an important aspect of how identities in the workplace are created and negotiated. Communities of practice provide the conceptual

framework for understanding the involvement of librarians in SoTL. The conceptual framework also structures the study to help the researcher understand how participation in SoTL affects librarians' teacher identity.

Generally, librarians have not easily adopted a teacher identity (Freedman, 2014; Houtman, 2010; Walter, 2008). A review of the literature identified a gap in the understanding of how professional development forms academic librarians' teacher identities. Professional development is important for librarians because practicing librarians must often fill the gaps left in their LIS education (Goodsett & Koziura, 2016). One specific gap in LIS education is in teaching and pedagogical knowledge (Brecher & Klipfel, 2014; Hall, 2017; Hensley, 2015). LIS students recognize their need for information literacy instruction skills because they realize that college students view librarians as instructors of information literacy and use. However, LIS students do not feel comfortable in their expected role of teaching information literacy (Inskip, 2015). Unlike academic librarians, primary and secondary educators developed their teacher identity during teacher education programs (Beauchamp & Thomas, 2009). Because many librarians did not develop their teacher identity during their LIS programs, their teacher identity must be developed on the job (Westrock & Fabian, 2010; Walter, 2008). Julien and Genuis (2011) discovered that librarians who felt prepared for instruction responsibilities identified teaching as important to their professional identity. The growth of a teacher identity is important for librarians because researchers have related identity to teaching effectiveness (Sammons et al., 2007). Moreover, having the opportunity to engage in practice teaching in a formal educational setting affected identities (Horn et al., 2008).

SoTL is a form of scholarship suitable for librarians to apply in order to grow in their teaching practice and more fully adopt the identity of a teacher. Mårtensson et al. (2011)

cautioned, though that the professional identity of teacher grows organically through SoTL involvement. Professional identity should not be the focus of engagement with SoTL. Instead, librarians should engage in the study of teaching, the study of student learning, and the subsequent sharing of their study for its own rewards. A growth of a teacher identity will develop naturally. Nonetheless, engagement in SoTL can affect professional identities (Roxå et al., 2008).

Multiple gaps exist in the literature regarding librarians as teachers, librarians' teacher identity, librarians' growth in their teacher identity through professional development, and librarians' involvement in SoTL (Perini, 2014; Walter, 2008). At the time of this study, researchers had not conducted a study on librarians' involvement with SoTL. More specifically, researchers have not conducted an in-depth study of the growth of a professional teacher identity through SoTL. In the literature review, the researcher identified a gap in the understanding of how involvement in SoTL influences a teacher identity. As Perini (2014) stated, SoTL is a field of scholarship where librarians have much to contribute and much to learn. Increased engagement with a field focused on the study of student learning provides librarians with an opportunity to increase their confidence and self-efficacy in teaching (Wheeler & McKinney, 2015).

The literature review supports this study to understand the role of SoTL in the growth of librarians' professional teacher identity. SoTL is a faculty development tool that many institutions of higher education use (Beach, 2015; Geertsema, 2016; Saylor & Harper, 2003). If librarians become more involved in professional development at their institutions, they would likely encounter or engage in SoTL. This researcher identified a gap in the literature of studies conducted on the growth of a teacher identity in librarians through professional development. In

summary, the researcher of this study seeks to understand if involvement in SoTL affects a librarians' professional identity by supporting and growing a teacher identity. The answers to the research questions will add to the body of literature on librarianship, professional identity, and SoTL.

Chapter III

Design and Methodology

Introduction

Previous studies have shown that librarians do not always identify as a teacher despite instruction being an important part of their professional roles (Julien & Genuis, 2011; Matlin & Carr, 2014; Wheeler & McKinney, 2015). While teaching is essential for many librarians' jobs they often learn instruction skills in employee professional development training instead of during their formal schooling (Bewick & Corrall, 2010; Houtman, 2010; Westbrock & Fabian, 2010). Researchers have recommended further investigation on how professional development affects librarians' teacher identity (Freedman, 2014; Walter, 2008). The researcher of this study endeavored to fill that gap. The initial idea for the study resulted from a question the researcher asked about engagement in SoTL: do members of the SoTL community create a teacher identity as a result of studying teaching and learning? From this foundational question, the theoretical framework, Communities of Practice, guided the researcher's study design (Wenger, 1998). Wenger (1998) concluded that meaning, learning, and identity could be found in communities that work together toward a shared purpose. The researcher framed this study around the idea that SoTL is a community of practitioners working toward the shared goal of improving teaching to improve student learning.

Researchers have used qualitative methods in previous studies to explore the professional identity of librarians (Austin & Bhandol, 2013; Bronstein, 2011; Hicks, 2014; Sare & Bales, 2014; Walter, 2008; Wheeler & McKinney, 2015). This study builds on the qualitative data collection methods of previous studies and extends the research with the addition of quantitative methods. The following chapter describes the design and methodology used to answer the

research questions. Within the chapter is information on study participants, data collection and analysis, role of the researcher, and limitations. A description of the methods used to ensure reliability and validity of the study is also included. Chapter III lays the groundwork for understanding the study results and discussion found in Chapters IV and V.

Research Questions

The following research questions were used to guide this inquiry:

1. What reasons do academic instruction librarians state for their participation in the Scholarship of Teaching and Learning?

2. What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' teacher identity?

3. What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' instruction?

Research Design

During the development of the study, questions were developed that could be answered with both qualitative and quantitative data (Onwuegbuzie & Leech, 2006). The questions led the researcher to design an explanatory sequential mixed methods study. While mixed methods research is recognized as one of the three research paradigms many opinions exist as to its rigor and suitability (Johnson & Onwuegbuzie, 2004; Johnson, Onwuegbuzie, & Turner, 2007; Teddlie & Tashakkori, 2012). In study designs that combine qualitative and quantitate data ensuring credibility can be challenging because of the various ways validity and reliability are addressed in the different methodologies (Plano Clark & Ivankova, 2016). The researcher recognized the complexity of mixed methods research and worked to ensure a strong study (Onwuegbuzie & Johnson, 2006; Teddlie & Tashakkori, 2009).

Despite the difficulties in developing a credible study, a multi-method approach allowed the researcher to select the best methods of both quantitative and qualitative data collection. Combining methods also helped to fully answer the three research questions, and it allowed the researcher to focus on the strengths of quantitative and qualitative methods thereby minimizing the weaknesses of each (Ivankova et al., 2006; Onwuegbuzie & Johnson, 2006; Teddlie & Tashakkori, 2012). Lastly, mixing quantitative and qualitative data created a more complete picture than if the researcher had only used one research method (Plano Clark & Ivankova, 2016).

Before beginning data collection, the researcher determined the primary purpose of the research design to be complementarity. Complementarity allows for overlaps in the analysis of the collected data (Caracelli & Greene, 1993; Greene et al., 1989; Ivankova & Plano Clark, 2016). More specifically, a complementary approach to mixed methods evaluation is when "qualitative and quantitative methods are used to measure overlapping, but distinct facets of the phenomenon under investigation" (Caracelli & Greene, 1993, p. 196). The methods allowed for an understanding of the state of librarians' involvement in SoTL, how librarians defined their professional identity, and how their professional identities were influenced by their involvement in SoTL. The sequence of the methods allowed for both breadth and depth of understanding. Broad knowledge was achieved through quantitative results, and depth was achieved through qualitative results (Denzin, 2012; Ivankova & Plano Clark, 2016; Johnson et al., 2007).

An explanatory sequential mixed methods study is designed to let the quantitative data influence the direction of the qualitative portion of the study (Creswell, 2014, 2015). The quantitative data are typically given priority in explanatory sequential mixed methods research designs because quantitative data collection occurs first and it is often the majority of the data

gathered (Ivankova et al., 2006). Therefore, the researcher gave priority to the quantitative data for the establishment of a foundation of knowledge about librarians' engagement in SoTL (Ivankova et al., 2006; Plano Clark & Ivankova, 2016).

The researcher started with the hypothesis that engaging in SoTL would help librarians grow their teacher identity. Therefore, the null hypothesis was that if librarians engage in the Scholarship of Teaching and Learning, their identities would be the same as they were before. By first collecting quantitative data from responses the researcher sought a broad understanding of the reasons academic librarians choose to participate in SoTL, how they defined their academic identity, and how their engagement in SoTL affected their teacher identity.

A secondary purpose for conducting a mixed methods approach was development (Greene et al., 1989). After the survey results were analyzed, the quantitative data findings helped provide parameters for the interview questions. The results from the survey guided the creation of the next form of data collection because the researcher adapted an interview protocol based on the quantitative results (Greene et al., 1989; Plano Clark & Ivankova, 2016). This integration of research methods allowed the researcher to conduct semi-structured interviews designed to elicit a deeper understanding of the survey responses (Greene et al., 1989; Hanson et al., 2005). The semi-structured interviews helped the researcher understand the complex interplay between involvement in SoTL, the professional identity, and the instructional practices of academic librarians (Galletta, 2013; Wengraf, 2001). The qualitative portion of this study helped the researcher gain insight into academic librarians' professional identities and into how their identity developed through participation in SoTL.

Through the sequencing of the data collection methods, the researcher explained the quantitative survey results with qualitative semi-structured interviews. In a sense, the sequential

nature of the study acted as a funnel, moving the researcher from broad understanding to more specific knowledge (Fetters et al., 2013; Hanson et al., 2005; Ivankova et al., 2006). The selected methods meant that the researcher engaged in both inductive and deductive inquiry, thus completing the cycle of research (Teddlie & Tashakkori, 2012). The explanatory sequential mixed methods research design allowed the three research questions to be answered with greater depth of understanding (Denzin, 2012; Johnson et al., 2007).

Participants

Study participants were academic instruction librarians employed at post-secondary institutions in the United States. In 2015, there were 26,606 academic librarians working in the United States (American Library Association, 2015). Approximately 23%, or 6,119, of all academic librarians' primary responsibilities include instruction (M. J. Petrowski, personal communication, October 5, 2016). Instruction librarians are expected to teach information literacy, work with students, understand curriculum, and possess other necessary skills (ACRL, 2007). A volunteer convenience sampling of librarians (n=95) on the Association of College and Research Libraries (ACRL) listserv was used for the quantitative portion of the study (Teddlie & Yu, 2007). Only academic instruction librarians who have participated in SoTL were included in the results. Survey participants were asked if their main responsibilities include instruction and if they have participated in SoTL. If they answered in the affirmative to both questions, then the remainder of the survey was revealed. Participants who responded that their main responsibility is not instruction and/or have not participated in SoTL were not shown the full survey and were excluded. Permission to conduct a survey on the Information Literacy listserv was provided by the site owner and associate director of ACRL (Appendix C). At the time the researcher sent the

survey, there were 6,163 subscribers to the ACRL Information Literacy listserv (M. Heuer, personal communication, 2017).

A purposeful sample of seven librarians (n=7) involved with SoTL, gathered from purposeful sampling, was used for the qualitative portion of the study. Purposeful sampling occurs when participants are selected to represent a population (Teddlie & Yu, 2007). The sampling strategy was used in order to ensure productive data gathering during the semi-structured interviews (Palinkas et al., 2015). Table 1 displays the demographics of the interview participants. Participants indicated their willingness to be interviewed by checking a box in the survey and providing their contact information.

Table 1

Demographics of Participants

	Gender	Librarian Status	Tenure Status	Type of Institution	Years in Practice
Librarian 1	Female	Faculty	Renewable contract	Community College	0-5 years
Librarian 2	Female	Faculty	Tenured	Regional University	6-10 years
Librarian 3	Female	Academic Staff	N/A	Private Liberal Arts College	0-5 years
Librarian 4	Female	Faculty	Tenure Contract and will apply for tenure in next three years	Private Liberal Arts University	0-5 years
Librarian 5	Male	Faculty	Tenured	Research University	16-20 years
Librarian 6	Female	Faculty	Tenure Contract	Regional University	6-10 years
Librarian 7	Female	Academic Staff	N/A	Private Liberal Arts University	11-15 years

A short timeline between the survey and interviews helped mitigate the potential loss of participants (Curry & Nunez-Smith, 2015). To integrate the methods, the researcher connected the survey participants with interview participants by ensuring the interview participants represented the survey population (Fetters et al., 2013).

Before conducting research, the researcher took the Protecting Human Research Participants course from the National Institute of Health (Appendix D). Next, approval to conduct the study was received from Northwest Nazarene University's Institutional Review Board (Appendix E). Survey participants gave consent when they clicked on the internet survey. Each interviewee signed an informed consent (Appendix F). The researcher informed each interview participant of how the data were to be used and how the data were to be kept confidential. Due to the mixed methodology, interview participants knew that they would be asked questions about their survey responses. Their survey responses were not anonymous but were confidential (Hesse-Biber, 2010).

All possible risks to the participants were minimized. Risks included feelings of uncomfortableness, unease, and/or embarrassment due to the disclosure of personal feelings and experiences. To decrease the risks, the researcher made sure of confidentiality and allowed participants to withdraw from the study at any time. Confidentiality was maintained through coding and assigning each participant a unique identifying number (Librarian 1, Librarian 2, Librarian 3, etc.). By decreasing risks and thoroughly explaining the purpose of the study, the researcher developed trust with the participants. Moreover, the researcher kept appointments, was respectful, and was reliable. To demonstrate respect to interviewees, the researcher recognized each participant as a person with rights who could withdraw at any time. Respect was also shown to participants by remembering that it was important to ensure confidentiality.

The researcher also sought to do no harm to the participants (Marshall & Rossman, 2016).

Power structures were recognized as occurring in librarian/faculty relationships, and the

researcher reminded interviewees of confidentiality (Hagman, 2015; Julien & Pecoskie, 2009).

All attempts were made to ensure each participant in the study was made to feel that they were

safe, that they were comfortable, and that their voice was being heard.

Data Collection

Communities of practice are "a way of talking about how learning changes who we are

and creates personal histories of becoming in the context of our communities" (Wenger, 1998, p.

5). This definition, along with Wenger's (1998) understanding of identity, denoted where the

researcher started constructing the data collection methods. Understanding how identity is

formed through learning in groups helped the researcher ask questions of participants that were

most pertinent to the study. Moreover, the theoretical framework kept the survey and interview

questions focused because the researcher used Wenger's description of identity to guide question

development.

In addition to the theoretical framework, the survey questions were adapted from the

University of Wisconsin's Teaching and Learning Impact Survey (Meyers, 2007). The Teaching

and Learning Impact Survey helped researchers understand the impact of SoTL at the University

of Wisconsin (Meyers, 2007). Permission to adapt survey questions was obtained from Meyers'

colleague, Dr. Ciccone, since Dr. Meyers is deceased (Appendix G). The researcher added

questions specific for librarians to The Teaching and Learning Impact Survey. The survey

included a retrospective pre-post design as this helped the researcher establish a base in which to

measure the impact of SoTL.

The survey was created using the survey creation software Qualtrics (Appendix H). Ordinal data were collected from 54 Likert-scale and five multiple-choice questions on the survey. The researcher sent the survey via e-mail to the ACRL Information Literacy listserv (Appendix I). The survey remained open for 4 weeks. Two reminder e-mails were sent to the ACRL Information Literacy listserv during the 4 weeks the survey was available to participants (Appendix J).

Due to the sequential nature of this study, the researcher conducted the seven semi-structured interviews after the analysis of collected survey data. This study's interview questions were informed by the results of the survey (Fetters et al., 2013), adapted from Walter's (2008) study on librarians' teacher identity, and fundamentally influenced by Wenger's (1998) description of identity and communities of practice (Appendix K). Walter gave permission to adapt the interview questions for the researcher's current study (Appendix L). Interviews are a beneficial qualitative data collection tool (Brenner, 2006; Creswell, 2013; Doody & Noonan, 2013; Marshall & Rossman, 2016) that allow for a vast amount of data to be collected in a relatively short amount of time. Interviews also allow for clarification of data (Brenner, 2006; Marshall & Rossman, 2016).

Before the start of the interviews, the participants gave verbal assent to take part in the study. The participants had previously signed an informed consent (Appendix F). The researcher used a protocol, but because the interviews were semi-structured, probes were used to elicit more detail and clarify question responses (Brenner, 2006; Marshall & Rossman, 2016). All interviews were conducted via the telephone. The researcher recorded the interviews using the app Voice Recorder on an iPad Air. Interviews lasted no more than 60 minutes. The researcher saved the recordings on a password protected file on an external hard drive. After the

interviews, the researcher transcribed the recordings. The researcher chose to transcribe the

interviews and did not hire a transcriptionist. Transcribing the interviews was important to the

researcher in order to become more familiar with the data (Brenner, 2006). The researcher will

keep the data for 3 years post study in compliance with the Federalwide Assurance Code. After

3 years, the data collected in this study will be destroyed (45 CRF 46.117).

Analytical Methods

The researcher analyzed the data through the theoretical lens of Communities of Practice

(Wenger, 1998). For Research Question 1, the researcher collected descriptive statistics to

identify which librarians in the population had participated in SoTL. For Research Questions 2

and 3, the researcher used the software program Statistical Package for the Social Sciences

(SPSS) to run a Wilcoxon signed-rank test to examine the quantitative data collected from the

surveys data gathered in Qualtrics (Field, 2013). The Wilcoxon signed-rank test is a non-

parametric test used for ordinal data that tests the mean difference between two observations

(Laerd Statistics, 2015b). A Wilcoxon signed-rank test is used "to determine whether there is a

mean difference between paired or matched observations" (Laerd Statistics, 2015b, para 1).

While a Wilcoxon signed-rank test looks at the mean differences, even though ordinal data in the

form of Likert-scale questions was collected, a Wilcoxon signed-rank test is still appropriate

since it is specifically used for non-parametric ordinal data. As a result, the researcher selected

this statistical test to understand agreements among librarians regarding the impact of their

engagement in SoTL and their teacher identity. The researcher aggregated the survey data and

compared the data about librarians' teaching responsibilities, their engagement with SoTL

literature, their professional interests, their teaching ability and effectiveness, their level of

involvement in SoTL research, their discussions about SoTL, and their teaching design.

Statistical results found the chance of a teacher identity forming in librarians through their engagement in SoTL (Field, 2013). Findings allowed the researcher to accept or reject the null hypothesis by testing against a p-value. A p-value of less than .05 was considered significant for this two-tailed test (Field, 2013). Table 2 aligns the research questions with the quantitative data collection methods and variables.

Table 2

Research Questions and Tests

Research Question	Test	Independent Variable	Dependent Variable(s)
What reasons do academic instruction librarians state for their participation in the Scholarship of Teaching and Learning?	Descriptive Statistics	N/A	N/A
What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' teacher identity?	Wilcoxon Signed-Rank	Involvement in SoTL	Teacher identity
What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' instruction?	Wilcoxon Signed-Rank	Involvement in SoTL	Instructional practices

For the qualitative data, the researcher used the software program NVivo to analyze the interviews and to identify themes. Using NVivo the researcher conducted open coding of the interview transcripts to reveal themes and the main ideas in the qualitative data (Marshall & Rossman, 2016). The codes emerged from the data until the data was exhausted.

The researcher used a contiguous approach to reporting the data (Fetters et al., 2013). The quantitative results are shown in a table; a table allows for easy viewing of the data. The qualitative results are represented in a narrative discussion. While the narrative primarily focused on the qualitative data analysis, the researcher integrated findings from the survey to demonstrate the mixing of the methods (Fetters et al., 2013; Plano Clark & Ivankova, 2016). Describing study results in a narrative format allowed the researcher to frame the discussion within the theoretical framework.

