Information Literacy in Higher Education: An Interdisciplinary Investigation of Library Instruction from the Academic Librarian, Faculty, and Student Perspectives

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INFORMATION LITERACY IN HIGHER EDUCATION:
AN INTERDISCIPLINARY INVESTIGATION OF LIBRARY INSTRUCTION FROM
THE ACADEMIC LIBRARIAN, FACULTY, AND STUDENT PERSPECTIVES

A dissertation submitted in partial fulfillment of
the requirements for the degree of
DOCTOR OF PHILOSOPHY
in
CURRICULUM AND INSTRUCTION
by
Barbara Maria Sorondo

2019
To: Dean Michael R. Heithaus  
College of Arts, Sciences and Education

This dissertation, written by Barbara Maria Sorondo, and entitled Information Literacy in Higher Education: An Interdisciplinary Investigation of Library Instruction from the Academic Librarian, Faculty, and Student Perspectives, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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Daniel B. Saunders

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James Burns, Major Professor

Date of Defense: October 21, 2019.

The dissertation of Barbara Maria Sorondo is approved.

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Dean Michael R. Heithaus  
College of Arts, Sciences and Education

________________________________________________________________________
Andrés G. Gil
Vice President for Research and Economic Development  
and Dean of the University Graduate School

Florida International University, 2019
DEDICATION

For my parents, Leonel and Barbara, who always emphasized the importance of education. My father taught me to read and reviewed every paper I wrote until the end. My mother coordinated life to work around my classes and extracurricular activities because school came first. Thank you.

In memory of my aunt Emilia, my grandmother Maria, and my great-grandmother Gabriela, who walked the teaching path before me.
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ABSTRACT OF THE DISSERTATION

INFORMATION LITERACY IN HIGHER EDUCATION:
AN INTERDISCIPLINARY INVESTIGATION OF LIBRARY INSTRUCTION FROM
THE ACADEMIC LIBRARIAN, FACULTY, AND STUDENT PERSPECTIVES

by

Barbara Maria Sorondo

Florida International University, 2019

Miami, Florida

Professor James Burns, Major Professor

The present study is a phenomenological case study exploring how a group comprised of teaching librarians, faculty, and students experienced library instruction at the research site, Florida International University (FIU), in the context of the Framework for Information Literacy (IL) for Higher Education (Association of College and Research Libraries, 2016). The present study uniquely addresses a gap in the literature on library instruction and IL by using interviews with three diverse participant groups within the same setting. The 10 participants included three teaching librarians, three faculty members, two undergraduate students, and two graduate students. They represented a variety of academic levels and ranks from three discipline areas: (a) science, technology, engineering, and mathematics, (b) social sciences, and (c) arts and humanities. The participants provided a detailed picture of library instruction at the university from a variety of perspectives.

The present study used a constructivist epistemology and methodology, gathering the data from the participants in their own words to address the study’s research question:
how does a group comprised of teaching librarians, faculty, and students experience library instruction at FIU? Data were analyzed using descriptive and axial coding. The shared experiences of the participants, at times converging, at times diverging, yielded insightful findings organized into several themes, including their experiences of the library instruction sessions, the perceived purpose of library instruction, the influence of library instruction, faculty and students’ relationships with librarians and libraries, and IL. The results have implications for