Validity and Reliability

In explanatory sequential mixed methods studies, the researcher needs to determine the validity of the survey data and consider the validity of the data collected through the semi-structured interviews (Creswell, 2014). Onwuegbuzie and Johnson (2006) noted the complexity of validity in mixed methods studies. An expert in both SoTL and academic librarianship initially reviewed the survey and provided recommendations on wording, the relevance of survey questions, and the reliability of the survey questions to answer the research questions. The initial validation process took place over an hour long virtual discussion and then via e-mail.

After the first expert examined the survey nine academic instruction librarians reviewed the survey for content validity. The content validity index was 93%. This S-CVI did not include two questions: What is your gender? and What is your employment status? Those questions were included in order to correlate data; however, they were not directly relevant to the purpose of the study. The content experts had a universal agreement of 59.6%.

The content experts also listed the research question with which they believed each survey question aligned. Once this data were collected, to ensure the relevancy of the survey questions to the research questions, the researcher asked the nine content experts to identify their

level of agreement or disagreement with the alignment of each of the survey questions to the selected research question. Based on input from the content experts each survey question was strongly aligned to a research question.

The researcher used face validity to determine if the survey questions measured what they intended to measure (Nevo, 1985). Tourangeau (2004) discussed the difficulty of validating attitudinal survey questions. Therefore, the researcher also conducted face validity with three content experts and adjusted survey questions based on confusion indicated by participants (Tourangeau, 2004).

After content and face validity, the survey was sent to a pilot group of 12 academic librarians. The researcher ran Cronbach's alpha to determine the reliability of the survey. Cronbach's alpha measured the internal consistency of the Likert scale questions on the survey (Field, 2013). Specifically, the test determined the reliability of the survey questions related to SoTL's impact on instruction and teacher identity. Based on the alpha scores from the pilot the researcher moved forward with data collection. The full survey had a Cronbach's alpha of .939. Research Question 2 had an alpha score of .906, and Research Question 3 had an alpha score of .881.

Recognizing the importance and complexity of validity, the researcher used weakness minimization to focus on the strengths of each type of data collection (Onwuegbuzie & Johnson, 2006). The researcher determined the validity of the instrument by weighing all possible options from the quantitative data collected (Creswell, 2014). The developmental research rationale also increased the validity of the study. The quantitative results informed the qualitative methods, thus increasing the credibility of the study (Greene et al., 1989; Plano Clark & Ivankova, 2016). In

addition to weighing all possible options, the researcher used content validity and confirmed the findings measured the "content [the questions] were intended to measure" (Creswell, 2014, p. 160). The researcher also scored the surveys consistently (Creswell, 2014).

For Research Question 1, the researcher collected descriptive statistics to identify which librarians in the population had participated in SoTL. The researcher ran Cronbach's alpha to test the reliability of the survey questions once all survey data were collected. The full survey had a high level of internal consistency, as determined by a Cronbach's alpha of .934. Scale statistics were also run on the survey questions aligned with research questions two and three. Research Question 2 had Cronbach's alpha score of .899 and Research Question 3 had a Cronbach's alpha score of .872. Reliable survey results influenced the semi-structured interviews.

To ensure the credibility of interviews, the researcher piloted the interview questions with two academic instruction librarians to make sure the questions would lead to relevant data (Brenner, 2006). Based on results from the pilot, the interview questions were modified, and the final protocol was written (Appendix K). Throughout the qualitative data collection phase, the researcher kept an audit trail in the form of a research log. The research log aided in the credibility of the findings (Bell, 2014; Creswell & Miller, 2000; Marshall & Rossman, 2016).

To validate the findings of the interviews, the researcher used member checking (Creswell, 2014, 2015; Marshall & Rossman, 2016). Participants reviewed initial research conclusions from the interviews. Due to the possibility of increased discomfort to the participants, the researcher did not ask the participants to review interview transcripts (Mero-Jaffe, 2011). Instead, initial study results were shared with the study participants via e-mail (Appendix M). Participants were asked to review initial results from their interview and confirm that their voices were accurately represented

(Marshall & Rossman, 2016). To determine the reliability of the semi-structured interviews, the researcher checked transcripts for errors (Creswell, 2014).

Limitations

Limitations exist in every study (Creswell, 2015; Marshall & Rossman, 2016). In this study, weaknesses include the retrospective pre-post survey design. Generally, the retrospective pre-post survey design is susceptible to limitations of recall and self-reporting (Klatt & Taylor-Powell, 2005a; Klatt & Taylor-Powell, 2005b). Participants might have been unable to recall their identity and instructional beliefs prior to involvement in SoTL, they might have a "social desirability bias," and/or an "effort justification bias" (Colosi & Dunifon, 2006, p. 3). Social desirability bias is when participants want to report development in an area in order to meet expectations. Effort justification bias is when participants indicate improvement in an area to validate time they spent involved in an activity (Colosi & Dunifon, 2006). Given these limitations of the retrospective pre-post survey design the researcher asked clarifying questions in the interviews to help explain some of the data collected.

Another limitation involves the size of the study's sample population (Creswell, 2015). A volunteer convenience sample was used to collect quantitative data via a survey. As a result of the use of volunteer convenience sampling for the quantitative portion of the study, the results may not be representative of all librarians (Creswell, 2015; Teddlie & Yu, 2007). The researcher asked librarians who took the survey if instruction was a primary role. Only librarians with instruction as a main job responsibility were included in the study results. Therefore, other librarians could engage in SoTL, and that engagement could influence their identity. The population for this study was specific. Another study limitation involves the external timeline set by the researcher's university; the survey was open from August 14- August 31, 2017.

Because the survey was open during the month of August, some potential participants might have missed taking part in the study or chose not to participate due to time constraints relating to the start of the academic year. A non-response bias is also present in this study (Berg, 2005). Less than two percent of the academic instruction librarians took the survey. It is unknown how many academic instruction librarians have participated in SoTL and that number of academic instruction librarians who participate in SoTL was not identified in this study.

Possible researcher bias existed. The researcher is an academic instruction librarian who possesses a professional interest in SoTL. During the interviews, the researcher was the instrument and thus potentially brought bias to the process (Marshall & Rossman, 2016). Nevertheless, the researcher purposefully minimized bias through the use of quantitative survey results. Bracketing was used to separate the researcher's personal feelings and experiences from those of the study participants (Marshall, 2016). During the qualitative data collection and analysis, the researcher kept notes to bracket her bias. The notes were analyzed for bias prior to final data analysis (Fischer, 2009). Bracketing allowed the researcher to acknowledge personal experiences but set aside them aside in order to let the voices of the participants lead the results (Fischer, 2009; Glasser, 1992).

An additional study limitation is that the researcher assumed all participants were honest on both the survey and in the interviews. Last, the qualitative study is subject to personal and multiple interpretations. The researcher used member checking to ensure the credibility of the data; nevertheless, it is possible that another researcher would interpret the transcripts differently (Marshall & Rossman, 2016). Further research is recommended to address the limitations of this study.

Role of the Researcher

As an academic instruction librarian, the researcher recognized a personal agenda for taking up the topic of librarian identity development through SoTL. The researcher brought to the study the bias that SoTL was useful for teacher identity development for all those working in higher education—including librarians. However, the literature did not support the belief that SoTL was useful in helping librarians develop a professional identity. The literature only supported that SoTL and identity development in higher education faculty are linked (McLean, 2009). For the researcher, the motivation for this study was personal. In order to minimize bias, the researcher answered the interview questions and made note of any relationship and/or prior knowledge with the interviewees. These notes were kept at the ready during qualitative analysis.

Conclusion

Librarians' participation in SoTL is understudied (Bradley, 2009; MacMillan, 2015; Otto, 2014; Perini, 2014). The explanatory sequential mixed methodology of this study allowed for a thorough answering of the research questions (Creswell, 214; Denzin, 2012; Johnson et al., 2007; Onwuegbuzie & Leech, 2006). Starting with the collection of quantitative data aided the researcher in understanding the breadth of librarian involvement in SoTL; next, the qualitative data provided depth of knowledge (Denzin, 2012; Johnson et al., 2007). In summary, the study was influenced by Wenger's (1998) description of identity and communities of practice. Survey questions were adapted from the University of Wisconsin's Teaching and Learning Impact Survey (Meyers, 2007). Interview questions were adapted and modified from Walter's (2008) study on librarians' teacher identity. The primary rationale for the mixed methods approach was complementarity. In other words, the qualitative data complemented and explained the quantitative data (Greene et al., 1989; Tashakkori & Teddlie, 2003). Overall, priority was given

to the quantitative data (Plano Clark & Ivankova, 2016), but the researcher integrated the quantitative and qualitative methods through the explanatory sequential nature of the study (Bryman, 2006; Hanson et al., 2005; Ivankova et al., 2006).

Chapter IV

Results

Introduction

As librarians continue to be required to perform teaching instruction as part of their job duties, it is important for academic librarians to identify themselves as teachers because such self-identity corresponds to teaching effectiveness (Day & Kington, 2008; Houtman, 2010; Mansfield et al., 2014; Walter, 2005). Previous researchers have connected participation in the Scholarship of Teaching and Learning (SoTL) to instructors possessing a teacher identity (Bennet et al., 2016; Cambridge, 2001; Kahn et al., 2013; Mitchell & Mitchell, 2015; Saylor & Harper, 2003). SoTL is an international program designed to improve learning in higher education (Pope-Ruark, 2012; Shulman, 2006). However, research on academic instruction librarians' participation in SoTL is limited (Bradley, 2009; MacMillan, 2015; Otto, 2014; Perini, 2014). The results of this study helped fill that gap.

A review of the literature showed that academic librarians' jobs include teaching responsibilities (Austin & Bhandol, 2013; Hagman, 2015; Julien & Genuis, 2011; Wheeler & McKinney, 2015). While graduate Library and Information Science (LIS) programs are the favored place to develop teaching skills, most librarians learn how to teach on the job (Maggio et al., 2015; Sare et al., 2012; Westbrock & Fabian, 2010). For the reason that most librarians learn to teach after they are employed, the researcher sought to understand how academic instruction librarians develop the identity as a teacher—specifically by examining their involvement in SoTL. SoTL is an area of research into teaching and learning in higher education (Shulman, 2006). Kahn et al. (2013) found that involvement in a SoTL network affects higher education professors' identities. Based on the literature review findings, the research questions for this

investigation were designed to gain an understanding of academic instruction librarians'

participation in SoTL. Specifically, the researcher wrote the research questions to help develop

an understanding of how academic librarians were involved in SoTL and how SoTL affects

identity and instruction. Importantly, other researchers have recommended further such studies

on how professional development affects librarians' teacher identity (Freedman, 2014; Walter,

2008). In addition, SoTL is often considered a tool for professional development and is situated

as such in this study (Geertsema, 2016; Meyers, 2007).

In this study, the researcher was guided by the theoretical framework, Communities of

Practice (Wenger, 1998). This theory was introduced by Lave and Wenger (1991) in *Situated*

Learning: Legitimate Peripheral Participation. In Situated Learning theory, the authors

designated the main situated learning groups communities of practice. Within these

Communities of Practice, participants engage in meaning-making, learning, and identity

formation (Wenger, 1998). Wenger (1998) described the component of identity in social

learning as "a way of talking about how learning changes who we are and creates personal

histories of becoming in the context of our communities" (p. 5). Many other researchers have

found Communities of Practice useful for understanding higher education practices and

membership (August & Dewar, 2010; Belzowski et al., 2013; Kissel et al., 2016; Pharo et al.,

2013). Thus, this study is underpinned by the idea that SoTL is a community of practitioners—a

community of practice—working toward the shared goal of improving teaching to improve

student learning (Barnard et al., 2011; Kahn et al., 2013; Michael, 2012; Shulman, 2006;

Wenger, 1998).

An explanatory sequential mixed methods design was utilized for this research study.

Quantitative data were collected from a survey sent to the Association of College and Research

Librarians' Information Literacy Listserv. The researcher then gathered qualitative data from semi-structured interviews of survey participants who agreed to be interviewed. The qualitative data helped explain the quantitative data (Fetters et al., 2013; Hanson et al., 2005; Ivankova et al., 2006). The research questions for this study were the following:

1. What reasons do academic instruction librarians state for their participation in the Scholarship of Teaching and Learning?

2. What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' teacher identity?

3. What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' instruction?

Chapter IV includes the results of the quantitative survey data and qualitative semi-structured interview data gathered to answer the research questions. The chapter is organized by the research questions. Results from the quantitative and qualitative data are combined under the headings for each research question to provide a full understanding of the findings. The researcher analyzed the collected data through the Communities of Practice theoretical framework (Wenger, 1998). The results are presented through that lens.

Data Collection Instruments

Survey Instrument

The survey included two primary sections (Appendix H). The first section included demographic questions and questions about participants' engagement in SoTL. On the second section of the survey, participants were asked to reflect on their time before they became involved in SoTL and after their involvement in SoTL. For each question, participants ranked their response on a 5-point Likert scale:

- 1 = Strongly disagree.

- 2 = Somewhat disagree.

- 3 = Neutral.

- 4 = Somewhat agree.

- 5 = Strongly agree.

Interview Protocol

The interview protocol was adapted from Walter's (2005) doctoral study on academic librarians' teacher identity. Once survey results were received, the researcher modified the protocol to explain the quantitative data. During a review of the survey results, the researcher noticed the mean score for the use of technology before SoTL was 3.44 and after SoTL was 4.19. With the exception of the survey item, *I believe there are many ways to teach and learn the same thing*, the effect size for the question on the use of technology was the lowest at .612. Thus, the researcher added a question to the protocol that dealt specifically with participants' use of technology. For the statement *I identify positively with members of the higher education teaching profession,* the mean score before involvement in SoTL was 3.80 and after SoTL was also 4.43. Therefore, the researcher added questions to the interview protocol about participants' interactions with librarians and others in the higher education community. The researcher also added a question about the use of assessment because the *z*-score of 6.852 was high. The researcher also added questions to the interview protocol about how participation in SoTL impacted the instruction of interviewees because those questions were needed to answer Research Question 3.

Participant Profile

Survey Participants

A 59-item Likert scale and multiple-choice survey was sent to the Information Literacy Listserv of the American Library Association. The survey included a retrospective pre-post design. This study design is useful in collecting self-reported data before and after an event or intervention (Klatt & Taylor-Powell, 2005a). Klatt and Taylor-Powell (2005b) found that the retrospective pre-post design "has been shown to reduce response-shift bias providing more accurate assessments of actual effect, is convenient to implement, [and] provides comparison data in the absence of 'pre' data" (p. 1). The retrospective pre-post design aided the researcher in establishing a base from which to measure the influence of SoTL. During the time of data collection, there were 6,163 subscribers to the listserv (M. Heuer, personal communication, 2017). Participants were asked if they had participated in SoTL based on the following definition that was crafted in conjunction with the first content expert:

> The Scholarship of Teaching and Learning is something many librarians engage in but it is not always called the Scholarship of Teaching and Learning. For this survey, participation in the Scholarship of Teaching and Learning includes the following activities, whether they are directly related to information literacy or deal with teaching and learning more generally. Scholars have defined the Scholarship of Teaching and Learning as researching the teaching and learning that occurs in higher education in order to improve student learning (Shulman, 2006). SoTL studies are often conducted on participants taught by the researcher. For this survey, participation in the Scholarship of Teaching and Learning included the following:

- Reading teaching and learning literature

- Attending teaching and learning conferences

- Using the teaching and learning literature in your teaching

- Conducting teaching and learning research

- Presenting and/or publishing teaching and learning research

- Implementing the techniques and methods supported by your own teaching and learning research in the classroom.

If a participant responded that they had not participated in SoTL based on the definition used in this research, continuation on the survey ended. Seven participants marked "No" for their response. Participants were also asked if their primary job responsibilities included instruction. If they answered no, the survey closed. Three participants indicated their primary job duties did not include instruction. Therefore, no additional data were collected from these 10 participants.

The available population is unknown because it is indefinite how many academic instruction librarians have participated in SoTL. As stated in Chapter III, from this research, it can be concluded that at least 1% of academic instruction librarians have some level of involvement in SoTL. Ninety-five participants of the population finished complete or partial surveys. However, the *n* differed by survey response since some participants dropped out or did not answer certain questions. Appendix N summarizes the participant population for each survey question.

Survey participants represented a broad range of the academic instruction librarian population. Table 3 summarizes the survey participant demographics for gender and employment status for both complete and incomplete survey results. Of the 95 participants, 63, or 66.32%, had faculty status. Twenty, or 31.75%, of the librarians with faculty status were tenured, and 43, or 68.25%, were non-tenured. Of the non-tenured faculty, 12, or 27.91%, were

eligible for tenure within the next 3 years. Table 3 also summarizes the institution type where

the survey participants were currently employed. Specifically, 13.68% worked at community

colleges, 30.52% worked at research universities, 11.58% worked at regional universities,

21.05% worked at private liberal arts universities, and 14.74% worked at private liberal arts

colleges. Only 2.11% worked at for-profit institutions. Last, 6.32% marked "other" as their

place of employment.

Survey participants had various career lengths. Specifically, 37.89% of the survey

participant population had worked 0-5 years. Participants who had worked 6-10 years made up

21.05% of the population, and participants who had worked 11-15 years made up 12.63% of the

population. However, 11.58% of the participants had worked 16-20 years, 9.47% had worked

21-25 years, 5.25% had worked 26-30 years, and 1.05% had worked 31-35 years and 36+ years.

Table 3

Participant Demographic Data (n = 95)

	Frequency	Percent (%)
Gender		
Female	79	83.15%
Male	13	13.68%
Non-binary	1	1.05%
I do not wish to self-identity	2	2.1%
Employment Status		
Faculty	63	66.32%
Staff	24	25.26%
Other	8	8.42%

	Frequency	Percent (%)
Tenure Status		
Tenured	20	21.05%
Not Tenured	43	45.26%
Eligible for Tenure in Next Three Years	12	12.63%
Institutional Status		
Community College	13	13.68%
For-Profit	2	2.11%
Private Liberal Arts College	14	14.74%
Private Liberal Arts University	20	21.05%
Regional University	11	11.57%
Research University	29	30.52%
Other	6	6.32%
Length of Experience		
0-5 years	36	37.89%
6-10 years	20	21.05%
11-15 years	12	12.63%
16-20 years	11	11.58%
21-25 years	9	9.47%
26-30 years	5	5.25%
31-35 years	1	1.05%
36+ years	1	1.05%

Interview Participants

Of the 95 librarians who completed the survey, 40 agreed to be interviewed. These librarians represented a range of experience. After reviewing the demographic data and the survey results, the researcher selected seven academic instruction librarians to interview. Interview participants were selected to represent a range of demographics and represent the overall survey population. Polkinghorne (2005) emphasized that samples are selected in

qualitative research to represent a population. A representative sample allows the researcher to understand the extent of the experience being studied.

The survey population was 83.15% female and 13.68% male. Therefore, the researcher selected six females (85.71%) and one male (14.29%) for the interview. As shown in Table 3, 66.32% of the survey population had faculty status, 25.26% were categorized by their institution as staff, and 8.42% of the survey population marked other for their employment status. Therefore, the researcher selected five librarians, or 71.43%, with faculty status and two librarians, or 28.57%, who had staff employment status.

The tenure status of the librarians with faculty status was also important. Of the surveyed population with faculty status, 21.05% were tenured, 45.26% were not tenured, and 12.63% were eligible for tenure in the next 3 years. Therefore, the researcher selected two librarians who were tenured, which was 28.57% of the interview population. The researcher also selected one librarian who would apply for tenure in the next 3 years, which was 14.29% of the interview population, and two librarians who were faculty but not tenured and not eligible in the next 3 years, which was 28.57% of the interview population.

The researcher also took the type of institution the interview participants worked at into consideration and closely aligned such with the survey population. Seven different types of institutions were represented in the survey population; consequently, the researcher balanced the type of institution represented with the other demographic data. One academic instruction librarian, or 14.29%, who worked at a research university participated in an interview. One librarian, or 14.29%, of the interview population, worked at a community college. The researcher selected two librarians who worked at regional universities for interviews, which was 28.57% of the interview population. The researcher also selected two librarians who worked at

private liberal arts universities, which was also 28.57% of the population; this aligned closely with the surveyed population. Last, the survey population included 14 librarians, or 14.74%, who worked at private liberal arts colleges, so one interview participant, or 14.29%, worked at a private liberal arts college.

Table 4 details the demographics of the interview participants, including gender, employment status, tenure status, institutional status, and length of experience. The length of experience each participant had in the field of librarianship was also important. Most survey participants, 37.89% of the population, had worked in the field 0-5 years. Consequently, the researcher selected three librarians, or 42.86%, for interviews who had 0-5 years of experience. Librarians with 6-10 years of experience accounted for 21.05% of the survey population. Of the interview participants, librarians with 6-10 years of experience accounted for 28.57% of the population. Librarians with 11-15 years of experience made up 12.63% of the survey population. Therefore, the researcher selected one librarian, or 14.29%, for the interview portion of the study. Finally, one librarian (14.29%) with 16-20 years of experience was chosen for an interview because 11.58% of the survey population had 16-20 years of experience. The survey population included librarians who had been in the field for 21-25 years, 26-30 years, 31-35 years, and 36+ years. However, each of those categories accounted for less than 10% of the survey population and were therefore not included in the interview population.

Table 4

Demographics of Interview Participants

	Gender	Employment Status	Tenure Status	Institutional Status	Length of Experience
Librarian 1	Female	Faculty	Renewable contract	Community College	0-5 years
Librarian 2	Female	Faculty	Tenured	Regional University	6-10 years
Librarian 3	Female	Staff	N/A	Private Liberal Arts College	0-5 years
Librarian 4	Female	Faculty	Tenure Contract and will apply for tenure in next 3 years	Private Liberal Arts University	0-5 years
Librarian 5	Male	Faculty	Tenured	Research University	16-20 years
Librarian 6	Female	Faculty	Tenure Contract	Regional University	6-10 years
Librarian 7	Female	Staff	N/A	Private Liberal Arts University	11-15 years

Once the interviewees were selected, the researcher e-mailed each participant at the address provided. After receiving confirmation of their willingness to participate, the researcher sent the participants the interview protocol (Appendix K) along with the informed consent (Appendix F). This form was signed and returned prior to participating in an interview. The researcher conducted the interviews via telephone.

Survey Validity and Reliability

In mixed methods studies, maintaining credibility can be challenging because of the different ways validity and reliability are addressed in the two methodologies (Plano Clark & Ivankova, 2016). The researcher recognized the potential issues with ensuring the credibility of

the research in the mixed methods design (Onwuegbuzie & Johnson, 2006; Teddlie & Tashakkori, 2009). In this study, the researcher needed to determine the validity of the quantitative survey data as well as consider the validity of the qualitative data collected through the semi-structured interviews (Creswell, 2014). To ensure a strong research study, the researcher confirmed the validity of the survey in three different ways.

Expert panel. First, an expert in both SoTL and academic librarianship reviewed the survey. This person has been called the most active librarian in SoTL (Chick, 2016). She holds a Master of Library Science and is a retired instruction librarian. In addition to her work as a librarian, she has given numerous presentations on SoTL, published her own SoTL research, and sits on the Publication Advisory Council for the International Society for the Scholarship of Teaching and Learning's journal Teaching and Learning Inquiry. After a thorough review of the survey, the expert gave recommendations on wording, the relevance of survey questions, and the reliability of the survey questions to answer the research questions. This validation process occurred during a 60-minute virtual discussion and then via e-mail. She suggested including additional ways a librarian could be involved in SoTL. Before her review of the survey, the definition of SoTL included the following:

- Reading teaching and learning literature.

- Conducting teaching and learning research.

- Presenting teaching and learning research.

- Publishing the results of teaching and learning research.

- Attending teaching and learning conferences.

- Implementing the techniques and methods supported by the teaching and learning literature in the classroom.

After her review the definition was as follows:

- Reading teaching and learning literature.

- Using the teaching and learning literature in your teaching.

- Conducting teaching and learning research.

- Presenting and/or publishing teaching and learning research in either information literacy or general teaching and learning literature and/or conferences.

- Attending teaching and learning conferences, which includes both information literacy and more general teaching and learning in higher education conferences

- Implementing the techniques and methods supported by the teaching and learning literature in the classroom.

The first content expert also recommended including the following phrase, "The Scholarship of Teaching and Learning is something many librarians engage in, but it is not always called the Scholarship of Teaching and Learning." Furthermore, she encouraged the researcher to define the term *my students*.

Content validity index. After the expert validation, nine academic instruction librarians reviewed the survey for content validity. Content validity determines if the content of the questions measures what it is intended to measure (Creswell, 2014). The scale content validity index (S-CVI) was 93%. The S-CVI signifies the content validity of the survey. Polit and Beck (2006) recommend a S-CVI of at least .90 or 90%. This S-CVI did not include two questions: "What is your gender?" and "What is your employment status?" Those questions had been originally included in the survey to correlate data; however, the questions were not directly relevant to the purpose of the study. The content experts had a universal agreement (S-CVI/UA) of 59.6%. The S-CVI/UA is the percent of questions deemed relevant to the study. Most of the

disagreement among the experts was over the demographic questions, which led to a lower universal agreement. Appendix O includes the content validity index.

A panel of nine experts in the field of library science reviewed the survey items to determine which research question aligned to each survey question. Additionally, the researcher asked the nine content experts to identify their level of agreement or disagreement with the alignment of each of the survey questions to a selected research question. Based on input from the content experts, the researcher aligned each survey question to a research question. The panelists were comprised of seven librarians and two faculty members. Of the seven librarians, three were library directors, and four were librarians with active SoTL experience. The two faculty members had both conducted SoTL research. The composition of the panel was selected to gain a range of expertise in librarianship and SoTL. Table 5 depicts the demographics of the expert panel.

Table 5

Demographics of Expert Panel

	Gender	Position	Type of Institution	Years in Practice
Expert 1	Female	Higher Education Consultant	For-profit company	6-10 years
Expert 2	Female	Librarian	Regional University	26-30 years
Expert 3	Female	Librarian	Regional University	11-15 years
Expert 4	Male	Librarian	Private Liberal Arts University	36+ years
Expert 5	Male	Librarian	Private Liberal Arts University	6-10 years
Expert 6	Female	Faculty	Private Liberal Arts University	16-20 years
Expert 7	Female	Librarian	Regional University	21-25 years
Expert 8	Female	Librarian	Private Liberal Arts University	6-10 years
Expert 9	Female	Librarian	Private Liberal Arts University	6-10 years

The third method the researcher used to check the validity of the survey was face validity. This method was utilized to determine if survey questions measured what each were intended to measure (Nevo, 1985). Table 6 depicts the demographic data of each content expert. The content experts for face validity were a mix of librarians and faculty members with experience in faculty development. Three content experts were asked to review each survey question and make notes on anything they found confusing or unclear. The researcher then combined the notes from the content experts and looked for patterns. Finally, the researcher adjusted survey questions based on confusion indicated by the content experts (Tourangeau, 2004). From the face validity process, the researcher adjusted wording and addressed concerns about redundancy.

Table 6

Demographics of Content Experts Used for Face Validity

	Gender	Position	Tenure Status	Type of Institution	Years in Practice
Content Expert 1	Female	Faculty with Faculty Development Experience	N/A	Private Liberal Arts University	21-25 years
Content Expert 2	Female	Librarian	N/A	Private Liberal Arts University	11-15 years
Content Expert 3	Female	Faculty with SoTL experience	N/A	Private Liberal Arts University	11-15 years

Cronbach's Alpha of pilot survey. Testing the internal consistency reliability of study results is necessary for high quality research (Henson, 2001). The internal consistency reliability tells a researcher how reliable the instrument is by calculating the extent of each item's assessment of "the same construct" (Trochim, 2006, Internal Consistency Reliability, para. 1). In other words, internal consistency reliability determines if the survey questions measure the same thing. Researchers use Cronbach's alpha to measure the internal consistency of Likert-scale questions (Field, 2013; Laerd Statistics, 2005a). An alpha score of .7 is considered acceptable (DeVellis, 2003; Kline, 2005). A high alpha score indicates a high internal consistency (Field, 2013; Laerd Statistics, 2005a). The researcher conducted a pilot of the survey with 12 academic instruction librarians. The full survey had a high level of internal consistency indicated by a Cronbach's alpha of .934. Scale statistics were also run on the survey questions aligned with Research Questions 2 and 3. Research Question 2 had a Cronbach's alpha score of .899. Research Question 3 had a Cronbach's alpha score of .872. These results were all above .7, and therefore were considered acceptable (DeVellis, 2003; Kline, 2005). The alpha scores indicated

the survey questions were measuring the same construct. Cronbach's alpha was not used for Research Question 1, because descriptive statistics were used to identify which librarians in the population had participated in SoTL.

Cronbach's Alpha of final survey. After survey results were gathered, the researcher ran Cronbach's alpha on the completed survey to determine the internal consistency of the final data (Field, 2013; Laerd Statistics, 2005a). The alpha score for all the ordinal questions in the pre-post survey section was .941. This alpha score showed a high internal consistency among survey participants. Results for each sub-section of questions showed a strong internal consistency. The alpha score for questions aligned with Research Question 2 was .991, and the alpha score for questions aligned with Research Question 3 was .881. These results were all within the acceptable range because they were above .7 (DeVellis, 2003; Kline, 2005). The high alpha scores indicate the questions on the survey were measuring the same concept. Due to these results, the researcher did not eliminate any questions.

Interview Pilot

Conducting a pilot of the interview protocol is important to ensure the questions elicit responses relevant to the research questions (Brenner, 2006). Piloting the research also lets the research test the recording equipment and work out any potential difficulties (Creswell, 2014; Marshall & Rossman, 2016). The researcher piloted the interview protocol with two academic librarians who participated in validating the survey. On the pilot survey, both pilot interview participants indicated their willingness to participate in an interview. The pilot interviews confirmed the questions on the protocol were eliciting the responses the researcher needed to answer the research questions. The researcher made one change after the pilot. The change

made was to include the definition of SoTL on the interview protocol. Demographics of the two

academic librarians who participated in the pilot are in Table 7.

Table 7

Demographics of Pilot Interview Participants

	Gender	Librarian Status	Tenure Status	Type of Institution	Years in Practice
Pilot Librarian 1	Female	Academic Staff	N/A	Private Liberal Arts University	0-5 years
Pilot Librarian 2	Female	Faculty	Tenure Contract	Research University	0-5 years

Results for Research Question 1: Reasons Academic Librarians Participate in SoTL

The review of the literature showed that librarians participated in SoTL, but their reasons

for involvement were unknown (Bradley, 2009; MacMillan, 2015; Perini, 2014). Instead,

authors offered opinions about librarians and SoTL, but research had not been conducted

(Bradley, 2009; MacMillan, 2015; Otto, 2014; Perini, 2014). Given this discovery, this study's

author wrote Research Question 1 to better understand academic instruction librarians' reasons

for participating in SoTL. Data gathered for this question helped form a foundational

understanding of the reasons librarians choose to participate in SoTL. Specifically, Research

Question 1 asked: What reasons do academic instruction librarians state for their participation in

the Scholarship of Teaching and Learning? The researcher used both the quantitative survey

results and the qualitative interviews to answer this research question.

Quantitative Results

To better understand the reasons why academic instruction librarians participated in

SoTL, the researcher first needed to know who participated in SoTL. To gather this

information, the researcher sent a survey to the Information Literacy listserv hosted by the

Association of College and Research Libraries. Ninety-five participants of the population

indicated they participated in SoTL, and of those 95 individuals, 40 of them agreed to be

interviewed.

Qualitative Results

Follow-up interviews with seven participants from the survey participant pool aided the

researcher in explaining the quantitative results (Plano Clark & Ivankova, 2016). For the

qualitative data, the researcher transcribed the interviews and used NVivo to identify themes that

emerged from the data. Once themes were identified, they were collapsed into codes. Then, to

confirm the identified codes accurately represented the interview participants' thoughts and

feelings, the researcher e-mailed the survey participants to conduct member checking (Marshall

& Rossman, 2016).

The qualitative data explained in detail the reasons the study participants gave for their

involvement in SoTL (Plano Clark & Ivankova, 2016). Further, the researcher determined that

overall, regardless of the reasons given for deciding to participate, academic instruction

librarians' decisions to participate in SoTL are reinforced and strengthened after their

involvement in SoTL. In other words, their initial desire to participate, is, upon participation,

enhanced, and they desire increased participation. Librarian 3's involvement in SoTL reinforced

her desire to improve and keep engaging in SoTL. Specifically, she said, "I think what kept me

interested, so much of it resonated with so much of my own experience as a learner initially, and

I was like, 'Wow, this really makes sense! I need to keep learning more.'"

All seven participants spoke about their reasons for choosing to participate in SoTL.

Table 8 displays the codes and the number of times the interviewees mentioned the code during

the interviews. Librarian 1 stated,

I think the reason why [I am involved in SoTL] is because there is that perception we

talked about, that librarians aren't teachers, and I think there is also a gap that needs to be

filled with some really good pedagogy training and because I want to improve.

Librarian 3 reiterated the idea of wanting to improve:

I just felt like there were so many ways in my experience as a learner that I thought,

"Wow, that instructor wasn't particularly effective; I didn't care about that class at all.

So that sort of made me really curious because if I am going to be doing this as a career,

how do I not have my students feel that way about me as an instructor? So, what things

can I learn as a future instructor to help me have a more compelling and engaging

classroom experience for students who are in that room or in that space, wherever that

space might be?

Table 8

Interview Results for Research Question 1

Question	*Codes*	*Number of Participants*	*Number of References*
What reasons do academic librarians state for their involvement in the Scholarship of Teaching and Learning?	Central to mission	2	4
	Improve own teaching	7	19
	Improve student learning	2	7
	Professional interest	4	5

The primary reason interview participants stated for their involvement in SoTL was to

improve their own teaching. The interviewees focused on SoTL's impact on their own teaching

over their students' learning. All seven participants specifically mentioned their teaching as a

reason they participated in SoTL, while only two expressed an intent to focus on student

learning. In fact, when asked about the reason Librarian 1 participated in SoTL, she responded, "Because I want to improve." Librarian 2 stated,

> I think I've always had that idea and mentality of being very self-reflective, but I think the Scholarship of Teaching and Learning just resonates with that natural tendency I have of trying to be reflective and learn from my experiences and try to improve in every way personally and professionally.

Librarian 3 did connect her own improvement to student learning and later said, "Ultimately, for me, right, it is student learning." Librarian 3 continued her explanation for involvement in SoTL by saying, "Because it actually makes the experience much more meaningful for the students." As with Librarian 3, Librarian 4 said her reason for participation in SoTL was because "it has a demonstrable impact on student learning."

Four participants mentioned professional interest, and two participants described SoTL as central to their mission as librarians as the reason for their involvement in SoTL. Librarian 3 said, "I just find all of it [SoTL] particularly interesting and relevant to the work that I do." Other study participants echoed the centrality of SoTL to their work because they work at a teaching-focused library. While there is some variation in the reasons academic instruction librarians choose to participate in SoTL, there is much commonality too. The results demonstrated academic instruction librarians want to be better teachers.

Results for Research Question 2: Impact of SoTL on Teacher Identity

Research Question 2 was "What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' teacher identity?" Both the quantitative survey results and the qualitative interviews were used to answer this research question. This question was central to the research. Many academic librarians identify as a teacher, but many do not

(Julien & Genuis, 2011; Matlin & Carr, 2014; Vassilakaki & Moniarou-Papaconstantinou, 2014; Walter, 2008). However, a teacher identity is important because it has been linked to teaching effectiveness (Day, 2008; Day & Kington, 2008). This researcher frames SoTL as an international community of practice, and communities of practice and SoTL have been shown to influence higher education professors' identities (Bennett et al., 2016; Correa et al., 2014; Schram & Allendoerfer, 2012; Voelker & Martin, 2013). Therefore, the researcher sought to understand SoTL's impact on academic instruction librarians' teacher identity.

Quantitative Results

The quantitative results were analyzed using SPSS. The researcher used a Wilcoxon signed-rank test to analyze the difference between the participants' scores before and after participation in SoTL. The Wilcoxon signed-rank test is a non-parametric alternative to the dependent *t*-test (Field, 2013; Tanner, 2012). Researchers use a Wilcoxon signed-rank test to study the same population at two different times—before and after an event has occurred (Field, 2013; Tanner, 2012). When analyzing the results from the Wilcoxon signed-rank tests, the researcher reviewed the *z*-scores, mean ranking, statistical significance, and effect size (Field, 2013).

Effect size is used to determine the difference between two groups. Specifically, the effect size is a number that demonstrates the size of the difference between the two groups (Salkind, 2017). The larger the effect size, the greater the difference between groups. When the effect size is small, there is greater similarity between the groups (Field, 2013; Salkind, 2017). The effect size was calculated to understand the difference between SoTL's impact on academic instruction librarians. To determine the size of the effect, the following was used:

- A small effect is from 0 to .3.

- A moderate effect is from .3 to .5.

- A large effect is above .5 (Field, 2013).

Z-scores are determined from the Wilcoxon signed-rank test and display how many standard deviations a score is from the mean (Salkind, 2017). Statistical significance, as displayed by a *p*-value, tells the researcher the reliability of the finding (Field, 2013).

The quantitative results indicated that participation in SoTL does impact academic instruction librarians' teacher identity. Table 9 displays the mean ranking before and after participation in SoTL. Table 9 also shows the statistical significance, the *z*-score, and the effect size. To obtain these survey results, the researcher used SPSS to combine the responses of all items related to Research Question 2. Then, using the combined data, the researcher ran descriptive statistics to obtain the mean scores and ran a Wilcoxon signed-rank test to discover the *p*-value, *z*-score, and effect size.

Table 9

Survey Results for Research Question 2

Question	Mean Before SoTL	Mean After SoTL	P Value	Z-Score	D Effect Size
What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' teacher identity?	3.42	4.24	.000	6.378	.654

When the survey items that aligned with Research Question 2 were combined (see Table 9), the results showed that before involvement in SoTL, participants (n = 95) reported a mean ranking of 3.42, which falls between neutral and agree. After engagement in SoTL, participants

also indicated a mean ranking of 4.24 which is between agree and strongly agree. The researcher

also reviewed the median scores for the survey items that aligned with Research Question 2,

because the data came from a Likert-scale. Participants reported a median ranking of 4, which

means they agreed with the survey statements. Additionally, after engagement in SoTL,

participants indicated a median ranking of 4. A Wilcoxon signed-rank test, which looks at the

relationship between two related samples, was used to analyze the difference between the

participants' scores before and after participation in SoTL (Field, 2013). A positive z-score

indicates participants responded with a higher mean ranking after participating in SoTL (Salkind,

2017). In other words, the z-score tells the researcher there is positive growth in the participants'

agreement of the statements on the survey after participation in SoTL. The results for this

research question showed $z = 6.378$, which displays a positive increase in reporting. Thus, the

positive growth demonstrates that SoTL positively impacts librarians' teacher identities.

As previously stated, the effect size demonstrates relative difference between groups.

The larger the effect size, the greater the differences between the groups (Salkind, 2017).

Therefore, there was a large effect ($r = .654$) on the reasons participants stated for their

participation in SoTL. From the p-value (p = .000) the researcher can conclude there is a

statistically significant difference in the responses for how the study participants felt before

involvement in SoTL and after involvement in SoTL. This statistical finding indicates that

engagement in SoTL impacted the teacher identity of academic instruction librarians. Owing to

these findings, the null hypothesis of *if librarians engage in the Scholarship of Teaching and*

Learning, their identities will be the same as they were before was rejected, and the research

hypothesis was accepted. Participation in SoTL impacted academic instruction librarians'

teacher identity. In fact, engagement in SoTL significantly impacted academic instruction

librarians' teacher identity (r = .654). After their participation in SoTL, librarians saw to a greater degree themselves as a teacher than they did prior to their involvement in SoTL (z = 6.378).

For each pair of items, a Wilcoxon signed-rank test determined there was a significant increase in participants' teacher identity after involvement in SoTL ($p < .001$). This p-value for each survey item demonstrates the extent to which engagement in SoTL impacted academic instruction librarians' teacher identity. While the impact of SoTL is wide-ranging, there was always positive growth, as evidenced from the positive z-scores. For all question areas on the survey, academic instruction librarians reported significant change; thus, involvement in SoTL had a positive impact on academic instruction librarians' teacher identity. Involvement in SoTL changes how librarians see themselves. Table 10 shows a detailed view of each item that aligned with Research Question 2.

Table 10

Individual Survey Item Results for Research Question 2

Question	*Mean Before SoTL*	*Mean After SoTL*	*P-Value*	*Z-Score*	*D Effect Size*
I identify positively with members of the higher education teaching profession.	3.80	4.43	.000	5.169	.536
I talk to my colleagues (librarians and other members of the higher education profession) about teaching and learning questions.	3.72	4.54	.000	6.029	.622
I identify as a teacher.	3.63	4.51	.000	5.801	.602
I believe I am an effective educator.	3.32	4.10	.000	5.807	.605
Being a member of the higher education teaching profession is important to me.	3.98	4.54	.000	4.545	.479
I have an accurate perception of my role as an instructor.	3.20	3.99	.000	5.957	.628
I relate to other teachers.	3.71	4.27	.000	4.990	.529
I attend teaching and learning conferences.	3.21	4.39	.000	6.198	.664
When I am in front of a class, I feel as if I belong.	3.27	4.21	.000	6.023	.649
I have a clear vision of how to become a more effective educator.	2.85	3.81	.000	6.315	.685
I am comfortable in my role as a teacher.	3.17	4.08	.000	6.106	.658
Other people think of me as a teacher.	3.24	4.04	.000	6.022	.653
Other people think of me as a partner in higher education.	3.35	4.10	.000	5.620	.606

From the individual survey items aligned with Research Question 2, results indicated a large positive effect for all survey statements. The larger the effect size, the greater the differences between the groups (Salkind, 2017). The positive large effect indicates that the difference between librarians' identities before participation in SoTL and after participation in SoTL was substantial. The item where participants reported the largest effect was for *I have a clear vision for how to become a more effective educator* ($r = .685$). In other words, through participation in SoTL, study participants had the greatest change in understanding how to grow as an educator.

Qualitative Results

For Research Question 2, the qualitative data allowed the researcher to better understand the information gathered in the survey (Plano Clark & Ivankova, 2016). In this study, results from the Wilcoxon signed-rank test showed a large positive effect on academic instruction librarians' teacher identity. This finding mostly aligned with the qualitative results. While most interview participants indicated they had a teacher identity, two participants did not. Table 11 displays the codes and the number of times the interviewees mentioned the code during the interviews.

Table 11

Interview Results for Research Question 2

Question	Codes	Number of Participants	Number of References
What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' teacher identity?	Leadership role	4	5
	Not a teacher	2	9
	See professional self more clearly	6	33

Results showed that when participants' felt empowered in their teaching, they identified as a teacher. Librarian 4 stated that "it is empowering," when others at her institution see her as a leader in teaching and learning. When outside forces impact a librarians' teaching agency, results from the qualitative interviews suggested they are less likely to see themselves as a teacher. Librarian 1 and Librarian 6 did not see themselves as teachers. Despite saying that teaching, "is a large part of my job," Librarian 1 also said, "Librarians aren't seen as teachers at all." Regarding the participation in the Scholarship of Teaching and Learning, Librarian 1 continued by saying, "It has given me tools, but I don't think it has changed my opinion of myself." Librarian 4 saw herself as a teacher but realized others in higher education might not. When asked about her involvement in SoTL she said, it [SoTL] aids in "having others see us as teachers. … I don't even know how many other faculty do sometimes."

Again, participation in SoTL is linked to librarians holding a teacher identity, but only if the librarians feel empowered. Librarian 2 said, "The Scholarship of Teaching and Learning has made me see my role as a teacher as more important. I think it has added validity to that role. That this is a valuable role in the university." Librarian 3 shared, "I think [it] has been the real value as far as my identity and then feeling then like I had more ownership more personal ownership of that identity." Librarian 3 also shared, "So, I think it [SoTL] helps my identity, and that when we meet each other—meaning me and the faculty person, right—we meet as co-collaborators. So that definitely helped with my identity. I don't sort of feel like the person who has been tagged as the substitute teacher."

The interview participants all indicated they wanted to improve in their jobs and specifically in teaching. Involvement in SoTL helped them improve, thus strengthening their teacher identity and teacher effectiveness. Those participants who were more involved in SoTL

than others saw SoTL as affecting their identity to the point of adopting a leader identity. Librarian 4 stated,

> I never identified as a leader, you know, but this is my thing, so now I kind of have my standing in the department because I am the person who does a lot of reading. I am kind of the go-to person, so it has kind of created a niche there—a leadership role within the department.

> Overall, SoTL helped interviewees see their professional self more clearly. Librarian 2 said, "It [SoTL] just sort of validated how I see myself and how I see this work that I am doing as important, and it has helped to have some external evidence." She continued,

> It [SoTL] has helped me see myself as an educator more fully. It has helped me to just understand the multi-faceted role or what being an educator is—a multi-faceted role … experience or role.

Librarian 3 supported Librarian 2's observations. She noted, "I would say it [SoTL] has been integral to my understanding of myself as a teacher."

Results for Research Question 3: Impact of SoTL on Instruction

Research Question 3 was **"**What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' instruction?" As with Research Question 2, both the quantitative survey results and the qualitative interviews were used to answer this research question. Teaching is an important duty for many librarians (Hall, 2013; Hall, 2017). However, the literature indicated that librarians do not learn instructional skills during library school (Hensley, 2015). Instead, they learn them on the job (Bewick & Corrall, 2010; Westbrock & Fabian, 2010). Since SoTL is a professional development tool often used to improve teaching at

the higher education level, this researcher wanted to understand the impact of SoTL on academic librarians' instruction (Booth & Woollacott, 2017).

Quantitative Results

As with the previous research question, a Wilcoxon signed-rank test—which looks at the relationship between two related samples—was used to analyze the difference between the participants' scores before and after participation in SoTL (Field, 2013). Table 12 displays the mean ranking before and after participation in SoTL for academic librarians' instructional activities. Table 12 also displays the statistical significance (p < .000), the *z*-score, and the effect size. To obtain these survey results, the researcher used SPSS to combine the responses of all items related to Research Question 3. Then, using the combined data, the researcher ran descriptive statistics to obtain the mean scores and ran a Wilcoxon signed-rank test to discover the *p*-value, *z*-score, and effect size. From the *p*-value (p = .000), the researcher determined that SoTL has a statistically significant impact on academic instruction librarians' instruction. After participating in SoTL, librarians change their instructional practices.

Table 12

Survey Results for Research Question 3

Question	Mean Before SoTL	Mean After SoTL	P-Value	Z-Score	D Effect Size
What is the impact of the Scholarship of Teaching and Learning on instruction?	3.37	4.36	.000	7.140	.740

Given that the data came from a Likert-scale the researcher reviewed the median scores in addition to the mean scores which were the primary data used. Before involvement in SoTL,

participants (n = 93) reported a mean ranking of 3.37 and a median ranking of 3.5. A mean

ranking of 3.37 means that the study participants' range of opinions fell between neutral and in

agreement with the survey statements. After involvement in SoTL, participants reported a mean

ranking of 4.36 and a median ranking on 4.5, indicating that participants' range of opinions fell

between agreement and strong agreement with the survey statements. The initial 3.37 mean

ranking was the lowest for the two research questions that used a Wilcoxon signed-rank. This

finding indicated that prior to participation in SoTL, academic instruction librarians did not

engage in many of the best instructional practices. Importantly, their use of instructional best

practices increased after participation in SoTL.

The effect size also demonstrated the relative difference between groups. From the data

collected for Research Question 3, there was a large effect (r = .740) from involvement in SoTL

on the instructional practices of academic instruction librarians. In other words, participation in

SoTL had a large impact on the instructional practices of academic instruction librarians (Fields,

2013).

Additionally, the positive z-score from the Wilcoxon signed-rank indicated participants

responded with a higher mean ranking after participating in SoTL (Salkind, 2017). The results

for this research question displayed a positive increase in reporting (z = 7.140). Thus, the z-

score showed a significant positive growth in the participants' agreement of the statements on the

survey after participation in SoTL. Owing to this growth, the researcher determined that SoTL

has a positive impact on the use of a variety of instructional practices.

Engagement in SoTL significantly impacted all instructional practices surveyed (p <

.001). After participating in SoTL, study participants changed their instructional practices to

reflect best practices. Table 13 displays a detailed view of each question that was aligned with

Research Question 3. For all survey items that aligned with Research Question 3, participants

responded with a positive large effect, as shown in the z-scores and *d* effect sizes. The item

where participants reported the largest effect was *I read research on teaching and learning* (*r* =

.765).

Table 13

Individual Survey Items Results for Research Question 3

Question	Mean Before SoTL	Mean After SoTL	P-Value	Z-Score	D Effect Size
My professional reading has an influence on my students' learning through my teaching.	3.67	4.47	.000	6.337	.657
I support the diverse needs of my students.	3.51	4.37	.000	6.254	.659
I believe it is important to take into account the students' prior knowledge when planning for instruction.	3.94	4.98	.000	6.513	.687
I have changed how I teach because of the knowledge I have gained at teaching and learning conferences I have attended.	3.38	4.49	.000	6.783	.727
I have changed what I teach because of the knowledge I have gained at teaching and learning conferences I have attended.	3.21	4.13	.000	6.467	.693
I have changed how I teach because of the research I have completed.	3.08	4.10	.000	6.304	.688
I have changed what I teach because of the research I have completed.	3.07	4.01	.000	6.255	.682
I incorporate the results of my research into the design and teaching of my courses.	3.11	4.11	.000	6.231	.676
I read research on teaching and learning.	3.39	4.71	.000	7.140	.765
I have changed how I teach because of the research I have read.	3.39	4.56	.000	6.895	.739
I have changed what I teach because of the research I have read.	3.25	4.28	.000	6.553	.703
I have knowledge about how to guide my students' learning.	3.12	4.24	.000	6.775	.731
I am able to foster an environment conducive for learning.	3.34	4.16	.000	6.140	.662
I use new technologies to engage my students.	3.44	4.19	.000	5.671	.612
I use assessment to guide my instruction.	2.91	4.17	.000	6.852	.743
I believe there are many ways to teach and learn the same thing.	4.15	4.79	.000	5.496	.593

Qualitative Results

The previous two research questions focused on why librarians participate in SoTL and the impact of SoTL on identity. Research Question 3 examined SoTL's impact on academic instruction librarians' instruction. Table 14 summarizes the codes and the number of times those codes were mentioned in during the interviews. For this research question, the researcher used both latent and manifest coding to identify themes (Boyatzis, 1998; Saldana, 2016).

Table 14

Interview Results for Research Question 3

Question	Codes	Number of Participants	Number of References
What is the impact of the Scholarship of Teaching and Learning on instruction?	Active learning strategies	5	16
	Assessment	7	13
	Attitude of self-improvement	6	17
	Technology	7	15

The themes of active learning strategies and an attitude of self-assessment were derived from latent coding (Saldana, 2016). These themes both showed up multiple times. Five librarians referred to active learning strategies, and six out of seven participants mentioned an attitude of self-improvement. For active learning strategies, Librarian 1 stated, "So, a lot of times what we have them do is group work. There is a lot of group work involved, even if it just a pair," and Librarian 7 said, "I'm trying to talk as little as possible. I'm done lecturing; it doesn't help the students." Librarian 5 went so far as to say that he was willing to "walk in and listen and co-create a class."

For the attitude of self-improvement, Librarian 3 said, "The Scholarship of Teaching and Learning has really helped me make more informed and intentional decisions in the classroom

and as a teacher." Librarian 5 stated, "I think the biggest thing is I am constantly reflecting and open to reflection." Librarian 2 said,

> I think it's [SoTL has] just given me an attitude of constantly trying to improve and assess and see what I can do differently and inform my practices from the research that is out there saying these are the best practices, or this is what you need to consider, or have you thought about issues of social justice in the classroom and equity of information.

Each interview participant stated they read teaching and learning literature, thus confirming the high z-score found in the survey results. Reading teaching and learning literature was one way participants sought to improve. Librarian 3 stated, "Doing more reading about how students learn. … Once I did more of that reading, then it was like, 'Oh! This is what this theory looks like in the classroom.'"

The researcher determined the themes of assessment and technology from manifest coding because questions about those topics were added to the interview protocol after the survey and they were therefore, directly evident in the data (Boyatzis, 1998; Weisburg, Krosnick, & Bowen, 1996). Specifically, the researcher desired to learn more about those topics after the survey indicated there was something that needed further review. Therefore, all seven participants mentioned both assessment and technology in their responses. Overall, though, while participants saw benefit to assessment, they were not conducting it the way they wanted. Some wanted to do more with it and did not feel that SoTL had impacted their assessment. For example, Librarian 2 said her use of assessment data "is pretty limited honestly." She continued, "But I think … the Scholarship of Teaching and Learning—even if I haven't done it—has helped me think about assessment in libraries in a different way or assessment of my teaching in a different way."

All interviewees shared that they are hesitant to use a lot of technology. Instead, they use technology when it makes sense for learning. Librarian 2 said, "I think I have just become more intentional about technology and a little more skeptical, I think." Similarly, Librarian 3 said, "I think I am much more mindful about the role of technology in the classroom." Librarian 7 summed up the common response by saying,

> I'd say my use of technology has not changed because my attitude has been and always will be that technology should never be central. What needs to be central is, "What is your learning objective, what do you want the students to be able to do?" If technology will serve a purpose, fine, but that is the last thing you think about.

Overall, instructional practices changed through engagement in the Scholarship of Teaching and Learning. The findings for Research Question 3 reinforced the rejection of the null hypothesis, which was *if librarians engage in the Scholarship of Teaching and Learning, their identities would be the same as they were before*. After engaging in SoTL, librarians conduct their teaching differently.

Conclusion

Chapter IV presented the quantitative and qualitative results on academic instruction librarians' participation in SoTL and on how SoTL impacted identity and instructional practices. The explanatory sequential mixed methods design allowed the researcher to present broad numeric findings and more specific qualitative findings. The qualitative data helped explain the quantitative data. A Wilcoxon signed-rank test and Cohen's *d* effect size revealed that involvement in SoTL had a significant impact on both the identity of academic instruction librarians and their instruction. Results from the semi-structured interviews showed a more complex picture of both SoTL's impact on teacher identity and on instructional practices.

Overall, SoTL positively impacted study participants' development of a teacher identity, but at times the local community in which interview participants worked overrode that impact, causing some interviewees to not see themselves as teachers. Additionally, interview findings showed that participation in SoTL influenced the pedagogy used by librarians, but instead of influencing specific instructional practices, involvement in SoTL had a greater impact on the participants' attitude toward pedagogical self-improvement.

Further explanation of the results is found in Chapter V, which expands on the data presented in Chapter IV. In Chapter V, the researcher discusses what the findings mean. Implications for professional practice and recommendations for future research are also included.

Other Quantitative Findings

The researcher gathered data on seven survey items unrelated to the three research questions. The findings proved interesting, and the results are reported below (see Table 15 and Table 16). For each pair of items, a Wilcoxon signed-rank test was used to determine if there was a significant impact from participating in SoTL ($p < .05$) (Fields, 2013). From the change in the responses to individual survey items, a clearer picture of how participation in SoTL impacts participants comes into view.

Teaching and Learning Findings. Engagement in SoTL had the greatest effect on participants' interest in teaching and learning issues and questions ($r = .642$). Table 15 shows that the participant responses to two items presented a large effect size while the responses to the other four demonstrated moderate effects. These findings indicated there was at least a moderate-sized difference between librarians before they participated in SoTL and the same group of librarians after they participated in SoTL. The Wilcoxon signed-rank test showed the p-value for each set of items remained in the statistically significant range at p = .000 (Fields, 2013). This p-

value (*p* = .000) indicated a statistically significant difference in the responses that measured the study participants' interests and desires before involvement in SoTL and after involvement in SoTL.

Survey responses for the items indicating academic instruction librarians' desire to become more effective educators and to improve student learning had a mean score above 4.5 before and after participation in SoTL. This finding indicated that even before engagement in SoTL, many participants strongly agreed with the statements *I desire to become a more effective educator* and *I desire to improve my students' learning*. The reasons librarians choose to initially engage in SoTL is tied to this finding. A detailed view of responses is shown in Table 15.

Table 15

Teaching and Learning Individual Survey Item Results

Items	Mean Before SoTL	Mean After SoTL	P-Value	Z-Score	D Effect Size
I enjoy teaching.	4.09	4.60	.000	4.724	.487
I am interested in teaching and learning issues and questions.	4.08	4.84	.000	6.196	.642
I desire to become a more effective educator.	4.54	4.87	.000	4.309	.447
I desire to learn more about teaching and learning.	4.24	4.69	.000	4.108	.469
I desire to improve my students' learning.	4.65	4.93	.000	4.347	.469
I desire to understand my students' learning.	4.31	4.86	.000	5.411	.587

Research Findings. The only survey item where the mean score after SoTL was below 4.5 was for the survey item *I enjoy research*. Instead, as shown in Table 16, the mean for that

item after SoTL was 4.17 and the effect size was only .373. Participation in SoTL only had a

moderate effect on the study population's enjoyment of research. Despite a moderate effect, the

z-score was positive, which indicated a positive growth in the participants' enjoyment with

research after participation in SoTL. Also, the probability statistic remained in the statistically

significant range p = .001 (Fields, 2013). This *p*-value (*p* = .001) indicated a statistically

significant difference in the responses that measured the study participants' interest in research

before involvement in SoTL and after involvement in SoTL.

Table 16

Research Individual Survey Item Results

Items	*Mean Before SoTL*	*Mean After SoTL*	*P-Value*	*Z-Score*	*D Effect Size*
I enjoy research.	3.81	4.17	.001	3.436	.373

Chapter V

Discussion

Introduction

For the past 100 years, academic librarians have struggled to determine a clear professional identity (Freedman, 2014). With the dawning of the Information Age, the roles and responsibilities of librarians have changed (Drabinski, 2016; Ellis et al., 2014; Goetsch, 2008; Jaguszewski & Williams, 2013; Karasmanis & Murphy, 2014). Currently, teaching is an important part of librarians' jobs (Hall, 2017; Matlin & Carr, 2014). However, despite the significance of teaching responsibilities, many librarians are ill-prepared and surprised by the role (Austin & Bhandol, 2013; Hagman, 2015; Julien & Genuis, 2011; Julien & Pecoskie, 2009; Wheeler & McKinney, 2015). Given the lack of preparation in pedagogy and instructional practices, many academic librarians do not identify as teachers (Freedman, 2014; Houtman, 2010).

The Scholarship of Teaching and Learning (SoTL) is an international movement to review teaching and learning and make the findings public in order to improve student learning (Pope-Ruark, 2012; Shulman, 2006). Engagement in SoTL has been shown to have an impact on professional identity (Mårtensson, Roxå, & Olsson, 2011; McLean, 2009; Roxå et al., 2007). Participation in SoTL is an opportunity for librarians to study their teaching, and through an increased understanding of their teaching, build confidence in their role as a teacher (Elton, 2009). The reason that developing a teacher identity is important for librarians is because the possession of a teacher identity has been shown to relate to the effectiveness of instruction. In other words, the more an instructor identifies as a teacher, the more effective their teaching (Day, 2008; Day & Kington, 2008; Houtman, 2010; Mansfield et al., 2014; Walter, 2005).

Understanding how SoTL impacts academic instruction librarians is useful for the communities of higher education, academic librarianship, SoTL, and educational development. Academic instruction librarians, similar to higher education faculty, often do not receive training in pedagogy and instruction (Bok, 2013; Davies-Hoffman et al., 2013; Hensley, 2015; Houtman, 2010; Leibowitz, 2015; Oleson & Hora, 2014; Saunders, 2015; Westbrock & Fabian, 2010). Instead, academicians—both librarians and faculty—frequently learn how to teach on the job (Bewick & Corrall, 2010; Murphy & Jensen, 2016; Westbrock & Fabian, 2010). While SoTL is practiced by some graduate students, it is more often an area of study academics engage with once they are working in the higher education field (Auten & Twigg, 2015; Ellis, Crumrine, & Scudder, 2010; Fanghanel et al., 2016). Despite research on higher education's faculty involvement in SoTL, prior to this study only opinion pieces had been written on academic instruction librarians' participation in SoTL (August & Dewar, 2010; Bradley, 2009; MacMillan, 2015; Miller-Young et al., 2016; Otto, 2014; Perini, 2014).

In this study, the researcher sought to understand academic instruction librarians' involvement in SoTL and the impact of that involvement on identity and instruction. The research questions for this study were:

1. What reasons do academic instruction librarians state for their participation in the Scholarship of Teaching and Learning?

2. What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' teacher identity?

3. What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' instruction?

As previously stated, a teacher identity is not held by all academic instruction librarians despite teaching being part of their job responsibilities (Hall, 2017; Wheeler & McKinney, 2015). However, teacher identity is important because research has linked it to the effectiveness of the instructor (Day, 2008; Day, Stobart, Sammons et al., 2006; Sammons et al., 2007). One of the purposes of SoTL it to determine the effectiveness of instructional techniques (O'Brien, 2008). In addition, authors have linked SoTL and identity (Bennett et al., 2016; Geertsema, 2016). The researcher sought to understand SoTL's impact on academic instruction librarians' teacher identities, as well as SoTL's impact on instruction, because of the connection between SoTL and professional identity and because the purpose of SoTL is to determine the efficacy of specific pedagogical practices. Therefore, the researcher studied how involvement in SoTL impacted academic instruction librarians' teacher identity and instruction.

In this chapter, the researcher discusses the results presented in Chapter IV. The discussion of the results is framed by the perspective of the communities of practice theoretical framework (Wenger, 1998). The chapter also includes implications of the research findings for professional practice and recommendations for future research.

Summary of the Results

The number of academic instruction librarians who participate in SoTL is unknown. From this research, it can be concluded that at least 1% of the 6,119 academic instruction librarians have some level of involvement in SoTL (M. J. Petrowski, personal communication, October 5, 2016). The researcher did conclude that of those academic instruction librarians who participated in the study, involvement in SoTL positively impacted both their identity and their instruction. Research findings also indicated that the primary reason academic instruction

librarians choose to participate in SoTL is because they want to improve their teaching. Study participants saw teaching as central to their professional mission.

As a result of participation in community shaping identity (Wenger, 1998), academic instruction librarians see engagement in SoTL as involvement in a community that values teaching and learning (Wenger, 1998). When the interview participants were asked about their interactions with others who also participate in SoTL, they described the interactions as beneficial, encouraging, and supportive. One participant said, "It has been mostly very community-based sharing of ideas," while another said, "It has been really rewarding because it has allowed me to engage in that kind of conversation beyond just the librarian circles." Nonetheless, despite discussion of community and interactions with peers on the topic of teaching and learning, most interview participants focused on projects they had completed. Projects included leading a faculty learning community, committee work, and faculty development events they attended. Participants could easily describe specific examples of engagement with colleagues on teaching and learning, including hallway conversations. What study participants rarely did was connect activities or conversations with how those projects or events specifically affected them. Nevertheless, quantitative results from the survey showed an impact from SoTL. Librarians recognized their role in teaching and learning but still did not feel completely part of the broad teaching and learning field, nor did they always see themselves as teachers. In other words, librarians did not always see themselves as full members in the SoTL community. Wenger, (1998) in the Communities of Practice theory, wrote that identity is negotiated in community. If the academic librarians involved in this study did not see themselves as fully part of the SoTL community, then their reticence to adopt a teacher identity is supported by the theoretical framework.

While study results demonstrated that SoTL had a positive strong effect on academic instruction librarians' identity and instruction, the reasons for the impact appeared to be connected to how they viewed themselves prior to SoTL involvement. Participants who already viewed themselves as teachers were more likely to be affected. Participants who did not see themselves as a teacher prior to involvement in SoTL primarily focused on tangible projects rather than personal effect. Given this, the researcher believes the implications of these results are particularly important to Library and Information Science (LIS) graduate schools, academic library administrations, and professional development organizations. These organizations and professional bodies need to support academic instruction librarians as teachers for the full positive effect of involvement in SoTL to occur.

Methodology

The researcher conducted an explanatory sequential mixed methods study to answer the research questions. Prior to this study, research had not been conducted on academic instruction librarians' involvement in SoTL. An explanatory sequential mixed methods approach allowed the author to gather baseline information about academic instruction librarians' involvement in SoTL. The quantitative data were then explained by qualitative interviews.

Of the academic instruction librarians working in the United States, approximately 23%, or 6,119, of them had primary responsibilities that included instruction (M. J. Petrowski, personal communication, October 5, 2016). Study participants for the quantitative portion of the study were from a volunteer convenience sampling of librarians (n=95) on the Association of College and Research Libraries Information Literacy (ACRL) listserv (Teddlie & Yu, 2007). At the time of the research, there were 6,163 subscribers to the ACRL Information Literacy listserv (M. Heuer, personal communication, 2017). The number of subscribers to the ACRL Information

Literacy listserv corresponded closely to the number of academic instruction librarians whose primary job responsibilities included instruction.

Survey participants indicated their willingness to participate in a follow-up interview by checking a box on the survey and providing their contact information. For the qualitative portion of the study, the researcher used a purposeful sample of seven librarians (n = 7) who participated in the survey (Teddlie & Yu, 2007).

The researcher used a Wilcoxon signed-rank test to analyze the responses on the pre-and post- reflective items on the survey (Field, 2013; Tanner, 2012). Mean scores, statistical significance (*p*-value), effect size represented by Cohen's *d,* and *z*-scores were reported (Field, 2013; Salkind, 2017; Tanner, 2012). For this study, a *p*-value of less than .05 was considered significant (Field, 2013). The interviews were coded for themes (Marshall & Rossman, 2016).

Summary of Results and Discussion for Research Question 1

Research Question 1 was "What reasons do academic librarians state for their participation in the Scholarship of Teaching and Learning?" As studies have shown, engaging in SoTL is a way for academic instruction librarians to become more effective educators and to improve their students' learning (Boyer, 1990; Hutchings, 2010; Shulman, 2006). The survey results identified academic instruction librarians who were involved in SoTL. From the participant pool, numerous interviewees said they participated in SoTL because teaching was a professional interest and because they saw teaching as central to their mission as librarians.

Academic instruction librarians participated in SoTL for a variety of reasons. The primary reason as determined by the qualitative data, was that the participants felt participation in SoTL improved their own teaching. This reason aligned with one of the purposes of SoTL—study teaching to improve student learning (Shulman, 2006). However, the majority of

participants did not state that the reason they wanted to improve their teaching was to improve student learning. Instead, many participants stopped at the importance of improving their own teaching. Viewed through the lens of Communities of Practice, this finding is not necessarily surprising (Wenger, 1998). Individuals engaged in a community of practice adopt customs of the group (Wenger, 1998). In the SoTL community, members publicly share their teaching practices and research on teaching and student learning (Shulman, 1998). However, since each class is comprised of unique individuals, and the participant pools are often small, SoTL study results may vary. Owing to small sample sizes and unique student populations, many SoTL studies are not generalizable (Miller-Young & Yeo, 2015). When the results of publicly shared teaching strategies and the subsequent outcomes of those pedagogical practices are not generalizable, placing the focus on the improvement of teaching instead of on the improvement of student learning may help participants more quickly feel part of the community. Therefore, the focus of study participants on the improvement of teaching over student learning may be a product of the SoTL field. Additional SoTL studies are needed to determine how teaching practices impact a different group of students.

Furthermore, all teachers have more control over their own teaching than control over student learning. Their goal for teaching is to help students learn, but ultimately, they cannot control student learning. Therefore, it is likely easier to focus on one's own teaching than it is to focus on student learning. The focus of the study participants on their interests and their teaching led this researcher to hypothesize that those involved in SoTL might choose to participate for themselves and only indirectly for potential outcomes for their students.

While four out of the seven interview participants had conducted SoTL studies, other participants spoke strongly about barriers to conducting research. Instead, participation in SoTL

has more of an impact on attitudes and behaviors with a lower barrier to entry, such as the enjoyment of teaching, the desire to improve teaching and student learning, and the enjoyment of understanding student learning, rather than on research.

Summary of Results and Discussion for Research Question 2

Research Question 2 was "What is the impact of the Scholarship of Teaching and Learning on academic librarians' teacher identity?" From the survey results, the null hypothesis of *if librarians engage in the Scholarship of Teaching and Learning their identities will be the same as they were before* was rejected, and the research hypothesis was accepted. Participation in SoTL had an impact on academic instruction librarians' teacher identity. Results from the Wilcoxon signed-rank test demonstrated the significant impact of SoTL on the participants' teacher identity. After involvement in SoTL, survey participants agreed more strongly with survey items that were aligned with Research Question 2.

The quantitative findings were confirmed and explained by the qualitative data. From the interviews, the researcher heard participants speak about the importance of gaining knowledge and expertise in teaching and learning because they did not always have a grounding in educational techniques prior to becoming an academic librarian. Even librarians with a background in pedagogy found involvement in SoTL beneficial in helping them see themselves as a teacher in the higher education context.

Multiple interview participants spoke of their involvement with the Centers for Teaching and Learning or equivalent department. Engaging in the community created by the centers affected the identities of the librarians who participated in this study. Study participants' involvement with teaching centers helped expand their instruction skills and made them feel part of the broad teaching and learning community at their institutions. As Wenger (1998) wrote,

"developing a practice requires the formation of a community whose members engage with one another and thus acknowledge each other as participants" (p. 149). For librarians to feel completely part of the higher education teaching and learning profession, they also need to feel part of a local community that views them as teachers.

Being an outsider, or at a minimum, feeling on the outside, negatively impacts librarians' teacher identity. Thus, despite SoTL impacting teacher identities, not all participants saw themselves as teachers. In fact, two interviewees specifically said they did not see themselves as teachers. This finding supported previous research studies that found that librarians who serve in the role of instructor do not necessarily view themselves as an educator (Freedman, 2014; Houtman, 2010). In this study, participants indicated their view of themselves as an educator was influenced by the situation in which they conducted their teaching. One participant felt that because they did not teach full semester courses, they were not a teacher. She often questioned if she was wanted at teaching center events because of her role as a librarian. A second participant believed that they were a professor and not a teacher. Librarian 6 described a teacher as someone who thinks about pedagogy and teaches children. The explanations for why these two interviewees did not see themselves as teachers is understood through the communities of practice theoretical framework. Wenger (1998) wrote that it was "a mistaken dichotomy to wonder whether the unit of analysis of identity should be the community or the person" (p. 146). Communities in which librarians find themselves affect their views of themselves, and community and individual identity are intertwined. It is difficult to tell where the individual identity ends and the community identity begins (Wenger, 1998), and since Librarian 1 and Librarian 6 did not believe they had colleagues who consistently viewed them as teachers, their own perceptions of themselves as teachers were compromised.

Not everyone defines the term *teacher* the same. Polger and Okamoto (2010) found that students viewed librarians differently and had different definitions of *teacher*—some definitions were narrow while others were broad. In this study, academic instruction librarians who did not see themselves as teachers were also influenced by the definitional box they created around the word *teacher*. For Librarian 1, a teacher was someone who taught a for-credit course. For Librarian 6, a teacher was someone who thought about pedagogy over content. Even though both interviewees spent time reading teaching and learning literature, attending conferences and workshops about teaching, and stated they were involved in SoTL, they did not see themselves as teachers because the teaching they conducted did not fit their pre-conceived ideas of a teacher. This result might be surprising, but when considering the results through the lens of the theoretical framework, it is not. Identity parallels practice (Wenger, 1998). When the practices of librarians do not fit the community's common definition of a teacher then their identity is impacted. Similarly, identity is both local and global (Wenger, 1998). The global definition of *teacher* clearly influenced Librarian 6, while Librarian 1 was heavily influenced by the local understanding of *teacher*. However, identities are not one-dimensional, and as seen in the other five librarians, a teacher identity is complex and a lived experience (Wenger, 1998). All librarians had identities that spanned multiple communities of practice.

It is important to note that possessing a faculty contract is not enough evidence for librarians to consider themselves teachers. Librarian 1 and Librarian 6 were both considered faculty at their respective institutions but did not view themselves as teachers. On the other hand, Librarian 3 and Librarian 7 held the position of academic staff at their institutions, but they did consider themselves teachers. This finding indicates that how others in the community view librarians or how an individual views the global definition of teacher has a greater impact

on teacher identity than does the institution's categorization of librarians. Furthermore, the lack of clarity concerning the role of a librarian is underscored by this finding (Freedman, 2014).

The methods academic librarians use for instruction on information literacy varies. Various methods include a one-shot instruction session, for-credit courses, embedded information literacy, and interactions at the reference desk (Davis, 2007; Davis et al., 2011; Roy & Hensley, 2016; Zai, 2014). Librarian 1 mentioned that she did not see herself as a teacher because she was not with the students for a full semester. Instead, she only saw them once or twice. This finding corresponds to the results found by Davis et al. (2011): When librarians taught for-credit courses that follow the schedule of other classes taught at the institution, they were more likely to see themselves as a teacher.

These results point to the reality of how one's situation affects one's view of him or herself. Wenger (1998) wrote that identity is influenced by community membership. The results from this study support that hypothesis of the communities of practice theoretical framework because even though all participants had teaching responsibilities, not all of them felt part of a community of higher education teachers (Wenger, 1998). Instead, they saw themselves as part of a different community or on the periphery of *real* teachers. In other words, participants who did not see themselves as teachers had not moved to full participation in the SoTL community and thus were not full members (Lave & Wenger, 1991).

Summary of Results and Discussion for Research Question 3

Research Question 3 was "What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' instruction?" Of the three research questions, survey results indicated that SoTL had the largest positive effect on instruction. Additionally, for each individual survey question that aligned with Research Question 3, the effect size was large.

Participation in SoTL had a positive impact on instruction. This finding aligns with previous descriptions and research on SoTL (Cambridge, 2001; Fanghanel, 2013; Fanghanel et al., 2016; Geertsema, 2016; Roxå et al., 2008). The mean ranking of 3.37 (between neutral and agree) before participation in SoTL was not a surprise, since many academic instruction librarians learn instruction skills on the job and not during graduate school (Bewick & Corrall, 2010; Hensley, 2015; Westbrock & Fabian, 2010). After participation in SoTL, the mean ranking on the survey was 4.36.

Interview data supported the survey findings since many participants spoke about how they had changed instructional methods as they learned more about teaching. However, despite changes to teaching—primarily in regard to the use of active learning strategies—interview participants spoke more about a change in their attitude. This attitudinal change was coded by the researcher as an attitude of self-improvement. Librarian 2 specifically stated, "I think it's [involvement in SoTL] just given me an attitude of constantly trying to improve." Librarian 5 spoke about the importance of reflection for his professional growth and how SoTL supported reflection. In summary, as indicated by interview participants, involvement in SoTL can lead to alterations in the attitude of academic instruction librarians toward continuing to develop their teaching strategies.

Booth and Woollacott (2017) wrote that SoTL is a professional development tool often used to improve teaching at the post-secondary level. Based on this view of SoTL, the researcher expected interview participants to speak about specific pedagogical changes. The researcher did not expect the qualitative study findings to emphasize attitudinal changes over adjustments to instructional practices. It could be assumed that academic instruction librarians might be involved in SoTL because they were already interested in improving, which was

supported by the results for Research Question 1. Nevertheless, even if librarians participated in SoTL because they wanted to improve their teaching, qualitative findings showed that their attitude toward instructional self-improvement still improved from involvement in SoTL. Engagement in a community of practice gives people power to work through "an identity of competence" (Wenger, 1998, p. 175). The researcher concluded that from participation in SoTL academic instruction, librarians grew in their teacher identity, which in turn affected their attitude toward learning about instructional strategies and pedagogy. Consequently, belonging to a community of teachers impacted librarians' attitude toward their current teaching and their willingness to continue to learn.

Quantitative results demonstrated that technology use was not as affected by SoTL as other areas of pedagogical methods. This finding was confirmed from the interview results. When asked about technology, interview participants spoke about the importance of student learning and how they felt technology often got in the way of the focus of the class. However, interviewees were all willing to use technology in class when they felt that it aligned with their learning outcomes. While SoTL did not change the interview participants' opinions of technology, it did reinforce for them the importance of alignment with activities and class objectives.

The findings for Research Question 3 further supported the rejection of the null hypothesis that aligned with Research Question 2: *if librarians engage in the Scholarship of Teaching and Learning, their identities would be the same as they were before*. An attitude of self-improvement in pedagogical practices signifies a growth in teacher identity. Day and Kington (2008) found that a teacher's effectiveness and his or her identity as a teacher are linked. Furthermore, a teacher's effectiveness is related to his or her resilience (Day, 2008; Day &

Kington, 2008; Day, Stobart et al., 2006; Sammons et al., 2007). Findings from this study illustrate that as librarians participate in SoTL, their attitudes toward instructional growth change, thus underscoring their identity as teachers. Librarian 2 specifically stated that because of involvement in SoTL, she has "an attitude of constant improvement and constant openness to improve and to change and to be an educator so my students can learn more effectively." Furthermore, she said that participating in SoTL helped her realize that she is "not the only one [who] still struggles with instructional issues." Librarian 2 sees herself as part of the teaching and learning community and knows she is not alone. Being part of the higher education community impacts her identity and supports her continued goals for improvement (Wenger, 1998).

Conclusion

SoTL is the study of teaching and learning and then making the results "public so that others can critique it, build on it, and contribute to the wider teaching commons" (Shulman, 2006, p. ix). Academic instruction librarians choose to participate in SoTL for a variety of reasons. As shown in the study results, academic instruction librarians who were part of this study want to improve, they care about their students' learning, and they feel teaching is central to their job. Librarians engaged in SoTL choose to participate in a community of practice where the focus is the topic of teaching and learning (Wenger, 1998). As Wenger (1998) wrote, "Communities of practice are about content—about learning as a living experience of negotiating meaning—not about form" (p. 229). Academic instruction librarians who participate in SoTL are participating in a professional community with other academics who are also interested in teaching and learning. Participants learn together and negotiate their teacher identities as a group (Wenger, 1998).

Indeed, study results indicated that SoTL communities impact academic instruction librarians who choose to participate in them. Engagement in SoTL positively influences how academic instruction librarians professionally identify, and participation in SoTL also impacts their instruction. However, when librarians do not feel that they fully belong to the community, they do not necessarily adopt the same identity as others in the group—they may not see themselves as teachers. A sense of belonging to the community is necessary for a sustained teacher identity.

Feelings of belonging to the teaching and learning community do not have as great of an impact on instruction as they do on an academic instruction librarians' teacher identity. Results from this study showed that involvement in SoTL had the largest impact on academic instruction librarians' instruction. For example, participation in SoTL had a large positive impact on academic instruction librarians' pedagogical practices—primarily in their attitude toward self-improvement. When academic librarians engaged in SoTL, they were more likely to feel comfortable admitting there is room for improvement and then would seek out ways to strive for growth. Additionally, as indicated in the qualitative research findings, academic librarians who participate in SoTL incorporated more active learning strategies into their teaching.

Overall, participation in SoTL impacted academic instruction librarians' teacher identity and instructional practices. Through the practices of reading literature, attending conferences, using learned teaching strategies, conducting and sharing research, and implementing research discoveries, librarians involved in SoTL were changed. Connection to the SoTL community—whether that community was local to their institution of higher education or global, as distinguished by the international teaching and learning community—significantly impacted academic instruction librarians in this study (Shulman, 2006; Trigwell, 2013). Moreover, when

academic instruction librarians felt they were full members of the SoTL community, the impact to their teacher identity and instruction was even greater.

Recommendations for Further Research

Teaching information literacy is an important part of academic librarians' jobs (Julien & Genuis, 2011; Vassilakaki & Moniarou-Papaconstantinou, 2014). The teaching methods employed by librarians to instruct on information literacy varies (Davis, 2007; Davis et al., 2011; Roy & Hensley, 2016; Zai, 2014). While this study confirmed previous results, that academic librarians who teach credit-bearing courses are more likely to see themselves as teachers, the researcher recommends additional research be conducted on this aspect of the study (Davis et al., 2011). There is room in the literature for an examination of why the type of teaching method affects teacher identity. There is also room in the literature for additional analysis with a larger sample. A larger sample will help the librarian community understand how various information literacy instruction methods impact teacher identity.

The researcher recommends further research using a larger sample size. The survey in this study captured a little over 1% of academic instruction librarians. Specifically, additional research should be conducted to determine how many academic instruction librarians participate in SoTL because it is still unclear how many academic librarians participate in SoTL. Additionally, further research is needed to understand participation in SoTL among librarians at different types of post-secondary institutions with different years of experience and different employment statuses.

Moreover, the researcher recommends additional research on the different types of involvement in SoTL. For this study, the researcher included the following as involvement in SoTL**:**

- Reading teaching and learning literature.

- Attending teaching and learning conferences.

- Using the teaching and learning literature in your teaching.

- Conducting teaching and learning research.

- Presenting and/or publishing teaching and learning research.

- Implementing the techniques and methods supported by your own teaching and learning research in the classroom.

The majority of participants read the literature, attended conferences, and used the literature in their teaching. However, many of them did not conduct their own research. A few study participants gave some insight into why they did not conduct their own research. Librarian 1 indicated that her personal life kept her from having time to dedicate to research studies. Librarian 7 worked part-time for many years and only recently accepted full-time work. When she was working part-time, she indicated she did not have time or support within the institutional structure to conduct research. Understanding why librarians choose or do not choose to research their teaching might shed light on needed areas for additional education during library school or for professional development once librarians are working either part-time or full-time.

Another recommendation for future research is to delve more deeply into the reasons academic instruction librarians state for their involvement in SoTL as well as involvement in other types of professional development. Results from this study pointed to the possibility that some participants might say they participate in SoTL to improve their own teaching instead of being involved in SoTL to improve student learning, because they see teaching as the end versus learning as the end. For some, the goal of professional development might be to professionally grow themselves. For others, the reason to participate in professional development could be

because they see learning as the end goal of teaching. How a person sees the ultimate purpose, or end goal, of the teaching and learning process might have an impact on the reason he or she participates in SoTL.

As shown in previous studies, teacher identity is linked to teacher effectiveness (Day & Kington, 2008; Sammons et al., 2007). Further research should be conducted on the growth of academic instruction librarians' teacher identities and on how the development of a teacher identity does or does not impact the quality of instruction. Additional research can be extended to include how the development of a teacher identity in academic librarians influences student learning.

The communities of practice theoretical framework includes the premise that humans are social creatures, and socializing is a central part of learning. Additionally, learning impacts identity (Wenger, 1998). While connecting how humans are social beings with learning and identity, Wenger (1998) wrote about how participation in a community of practice affects identity. Research findings supported that element of the theoretical framework. Given that, the researcher also recommends additional studies be conducted on how local communities affect academic librarians. Roxå et al. (2008) found that workplace culture and context shapes the identities of academicians, and research findings from the interviews indicated that faculty and staff at the research participants' institutions had a greater influence on how participants saw themselves than their institution classification. Study participants who held staff positions saw themselves as teachers, while other interview participants who were classified as faculty did not view themselves as teachers. Interview responses pointed to the influence of the local community on identity, which interview participants identified as including faculty members whose primary responsibility was teaching. As Julien and Pecoskie (2009) found, teaching

faculty hold power over librarians. Therefore, the researcher recommends additional research to further investigate how power differentials impact the local teaching and learning community and how the power dynamic in the local community affects academic librarians' teacher identity. As previous research has shown, local events impact how a person views himself or herself (Hsieh, 2010).

Identities are complex and consist of multiple parts, including "self-image, self-esteem, job-motivation, task perception, and future perspective" (Kelchtermans, 1993, p. 444). Findings from this research were that participants who identified as teachers also possessed the identity of librarian. This dual self-image may cause professional stress (Colbeck, 2008; Vassilakaki & Moniarou-Papaconstantinou, 2014). Again, further research on how local communities, including library administration, can help academic instruction librarians adopt the identity of a teacher while maintaining a congruent view of themselves will be beneficial for those working in higher education. Librarians are not the only group within higher education who struggle with their identities. Educational developers also struggle with possessing multiple identities (Bennet et al., 2016). Additional research on how to help academicians reconcile various and possibly conflicting identities may be useful for aiding those employed in the higher education field to find professional balance and a better understanding of how they fit within the broad post-secondary community.

In addition to local communities of practice affecting identity, global communities impact it as well (Wenger, 1998). Specifically, "an identity is neither narrowly local to activities nor abstractly global. Like practice, it is an interplay of both" (Wenger,1998, p. 163). Given that identities are comprised of local and global activities, the researcher recommends further research focusing on academic instruction librarians' global participation in communities of

practice. For example, this researcher suggests studying how continued learning impacts academic instruction librarians' identity as a member in the broad teaching and learning community. A second recommendation for future study focuses on researching the global identities of academic instruction librarians. This researcher recommends additional research on generational views of teacher identity in librarianship. As depicted in early literature, the primary role of librarians was to house, preserve, and make the written word available (Drabinski, 2016), yet as information has changed, the role of librarians has also changed (Ellis et al., 2014; Goetsch, 2008; Jaguszewski & Williams, 2013; Karasmanis & Murphy, 2014). Specifically, the past few decades have led to change in the teaching responsibilities of librarians (Walter, 2005a; Warner & Seamans, 2004). Since much of this change has been relatively recent, the researcher recommends studying the growth of teacher identities in veteran librarians. To understand generational differences, the researcher also recommends studying new academic instruction librarians' teacher identities. Moreover, this researcher recommends surveying higher education faculty in various disciplines to see how many consider themselves teachers.

Since many academic librarians learn instruction skills on the job, this researcher also recommends additional research on professional development opportunities for librarians (Brecher & Klipfel, 2014; Westbrock & Fabian, 2010). SoTL is one type of professional development, but there are other types of academic development in which librarians can, and do, elect to participate (Buck, 2014; Fanghanel, 2013; Francis & Wingrove, 2017; Geertsema, 2016; Mitchell & Mitchell, 2015). Participants in both the quantitative and qualitative portions of this study indicated that they engaged in a range of professional development opportunities. Therefore, delving more deeply into what types of professional development librarians

participate in and studying how those opportunities impact their teaching and instruction will help the library community and academic developers in their efforts to support educators.

Communities of practice are widely used in higher education and particularly in the academic library field (August & Dewar, 2010; Belzowski et al., 2013; Richlin & Cox, 2004). Overall, the researcher recommends broad research on how librarians' professional communities impact their involvement in SoTL. All interviewees indicated the community of professionals—other librarians and higher education faculty—affected them. How they were affected, though, varied. Mapping the communities of practice in which librarians find themselves would likely allow for greater understanding of how librarians are situated within the library profession, the higher education profession, and the SoTL community.

In addition to further research on librarians' teacher identity, this researcher recommends further study on how librarians' instructional practices are impacted by their involvement in various communities of practice and professional development. In this study, the findings indicated SoTL primarily impacted librarians' attitudes toward self-improvement and their use of active learning strategies. Interview participants rarely spoke about specific pedagogical changes they made due to their involvement in SoTL. It would be useful for the academic library community and the academic development community to have a better understanding of how different types of professional development influence instruction librarians' pedagogies. Likewise, it would be useful to know if any professional development changes the pedagogical practices of academic librarians, and if so, why instructional practices change after participation in some professional development but not in SoTL.

Discovering that involvement in SoTL affected academic instruction librarians' attitudes toward instructional improvement more so than impacting specific pedagogical practices was

surprising to the researcher. Given this anomaly, the researcher recommends additional research on SoTL's impact on attitudes. It would be interesting to know if the SoTL community, through the studying the teaching and learning, allows instructors to feel more comfortable acknowledging room for improvement. Further research is also needed on how changes in teachers' attitudes toward professional growth impacts their instruction. Moreover, the researcher recommends future studies on how participation in SoTL impacts academic instruction librarians' engagement in self-reflection. Conducting and acting on assessment results is already an important part of many librarians' jobs (Greer et al., 2015; Oakleaf, 2011). The use of assessment data often requires a reflective component (Kissel et al., 2016; Oakleaf, 2011). Understanding the interplay between self-reflection, assessment, and the development of an attitude of self-improvement might help educational developers, the SoTL community, and the academic library community create professional development programs that support academic librarians' professional advancement.

Study results from this research indicated the mean score of 3.44 before participation in SoTL and the mean score of 4.19 after participation in SoTL for the survey topic *I use new technologies to engage my students*. This finding was unique because it had a smaller effect size (r=.612) than some of the other survey items. The qualitative data clarified and explained the quantitative findings which led to a slightly different understanding of the conclusion. All seven interview participants indicated they were hesitant to use technology because they often felt it did not add to the lesson. Instead, they often saw it as a distraction from the core topics being taught. Due to these findings, this researcher has two recommendations for future studies. First, the academic library community and LIS graduate programs would benefit from supplementary research on why librarians use technology in their lessons prior to participation in SoTL.

Understanding why librarians use technology may help foster similar strategies for the support of other instructional practices. Specifically, it would be interesting, and possibly useful, to know why academic librarians choose to use technology in their teaching when they are not well-versed in the teaching and learning literature. Second, the academic library community, the SoTL community, and the educational technology community may benefit from additional research on why academic instruction librarians feel technology is a hindrance in the classroom. Understanding why academic librarians are hesitant to use technology may point to professional development needs, or it may show that librarians are cognizant of their students as learners.

Implications for Professional Practice

Results from this study found that most participants participated in SoTL by reading the literature, attending conferences, and using the literature in their teaching. Few of the participants conducted their own research. While study participants primarily indicated that the reason they did not conduct primary research was due to a lack of time, still, given this finding, LIS graduate programs and professional development organizations may want to spend additional time instructing on research methods, and specifically SoTL research methods. In a recent study, Kennedy and Brancolini (2018) found that only 17% of participants believed their LIS master's degree program prepared them to conduct research. If academic instruction librarians develop an increased comfort level with research, they might be more willing to conduct SoTL research studies. Despite numerous definitions of SoTL, commonality among research set-up exists (Bass, 1999; Felten, 2013; Hutchings, 2000; Kreber, 2002a; O'Brien, 2008; Shulman, 2006). There is a need for additional support of academic librarians who want to conduct SoTL research.

Another implication for professional practice is that Centers for Teaching and Learning, or the equivalent department, should more strongly support academic librarians' engagement in SoTL initiatives. Many participants spoke about how beneficial their university's teaching and learning center was to their professional development. Specifically, staff in the teaching and learning center could host workshops to discuss how to create and conduct a research project on information literacy. Since the instruction conducted by librarians often differs from faculty who teach semester-long courses, the teaching and learning center may also want to consider hosting a workshop exclusively for librarians if the university has a staff of many academic instruction librarians (Davis, 2007; Zai, 2014).

Participation in SoTL has a positive effect on academic instruction librarians' teacher identity. Involvement in SoTL also positively impacts academic instruction librarians' instruction. Reading the teaching and learning literature and then using the strategies discussed in the articles is enough to change both instructional practices and how librarians view themselves. Therefore, librarians should be introduced to the teaching and learning literature in their schooling early in their career. In fact, academic librarians should be taught about the broad teaching and learning community in higher education. Since instruction is still not a core part of many LIS graduate programs, administrators and faculty in those programs should, at a minimum, introduce LIS graduate students to how academic librarians fit into the higher education community (Brecher & Klipfel, 2014).

Owing to their job functions, many academic librarians already have some experience with self-reflection (Corrall, 2017). Separately, Trigwell (2013) wrote that engagement in SoTL helps instructors build their teaching practices on theory. Self-reflection coupled with theory and practice leads to praxis (Jacobs, 2008). In many ways, involvement in SoTL leads to deeper

praxis. As librarians learn about instructional theories and practices, they are more likely to reflect on their teaching and act on those reflections. Librarian 5 specifically stated, "I look at what I do as a praxis, which to me means it is a cycle of practice, research, practice, research, practice, research." Librarian 6 also discussed the importance of praxis in her professional work. Growing as a teacher is a process, and the praxis that SoTL involvement encourages was found to be beneficial for participants in this study. Therefore, organizers of future professional development initiatives should consider incorporating instruction on praxis and demonstrating how SoTL supports it. Similarly, individuals responsible for professional development should incorporate instruction on the importance of being reflective practitioners. Oakleaf (2011) found that librarians who participated in assessment automatically were involved in reflective practice. Oakleaf (2011) further noted that reflective practice was important for librarians to grow professionally. These findings were further supported by this study's findings on the connection of reflection and an attitude of self-improvement.

Additionally, library organizations, library schools, and library administrations should look for ways to make the teaching and learning of librarians more visible. Participants in this study found the support and encouragement of other colleagues to be beneficial to their own practice. However, there were still recognized gaps. Some participants indicated they were not seen as teachers nor did they see themselves as a teacher. Moreover, the view others had of their role affected the view they had of themselves. For example, Librarian 1 felt the need to confirm librarians were wanted at teaching and learning events hosted by the university despite having faculty status. She was willing to advocate for herself, but greater support from the larger higher education teaching community might influence how other faculty view her as well as how they

view other librarians. This implication for practice is underpinned by Wenger's (1998)

Communities of Practice theory, which noted that participation in a community impacts identity.

In 2008, Walter found that LIS curriculum was not meeting the needs of librarians with

teaching responsibilities. While some participants in this research study did indicate they took

courses on instruction during library school that they found helpful, other participants still felt

there was a gap between their graduate-level work and the requirements of their job. Librarian 1,

who has been in the field 0-5 years, stated that she took an instruction class during her master's

program, but she did not recall discussing pedagogy. Librarian 4, who has also been in the field

0-5 years, had a similar experience. She started library school with a teacher identity because of

previous graduate work, but she said, "I feel strongly that I should have had classes in graduate

school, in library school, on teaching. I feel like that was really missing in my graduate ...

training." On the other hand, Librarian 3, who has 0-5 years of professional working experience,

spoke about a teaching practicum she had the opportunity to participate in during graduate

school. Due to the practicum, she indicated she felt prepared for teaching responsibilities upon

graduation. An additional caveat is that Librarian 2 started library school with the intention of

working in a K-12 setting and was exposed to a lot of coursework on pedagogy and instruction.

Librarians do have experience with assessment, and survey results showed an increase in

librarians' use of assessment to guide instruction after participation in SoTL (Oakleaf, 2009).

However, this study's findings also indicated that librarians wanted to assess student learning,

but they often did not. Interview participants recognized the benefits of assessment, but often

felt that they did not have the necessary skillset. In fact, Librarian 1 stated, "I have been

struggling with that [assessment] for a while." When asked what has changed the most in their

teaching through participation in SoTL, Librarian 2 said, "I think what has happened is my fear

of assessment has been diminished a little bit. That doesn't mean I am actually comfortable assessing student learning all the time." Given this finding, it would behoove both LIS graduate programs and professional development organizations to spend time teaching assessment strategies and then teaching what to do with assessment data. Librarians clearly want, and need, additional instruction on assessment. LIS programs and professional organizations are uniquely situated to meet this need.

LIS graduate programs have made progress in aligning their curriculum with the needs of the field, but additional work needs to be done (Hensley, 2015). As teaching continues to grow as part of librarians' jobs, LIS professors should add curriculum on pedagogy and provide more opportunities for their students to practice teaching (Hall, 2017; Hensley, 2015). Practicum programs such as the one described by Librarian 3 are a good model of how other LIS graduate programs can incorporate teaching and learning into their curriculum to help students prepare for future job responsibilities.

Walter (2008) also found in his research that teaching was central to how librarians viewed their mission. This finding was reconfirmed in this research study. The importance of LIS graduate programs emphasizing instruction is further highlighted because practicing academic librarians view teaching as central to their mission. Many interview participants spoke about how important their teaching was to their professional role, with Librarian 2 going so far as to say, "my identity as an educator is really central to my work." Additionally, academic library employers want librarians with instruction skills (Hall, 2013; Hensley, 2015). LIS graduate program administrators and faculty need to stay in tune with the requirements for librarians working in the field.

Given that academic instruction librarians view teaching as central to their mission, in the future they should work to extend their SoTL practices and place additional focus on student learning. More interview participants identified their reason for involvement in SoTL as being to improve their own teaching rather than to improve student learning. Indeed, while participation in SoTL provides an opportunity for librarians to gain knowledge about their teaching and improving teaching is necessary and important, the primary end goal of SoTL is increased student learning (Elton, 2009; McKinney, 2006). As Shulman (2006) noted:

> The scholarship of teaching and learning invites faculty…to view teaching as serious, intellectual work, ask good questions about their students' learning, seek evidence in their classrooms that can be used to improve practice, and make this work public so that others can critique it, build on it, and contribute to the wider teaching commons. (p. ix)

Therefore, future SoTL practice among academic instruction librarians should include advancement on the focus of student learning.

Another implication for future practice includes fostering a vision wherein academic librarians recognize each other as members of the teaching and learning community. In many instances, this is already happening, but for the broader teaching and learning community to also view librarians as participants in the community, academic librarians need to fully embrace the role themselves. Identity is negotiated, and librarians must first negotiate this identity within themselves (Wenger, 1998). In other words, the academic librarian community must first define themselves as teachers. Then, academic librarians will have the support of their most closely aligned professional community as they adopt the identity of teacher. Professional organizations such as the Association of College and Research Libraries and the Association of Research Libraries can specifically refer to librarians as teachers. How people refer to themselves and how

they participate in a community with others will affect how they make abstract concepts such as identity concrete (Wenger, 1998).

Due to academic librarians teaching information literacy using a variety of methods and contexts, future focus by LIS graduate schools and professional development organizations should be given to specific pedagogical practices that work in different class settings (Davis, 2007; Davis et al., 2011; Roy & Hensley, 2016; Zai, 2014). Additionally, discussion on teaching information literacy in a one-shot instruction session, credit-bearing courses, or at the reference desk will help future and current academic librarians understand their role within the higher education teaching and learning community.

Furthermore, LIS graduate programs and professional development organizations should consider openly discussing the importance of a teacher identity for effective instruction (Day & Kington, 2008; Sammons et al., 2007). Supporting librarians in fostering their teacher identity will likely have a positive impact on the academic librarianship community. Teaching will continue to be a job responsibility for academic librarians (Gammons, Carroll, & Inge, 2017; Hall, 2017); therefore, helping them feel comfortable in that role will be beneficial.

Overall, the results of this study point to the importance of librarians being open-minded to assuming a teacher identity. Librarians need to participate in the broad higher education profession. This involvement should be encouraged in library school, by library organizations, and by library administrations. When librarians choose to participate in the international higher education teaching and learning community, they will have additional opportunities to engage in practices that lead to identity formation and the development of professional purpose (Wenger, 1998).

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Appendix A

Permission to Use Communities of Practice Image

From: Etienne and Bev Wenger-Trayner [mailto:be@wenger-trayner.com]
Sent: Saturday, October 15, 2016 7:57 PM
To: Lauren Hays <ldhays@mnu.edu>
Subject: Re: Dissertation

Lauren,

Yes, you are welcome to use this figure in your dissertation.

All the best on your work,

Etienne and Bev

	Etienne and Bev Wenger-Trayner Social learning theorists and consultants	**E** be@wenger-trayner.com	**Blog and resources:**	wenger-trayner.com
		T +1 (530) 205 3534	**BEtreat workshops:**	wenger-trayner.com/betreat

On Oct 12, 2016, at 09:01, Lauren Hays <ldhays@mnu.edu> wrote:

Etienne and Beverly Wenger-Trayner,

I am using communities of practice as the theoretical framework for my dissertation on librarian engagement in the Scholarship of Teaching and Learning. I am requesting permission to use the image on levels of participation found on this website http://wenger-trayner.com/project/levels-of-participation/ in my dissertation.

Thank you,

Lauren Hays, MLS, MS
Assistant Professor
Instructional and Research Librarian, Mabee Library

Office: 913.971.3561 | fax: 913.971.3285
_____

MidAmerica Nazarene University
2030 E. College Way
Olathe, KS 66062
www.mnu.edu

Celebrating 50 Years: 1966-2016!

Appendix B

Permission to Use Wisconsin Teaching Fellows & Scholars Image

From: Voelker, David [mailto:voelkerd@uwgb.edu]
Sent: Monday, November 28, 2016 6:16 PM
To: Lauren Hays <ldhays@mnu.edu>
Cc: Martin, Ryan <martinr@uwgb.edu>
Subject: Re: Wisconsin Teaching Fellows & Scholars Program assessment project: Final report

Dear Lauren,

Thanks for the request. Yes, that would be fine. Do you have an adequate copy of the figure?

Best,

David Voelker

From: Lauren Hays <ldhays@mnu.edu>
Date: Monday, November 28, 2016 at 10:37 AM
To: "Voelker, David" <voelkerd@uwgb.edu>
Subject: Wisconsin Teaching Fellows & Scholars Program assessment project: Final report

Dr. Voelker,

I am writing my dissertation on librarians' teacher identity development through their engagement with the Scholarship of Teaching and Learning. I have permission from Dr. Ciccone to use survey questions from the Report on the Impact of the Scholarship of Teaching and Learning on the UW-System. I am including references to the Wisconsin Teaching Fellows & Scholars Program Assessment Project: Final Report in my literature review, and I want to ask permission to use Figure 1 *Scope of impact of Wisconsin Teaching Fellows & Scholars, with examples of activities.*

Thank you for your time.

Regards,

Lauren Hays, MLS, MS
Assistant Professor
Instructional and Research Librarian, Mabee Library

Office: 913.971.3561 │ fax: 913.971.3285
_____

MidAmerica Nazarene University

2030 E. College Way
Olathe, KS 66062
www.mnu.edu

Celebrating 50 Years: 1966-2016!

Appendix C

Site Permission Letter

ACRL
Advancing learning
Transforming scholarship
Association of College & Research Libraries
A division of the American Library Association

November 15, 2016

Northwest Nazarene University
Attention: HRRC Committee
Helstrom Business Centers 1st Floor
623 S. University Boulevard
Nampa, ID 83686

RE: Research Proposal Site Access for Mrs. Lauren Hays

Dear HRRC Members:

This letter is to inform the HRRC that the owners of the Information Literacy discussion list (ILI-L) sponsored by the American Association of College and Research Libraries reviewed the proposed dissertation research plan including subjects, assessment procedures, proposed data and collection procedures, data analysis, and purpose of the study.

I understand that Mrs. Hays will be sending a survey to all members of the ILI-L discussion list. Data collected from the survey will be used to understand academic librarians' teacher identity development through their engagement in the scholarship of teaching and learning. Additionally, I understand that this study is an explanatory sequential mixed methods study, and that six librarians who indicate their willingness to be interviewed will be contacted after the completion of the survey analysis. For all data collection, participants will provide assent. Mrs. Hays will present details of the study to participants, and interview participants will be asked to sign an informed consent.

I also understand that this study will be reviewed by Northwest Nazarene University's Human Research Review Committee, and that the collected data will be protected on a password protected external hard drive. At the conclusion of the study, I understand that Mrs. Hays will keep the data for three years in compliance with the Federalwide Assurance Code. After three years the data collected in this study will be destroyed.

Mrs. Hays has permission to post an invitation to complete the survey on the ILI-L discussion list. The authorization dates for this research are July 2017-April 2018.

Sincerely,

Mary Jane Petrowski
Associate Director
Association of College & Research Libraries
ILI-L Discussion List Owner

50 East Huron Street | Chicago, IL 60611-2795
(312) 280-2523 | (800) 545-2433, ext. 2523 | Fax: (312) 280-2520
E-mail: acrl@ala.org | www.acrl.org

Appendix D

NIH Certificate

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Lauren Hays** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 03/14/2016.

Certification Number: 2031718.

Appendix E

Approval from Northwest Nazarene University's Institutional Review Board

Lauren Hays <lhays@nnu.edu>

[Northwest Nazarene University] RE: Protocol #4032017 - ACADEMIC LIBRARIANS' TEACHER IDENTITY DEVELOPMENT THROUGH THE SCHOLARSHIP OF TEACHING AND LEARNING

Northwest Nazarene University <rboyes@nnu.edu>   Wed, Mar 15, 2017 at 9:51 PM
Reply-To: rboyes@nnu.edu
To: Lauren Hays <lhays@nnu.edu>

Dear Lauren,

The HRRC has reviewed your protocol: Protocol #4032017 - ACADEMIC LIBRARIANS' TEACHER IDENTITY DEVELOPMENT THROUGH THE SCHOLARSHIP OF TEACHING AND LEARNING. You received "Full Approval". Congratulations, you may begin your research. If you have any questions, let me know.

Rick Boyes
Northwest Nazarene University
HRRC Member
623 S University Blvd
Nampa, ID 83686

Appendix F

Informed Consent Form

A. PURPOSE AND BACKGROUND

Lauren Hays, PhDc, in the Department of Graduate Education at Northwest Nazarene University is conducting a research study related to librarians' teacher identity development through the Scholarship of Teaching and Learning. We appreciate your involvement in helping us investigate how the Scholarship of Teaching and Learning influences librarians' teacher identity.

You are being asked to participate in this study because you are a healthy volunteer, over the age of 18.

B. PROCEDURES

If you agree to be in the study, the following will occur:

1. You will be asked to sign an Informed Consent Form, volunteering to participate in the study.

2. Immediately prior to the start of the interview, the researcher will ask for verbal assent for your participation in the study.

3. You will meet with the researcher via Skype.

4. You will answer interview questions and engage in a discussion on your teacher identity and your engagement with the Scholarship of Teaching and Learning. This discussion will be recorded and is expected to last approximately 60 minutes.

5. Once data is collected and analyzed, you will be asked to review the analysis of the collected data. The researcher will share initial research conclusions via e-mail. The researcher will give you the opportunity to confirm that your thoughts and feelings are represented in the results. Checking the data should take approximately 60 minutes.

These procedures will be competed via Skype and through e-mail. The process will take a total time of about 2 hours divided into two 60 minute sessions.

C. RISKS/DISCOMFORTS

1. Some of the discussion questions may make you uncomfortable or upset, but you are free to decline to answer any questions you do not wish to answer or to stop participation at any time.

2. For this research project, the researchers are requesting demographic information. Due to the size of the academic instruction librarian community, the combined answers to these questions may make an individual person identifiable. The researchers will make every

effort to protect your confidentiality. However, if you are uncomfortable answering any of these questions, you may decline to answer them.

3. You have been asked to participate in the interview based on questions your answered on a survey that is part of this study. You will be asked questions about your response to survey questions. Due to this, your survey responses will not be anonymous. However, the researcher will maintain confidentiality of your survey and interview responses.

4. During the study, you will be asked to disclose personal feelings about your professional abilities and dispositions. This may lead to temporary embarrassment or frustration. The researcher will reduce these risks by ensuring confidentiality of the data.

5. Confidentiality: Participation in research may involve a loss of privacy; however, your records will be handled as confidentially as possible. No individual identities will be used in any reports or publications that may result from this study. Confidentiality will be maintained through coding and assigning each participant a unique identifying number (Librarian 1, Librarian 2, Librarian 3, etc.). All data from notes, recordings, and transcripts will be kept in a locked file cabinet in the researcher's office and the key to the cabinet will be kept in a separate location. In compliance with the Federal wide Assurance Code, data from this study will be kept for three years, after which all data from the study will be destroyed (45 CFR 46.117).

6. Only the primary researcher and the research supervisor will be privy to data from this study. As researchers, both parties are bound to keep data as secure and confidential as possible.

D. BENEFITS
There will be no direct benefit to you from participating in this study. However, the information you provide may help the library community better understand the development of a librarians' teacher identity. The information may also help faculty developers understand how the Scholarship of Teaching and Learning influences identity.

E. PAYMENTS
There are no payments for participating in this study.

F. QUESTIONS
If you have questions or concerns about participation in this study, you should first talk with the researcher. Lauren Hays can be contacted via email at lhays@nnu.edu, via telephone at 913-971-3561 (W) / 816-863-4207 (C) or by writing: lhays@nnu.edu. You may also contact Dr. Bethani Studebaker, Dissertation Chair at 208-467-8802 or by writing: bstudebaker@nnu.edu

Should you feel distressed due to participation in this study, you should contact your own health care provider.

G. CONSENT
You will be given a copy of this consent form to keep.

PARTICIPATION IN RESEARCH IS VOLUNTARY. You are free to decline to be in this study, or to withdraw from it at any point. Your decision as to whether or not to participate in this study will have no influence on your present or future status as a student at Northwest Nazarene University.

I give my consent to participate in this study:

Signature of Study Participant	**Date**

I give my consent for the interview and discussion to be audio taped in this study:

Signature of Study Participant	**Date**

I give my consent for direct quotes to be used in this study:

Signature of Study Participant	**Date**

Signature of Person Obtaining Consent	**Date**

THE NORTHWEST NAZARENE UNIVERSITY HUMAN RESEARCH REVIEW COMMITTEE HAS REVIEWED THIS PROJECT FOR THE PROTECTION OF HUMAN PARTICIPANTS IN RESEARCH.

Appendix G

Permission to Use Survey Tool

From: Anthony A Ciccone [mailto:ciccone@uwm.edu]
Sent: Monday, September 26, 2016 7:16 PM
To: Lauren Hays <ldhays@mnu.edu>
Subject: Re: The Scholarship of Teaching and Learning Impact Survey

Certainly, Lauren. I am very glad that you find the questions useful.I would of course appreciate your crediting Renee Meyers, Professor of Communication, UW-Milwaukee (d. 2012).

Please let me know if I can be of further help to you in your research.

Best,

Tony Ciccone

Anthony (Tony) Ciccone
Emeritus Professor of French
University of Wisconsin- Milwaukee

Past President, International Society for the Scholarship of Teaching and Learning (ISSOTL)

From: Lauren Hays <ldhays@mnu.edu>
Sent: Monday, September 26, 2016 2:31 PM
To: Anthony A Ciccone
Subject: The Scholarship of Teaching and Learning Impact Survey

Dr. Ciccone,

Thank you again for sharing the University of Wisconsin Teaching and Learning Impact Survey.   As I have progressed in my dissertation, this resource has proven very beneficial. May I have permission to adopt questions and use some of the questions verbatim for my own research.

Thank you,

Lauren Hays

From: Anthony A Ciccone [mailto:ciccone@uwm.edu]
Sent: Saturday, May 28, 2016 8:44 PM
To: Lauren Hays <ldhays@mnu.edu>
Subject: Re: The Scholarship of Teaching and Learning Impact Survey

Hi, Lauren,

Thank you for your note. I have found these two documents. Hope they help.

Unfortunately, my colleague Renee Meyers passed away in 2012. Much of this is her work so please credit here accordingly.

Best,

Tony

Anthony (Tony) Ciccone

Emeritus Professor of French

University of Wisconsin- Milwaukee

President, International Society for the Scholarship of Teaching and Learning (ISSOTL)

From: Lauren Hays <ldhays@mnu.edu>
Sent: Wednesday, May 25, 2016 7:03 PM
To: Anthony A Ciccone
Subject: The Scholarship of Teaching and Learning Impact Survey

Dr. Ciccone,

Recently, I read the Report on the Impact of the Scholarship of Teaching and Learning on the UW-System that you and Dr. Meyers presented at the ISSOTL conference in 2006. I am writing my dissertation on SoTL's impact on librarian's professional identity, and I am seeking the questions that were used in this study. Specifically, I am curious to know about the questions that were asked to learn about the personal impact of SoTL. Do you have access to the questions there were used in the study?

I appreciate your time.

Regards,

Lauren Hays, MLS, MS

Assistant Professor

Instructional and Research Librarian, Mabee Library

Office: 913.971.3561 │ fax: 913.971.3285

_____

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Information about MidAmerica Nazarene University for students, parents, alumni, donors, and the community

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Appendix H

Survey

Hello. Thank you for taking the time to participate in this survey. This survey includes 59 multiple choice and Likert scale questions. It will take you approximately 30 minutes to complete. By clicking on the link below to start the survey you consent to participate in the study. You may withdraw from this study at any time. This research has been approved by the Human Research Review Committee at Northwest Nazarene University.

When this survey refers to classes, courses, or teaching the following are included: for-credit classes, one-shot instruction sessions, and embedded librarianship.

The term "my students" refers to students in the classes with whom you work.

The Scholarship of Teaching and Learning is something many librarians engage in but it is not always called the Scholarship of Teaching and Learning.

For this survey, participation in the Scholarship of Teaching and Learning includes the following activities, whether they are directly related to information literacy or deal with teaching and learning more generally.

The Scholarship of Teaching and Learning is researching the teaching and learning that occurs in higher education in order to understand and improve student learning. SoTL studies are often conducted on participants taught by the researcher. For this survey, participation in the Scholarship of Teaching and Learning includes the following:

- Reading teaching and learning literature
- Attending teaching and learning conferences
- Using the teaching and learning literature in your teaching
- Conducting teaching and learning research
- Presenting and/or publishing teaching and learning research
- Implementing the techniques and methods supported by your own teaching and learning research in the classroom

Have you participated in SoTL as defined above? (If the participant answers no they will stop here)	Yes			No					
Do your primary job responsibilities include instruction? (If the participant answers no they will stop here)	Yes				No				
With which gender do you identify?	Female		Male		Non-binary		Other (write-in)	I do not wish to self-identify	
How many years have you been a librarian?	0-5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	31-35 years	36+ years	
At what type of higher education institution do you currently work? Check all that apply.	Research university	Private liberal arts university	Private liberal arts college	Regional university	Community college	For-profit university	I teach in an MLS program.	Other	I do not work for an institution of higher education.

Are you currently a tenured faculty member?	Yes	No
Are you currently on a tenure track contract? (This will be revealed if the participant answered no to the question above).	Yes	No
Are you planning to apply for tenure in the next three years. (This question will be revealed if the participant answered yes to being on a tenure track contract)	Yes	No
Are you on a renewable contact? (This will be revealed if the participant	Yes	No

answered no to being a tenured faculty member and no to being on a tenure track contract)				
Are you permitted to include SoTL research in your tenure and promotion application? (This question will be revealed if the participant answered yes to the question above)	Yes	No		
What is your position?	Faculty	Academic Staff	Other (Write-in)	
What is your employment status?	Full-time		Part-time	
What is the level of questions you teach/support?	Undergraduate	Graduate	Both undergraduate and graduate	Non-credit bearing courses such as continuing education courses	Undergraduate, graduate, and non-credit bearing courses
Indicate how strongly you agree with this	Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree

statement. *My departmental colleagues value SoTL research.*							
Indicate how strongly you agree with this statement. *On my campus, SoTL work is connected with institutional initiatives affecting student learning.*	Strongly agree		Somewhat agree		Neutral	Somewhat disagree	Strongly disagree
Indicate how strongly you agree with this statement. *SoTL work is valued on my campus.*	Strongly agree		Somewhat agree		Neutral	Somewhat disagree	Strongly disagree
In your career, what is the approximate number of SoTL research projects you have undertaken?	No projects	1-2 research projects	3-4 research projects	5-6 research projects	7-8 research projects	9-10 research projects	11-20 research projects More than 20 research projects

(If participant answers no projects they will skip the next question).								
In your career, what is the approximate number of SoTL presentations you have given?	No presentations	1-2 presentations	3-4 presentations	5-6 presentations	7-8 presentations	9-10 presentations	11-20 presentations	More than 20 presentations
How long have you participated in SoTL?	0-2 years	3-5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	Over 30 years
Check as many as apply:								
In addition to the Scholarship of Teaching and Learning, I have engaged in the following professional development activities:	ACRL Immersion		Institute of Research Design in Librarianship		Employer sponsored professional development	State library conferences		National library conferences	Other (Write-in)

This section of the survey asks you to reflect on the time before you participated in the Scholarship of Teaching and Learning as well as the time after you started participating in the Scholarship of Teaching and Learning. In the **before** section, respond to the

statement as you would have before being involved in SoTL. In the **after** section, respond to the item as you would today. Each question should be answered twice—once in the **before** column and once in the **after** column.

	Before participation in the Scholarship of Teaching and Learning:					**After** participation in the Scholarship of Teaching and Learning:				
	Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree	Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree
I enjoy teaching										
I have knowledge about how to guide my students' learning.										
I identify positively with members of the higher education teaching profession.										
I talk to my colleagues (librarians and other members of the higher education profession) about teaching and learning questions.										

I identify as a teacher.										
I am interested in teaching and learning issues and questions.										
I desire to become a more effective instructor.										
I believe I am an effective educator.										
My professional reading has an influence on my students' learning through my teaching.										
Being a member of the higher education teaching profession is important to me.										
I support the diverse										

instructional needs of my students.										
I believe it is important to take into account the students' prior knowledge when planning for instruction.										
I have an accurate perception of my role as an instructor.										
I relate to other teachers.										
I attend teaching and learning conferences.										
I have changed *how* I teach because of the knowledge I have gained at teaching and learning										

conferences I have attended.									
I have changed *what* I teach because of the knowledge I have gained at teaching and learning conferences I have attended.									
I have changed *how* I teach because of the research I have completed.									
I have changed *what* I teach because of the research I have completed.									
I incorporate the results of my research into the design and teaching of my courses.									

I read research on teaching and learning.									
I have changed *how* I teach because of the research I have read.									
I have changed *what* I teach because of the research I have read.									
I endeavor to involve students as partners in my research.									
I have knowledge about how to guide my students' learning.									
I have knowledge about educational theory.									
I am able to foster an									

environment conducive for learning.									
I use new technologies to engage my students.									
When I am in front of a class I feel as if I belong.									
I use assessment to guide my instruction.									
I have a clear vision for how to become a more effective educator.									
I believe there are many ways to teach and learn the same thing.									
I enjoy research.									

I desire to learn more about teaching and learning.											
I desire to improve my students' learning.											
I desire to better understand my students' learning.											
I am comfortable in my role as a teacher.											
Other people think of me as a teacher.											
Other people think of me as a partner in higher education.											

After the survey results have been analyzed, qualitative interviews will be added to this study. The interviews will help explain the quantitative data gathered from the surveys. Interviews will take no more than one hour and will be scheduled at a time that is convenient for you. Interviews will occur virtually. Please answer the following two questions to help the researcher know if you are willing to be interviewed for the qualitative portion of the study. If you choose to include your contact information your survey

results will remain confidential. If you do not want to be interviewed your survey results will remain anonymous. It is possible that not everyone who expresses willingness to be interviewed will be contacted. Thank you for taking the survey.		
Are you willing to be interviewed for clarification on your responses to the survey?	Yes	No
If yes, please provide your name, e-mail and phone number.		

Appendix I

Email sent with Survey

Monday, August 14, 2017

Academic Instruction Librarians:

I am Lauren Hays, and I am a Doctoral Student at Northwest Nazarene University studying academic instruction librarians' teacher identity development through their engagement with the Scholarship of Teaching and Learning. This research has been approved by the Human Research Review Committee at Northwest Nazarene University.   If you are willing to participate, please click on the link below and take the survey. This survey includes 59 multiple choice and Likert scale questions. It will take you approximately 20 minutes to complete. By clicking on the link below you consent to participate in the study. You may withdraw from this study at any time.

http://nnu.co1.qualtrics.com/jfe/form/SV_d4mxzWNW9xvGHpr

If you have questions or concerns about participation in this study, you should first talk with the researcher. Lauren Hays can be contacted via email at lhays@nnu.edu, via telephone at 913-971-3561 (W) / 816-863-4207 (C) or by writing: lhays@nnu.edu You may also contact Dr. Bethani Studebaker, Dissertation Chair at 208-467-8802 or by writing: bstudebaker@nnu.edu

Thank you,

Lauren Hays, PhDc
Northwest Nazarene University

Appendix J

Reminder E-mails Sent with Survey

Thursday, August 17, 2017

Academic Instruction Librarians:

This e-mail is a reminder that the survey remains opens.

I am Lauren Hays, and I am a Doctoral Student at Northwest Nazarene University studying academic instruction librarians' teacher identity development through their engagement with the Scholarship of Teaching and Learning. This research has been approved by the Human Research Review Committee at Northwest Nazarene University. If you are willing to participate, please click on the link below and take the survey. This survey includes 59 multiple choice and Likert scale questions. It will take you approximately 20 minutes to complete. By clicking on the link below you consent to participate in the study. You may withdraw from this study at any time.

http://nnu.co1.qualtrics.com/jfe/form/SV_d4mxzWNW9xvGHpr

If you have questions or concerns about participation in this study, you should first talk with the researcher. Lauren Hays can be contacted via email at lhays@nnu.edu, via telephone at 913-971-3561 (W) / 816-863-4207 (C) or by writing: lhays@nnu.edu You may also contact Dr. Bethani Studebaker, Dissertation Chair at 208-467-8802 or by writing: bstudebaker@nnu.edu

Thank you,

Lauren Hays, PhDc
Northwest Nazarene University

Academic Instruction Librarians:

This e-mail is a reminder that the survey remains opens. It will close Thursday, August 31 at 5pm Central Time.

I am Lauren Hays, and I am a Doctoral Student at Northwest Nazarene University studying academic instruction librarians' teacher identity development through their engagement with the Scholarship of Teaching and Learning. This research has been approved by the Human Research Review Committee at Northwest Nazarene University. If you are willing to participate, please click on the link below and take the survey. This survey includes 59 multiple choice and Likert scale questions. It will take you approximately 20 minutes to complete. By clicking on the link below you consent to participate in the study. You may withdraw from this study at any time.

http://nnu.co1.qualtrics.com/jfe/form/SV_d4mxzWNW9xvGHpr

If you have questions or concerns about participation in this study, you should first talk with the researcher. Lauren Hays can be contacted via email at lhays@nnu.edu, via telephone at 913-971-3561 (W) / 816-863-4207 (C) or by writing: lhays@nnu.edu You may also contact Dr. Bethani Studebaker, Dissertation Chair at 208-467-8802 or by writing: bstudebaker@nnu.edu

Thank you,

Lauren Hays, PhDc
Northwest Nazarene University

Appendix K

Interview Protocol

Interview Protocol:
1. Why did you choose to become an academic instruction librarian?
2. How would you describe your professional work?
3. How important are your teaching responsibilities to your work?
4. How did you initially learn to teach?

Read definition of the Scholarship of Teaching and Learning.

The Scholarship of Teaching and Learning is something many librarians engage in but it is not always called the Scholarship of Teaching and Learning.
For this research, participation in the Scholarship of Teaching and Learning includes the following activities, whether they are directly related to information literacy or deal with teaching and learning more generally.
The Scholarship of Teaching and Learning is researching the teaching and learning that occurs in higher education in order to understand and improve student learning. SoTL studies are often conducted on participants taught by the researcher. For this research, participation in the Scholarship of Teaching and Learning includes the following:

- *Reading teaching and learning literature*
- *Attending teaching and learning conferences*
- *Using the teaching and learning literature in your teaching*
- *Conducting teaching and learning research*
- *Presenting and/or publishing teaching and learning research*
- *Implementing the techniques and methods supported by your own teaching and learning research in the classroom*

5. How long have you been involved in the Scholarship of Teaching and Learning?
6. Will you explain why you participate in the Scholarship of Teaching and Learning?
7. Will you describe your interactions with other librarians or members of the higher education profession you have engaged with who also participate in the Scholarship of Teaching and Learning?
8. Which of the activities in the definition of the Scholarship of Teaching and Learning do you believe most affected you? Why?
9. What Scholarship of Teaching and Learning activities are you involved in? Why are you involved in those activities?
10. Which activity in the definition of Scholarship of Teaching and Learning do you participate in the most? Why are you involved in that activity the most?
11. How has your involvement in the Scholarship of Teaching and Learning impacted your teaching?

12. What would you say has changed the most in your teaching through your participation in the Scholarship of Teaching and Learning? Why?

13. How has your use of assessment data changed through participation in the Scholarship of Teaching and Learning?

14. How has your use of technology changed through participation in the Scholarship of Teaching and Learning?

15. Describe how your participation in a community of scholars interested in teaching and learning has impacted your instruction.

16. How has your involvement in the Scholarship of Teaching and Learning affected your view of yourself as a teacher?

17. You mentioned you participated the most in X (activity the participant said they participated in the most in SoTL). In what ways has your participation in X impacted your view of yourself as an educator.

18. Describe how your participation in a community of scholars interested in teaching and learning has impacted your teacher identity.

19. Is there anything else about your work as a teaching librarian that we have not discussed that you would like to talk about?

20. Is there anything else about your participation in the Scholarship of Teaching and Learning that you would like to talk about?

Appendix L

Permission to Use Interview Protocol

From: Walter, Scott [mailto:SWALTE11@depaul.edu]
Sent: Tuesday, September 27, 2016 10:25 AM
To: Lauren Hays <ldhays@mnu.edu>
Subject: Re: Dissertation Interview Protocol and Survey

Lauren - always nice to hear the old work is still useful :-)

Feel free to adapt my instrument. Not sure which version you're looking at, but you might want to use the version found in the 2005 ARL SPEC kit, available in HathiTrust. Look forward to seeing what you find a decade later!

Best,

Scott

Scott Walter, MLS, PhD
University Librarian | DePaul University
e-mail: swalte11@depaul.edu
Twitter: @slwalter123
Sent from my iPhone

On Sep 26, 2016, at 4:33 PM, Lauren Hays <ldhays@mnu.edu> wrote:

Dr. Walter,

Earlier this year, I read your dissertation with much interest. I am writing my dissertation on academic librarians' teacher identity development through engagement in the Scholarship of Teaching and Learning. Your research has been instrumental in helping me think through my own study. May I have permission to adopt questions, and use some of the questions verbatim, from your Instructional Improvement in Academic Libraries: A Survey of Current Practices and your interview schedule for my own research?

Thank you,

Lauren Hays, MLS, MS
Assistant Professor
Instructional and Research Librarian, Mabee Library

Office: 913.971.3561 │ fax: 913.971.3285
_____

MidAmerica Nazarene University
2030 E. College Way
Olathe, KS 66062
www.mnu.edu

Celebrating 50 Years: 1966-2016!

Appendix M

Member Checking E-mail

October 17, 2017

Dear---,

Thank you for your participating in the study. I want to let you know some of the themes that resulted from the interviews of all participants (see below). Please know if these accurately depicted our conversation. If you have any suggestions or modifications, please let me know as well.

Research questions aligned with themes:

Research Question 1: What reasons do academic librarians state for their participation in the Scholarship of Teaching and Learning?
- Professional interest
- Improve student learning
- Improve own teaching
- Central to mission

Research Question 2: What is the impact of the Scholarship of Teaching and Learning on academic librarians' teacher identity?
- See professional self more clearly
- No teacher identity
- Leadership role

Research Question 3: What is the impact of the Scholarship of Teaching and Learning on academic instruction librarians' instruction?
- Active learning strategies
- Assessment
- Attitude of self-improvement
- Technology

Thank you again for your willingness to be interviewed. If I do not hear from you by October 24 I will proceed with these themes.

Lauren Hays
Doctoral Student
Northwest Nazarene University
lhays@nnu.edu
Telephone: 816-863-4207
HRRC Approval# 4032017

Appendix N

Survey Population by Research Question

Survey Population

Questions by Research Question	Population
I enjoy teaching.	*n*=94
I am interested in teaching and learning issues and questions.	*n*=93
I desire to become a more effective educator.	*n*=93
I enjoy research.	*n*=85
I desire to learn more about teaching and learning.	*n*=86
I desire to improve my students' learning.	*n*=86
I desire to understand my students' learning.	*n*=85
I identify positively with members of the higher education teaching profession.	*n*=93
I talk to my colleagues (librarians and other members of the higher education profession) about teaching and learning questions.	*n*=94
I identify as a teacher.	*n*=93
I believe I am an effective educator.	*n*=92
Being a member of the higher education teaching profession is important to me.	*n*=90
I have an accurate perception of my role as an instructor.	*n*=90
I relate to other teachers.	*n*=89
I attend teaching and learning conferences.	*n*=87
When I am in front of a class I feel as if I belong.	*n*=86
I have a clear vision for how to become a more effective educator.	*n*=85
I am comfortable in my role as a teacher.	*n*=86
Other people think of me as a teacher.	*n*=85
Other people think of me as a partner in higher education.	*n*=86
My professional reading has an influence on my students' learning through my teaching.	*n*=93
I support the diverse needs of my students.	*n*=90
I believe it is important to take into account the students' prior knowledge when planning for instruction.	*n*=90
I have changed how I teach because of the knowledge I have gained at teaching and learning conferences I have attended.	*n*=87
I have changed what I teach because of the knowledge I have gained at teaching and learning conferences I have attended.	*n*=87
I have changed how I teach because of the research I have completed.	*n*=84
I have changed what I teach because of the research I have completed.	*n*=84
I incorporate the results of my research into the design and teaching of my courses.	*n*=85
I read research on teaching and learning.	*n*=87
I have changed how I teach because of the research I have read.	*n*=87
I have changed what I teach because of the research I have read.	*n*=87
I have knowledge about how to guide my students' learning.	*n*=86
I am able to foster an environment conducive for learning.	*n*=86

I use new technologies to engage my students.	*n*=86
I use assessment to guide my instruction.	*n*=85
I believe there are many ways to teach and learn the same thing.	*n*=86

Appendix O

Content Validity Index

Content Validity Index										
Item	Expert 1: Mark the survey questions that are relevant to the purpose of the study.	Expert 2: Mark the survey questions that are relevant to the purpose of the study.	Expert 3: Mark the survey questions that are relevant to the purpose of the study.	Expert 4: Mark the survey questions that are relevant to the purpose of the study.	Expert 5: Mark the survey questions that are relevant to the purpose of the study.	Expert 6: Mark the survey questions that are relevant to the purpose of the study.	Expert 7: Mark the survey questions that are relevant to the purpose of the study.	Expert 8: Mark the survey questions that are relevant to the purpose of the study.	Expert 9: Mark the survey questions that are relevant to the purpose of the study.	Number in Agreement
Have you participated in SoTL?	x	x	X	X	X	X	X	x	x	9
With what gender do you identify?	0	o	X	O	X	0	0	x	x	4
How many years have you been a librarian?	x	x	X	X	X	X	X	x	x	9
At what type of higher education institution do you currently work?	0	x	X	X	X	X	X	x	x	8

I am currently a tenured faculty member.	0	x	X	X	X	X	X	x	x	8
I am currently on a tenure track contract.	0	x	X	X	X	X	X	x	x	8
I plan to apply for tenure in the next three years.	0	x	X	X	X	X	X	x	x	8
I am on a renewable contact.	0	x	X	X	X	X	X	x	x	8
Would you be able to include SoTL research in your tenure and promotion application?	x	x	X	X	X	X	X	x	x	9
What is your position?	x	x	X	X	X	X	X	x		8
What is your employment status?	0	x	X	O	X	0	X	x		5
The level of courses I	0	x	X	X	X	X	X	x	x	8

teach/support are:									
My departmental colleagues value SoTL research.	?	x	X	X	X	X	X	x	x	8
On my campus, SoTL work is connected with institutional initiatives affecting student learning.	x	x	X	X	X	X	X	x	x	9
SoTL work is valued on my campus.	?	x	X	O	X	X	X	x	x	7
Indicate the approximate number of SoTL research projects you have undertaken.	x	x	X	X	X	X	X	x	x	9
Indicate the approximate number of SoTL research	0	x	X	X	X	X	X	x	x	8

projects you have presented.										
How long have you participated in SoTL?	x	x	X	X	X	X	X	x	x	9
In addition to the Scholarship of Teaching and Learning, I have engaged in the following professional development activities:	x	x	X	X	X	X	X	x	x	9
Retrospective Likert Questions										
I enjoy teaching	0	x	X	X	X	X	X	x	x	8
I have knowledge about how to guide my students' learning.	?	x	X	X	X	X	X	x	x	8

I identify positively with members of the higher education profession.	0	o	X	X	X	X	X	x	x	7
I talk to my colleagues about teaching and learning questions.	x	x	X	X	X	X	X	x	x	9
I identify as a teacher.	x	x	X	X	X	X	X	x	x	9
I am interested in teaching and learning issues and questions.	x	x	X	X	X	X	X	x	x	9
I desire to become a more effective instructor.	x	x	X	X	X	X	X	x	x	9
I am an effective educator.	x	x	X	X	X	X	X	x	x	9

My professional reading has an influence on my students' learning through my teaching.	x	x	X	X	X	X	X	x	x	9
I identify positively with the members of the higher education teaching profession.	x	x	X	X	X	X	X	x	x	9
Being a member of the higher education teaching profession is important to me.	x	x	X	X	X	X	X	x	x	9
I support the diverse needs of my students.	x	x	X	X	X	X	X	x	x	9

I believe it is important to take into account the student's prior knowledge when planning for instruction.	x	x	X	X	X	X	X	x	x	9
I have an accurate perception of my role as an instructor.	?	x	X	O	X	X	X	x	x	7
I relate to other teachers.	x	o	X	X	X	X	X	x	x	8
I attend teaching and learning conferences.	x	x	X	X	X	X	X	x	x	9
I teach differently because of the teaching and learning conferences I have attended.	x	x	X	X	X	X	X	x	x	9

I have changed the content of my courses based on teaching and learning conferences I have attended.	0	x	X	X	X	X	X	x	x	8
I teach differently because of the research I have conducted.	x	x	X	X	X	X	X	x	x	9
I incorporate the results of my research into the design and teaching of my courses.	x	x	X	X	X	X	X	x	x	9
I have changed the content of my courses based on research I have completed.	?	X	X	X	X	X	X	x	x	8
I read research on	x	x	X	X	X	X	X	x	x	9

teaching and learning.										
I teach differently because of the research I have read.	x	X	X	X	X	X	X	x	x	9
I have changed the content of my courses based on research I have read.	?	X	X	X	X	X	X	x	x	8
I endeavor to involve students as partners in my research.	x	O	X	X	X	X	X	x	x	8
I have knowledge about how to guide my student's learning.	x	x	X	X	X	X	X	x	x	9
I have knowledge about educational theory.	x	x	X	X	X	X	X	x	x	9

I am able to foster a conducive learning environment for my students.	x	x	X	X	X	X	X	x	x	9
I use alternative technologies to engage my students.	x	x	X	O	X	0	X	x	x	7
When I am in front of a class I feel as if I belong.	?	o	X	X	X	X	X	x	x	7
I use assessment to guide my instruction.	x	x	X	X	X	X	X	x	x	9
I have a clear vision for how to become an effective educator.	x	x	X	X	X	X	X	x	x	9
I believe there are many ways to teach and learn the same thing.	x	x	X	X	X	X	X	x	x	9

I enjoy research.	x	x	X	X	X	X	X	x	x	9
I desire to learn more about teaching and learning.	x	x	X	X	X	X	X	x	x	9
I desire to improve my students' learning.	x	x	X	X	X	X	X	x	x	9
I desire to better understand my students' learning.	x	x	X	X	X	X	X	x	x	9
I am comfortable in my role as a teacher.	x	o	X	X	X	X	X	x	x	8
Other people think of me as a teacher.	x	o	X	X	X	X	X	x	x	8
Other people think of me as a partner in higher education.	x	x	X	X	X	X	X	x	x	9
59 questions total										
Proportion	40	52	59	54	59	56	58	59	57	S-CVI= .9267
Relevancy	0.67	0.88	1	0.91	1	0.94	0.98	1	0.96	

										S-CVI/UA .576
57 questions total										
Proportion (w/o demographic data)	40	51	57	54	57	56	56	57	56	
Relevancy (w/o demographic data)	0.7	0.89	1	0.94	1	0.98	0.98	1	0.98	
										UA (without demographic data) =.596
										S-CVI (without demographic data)= .94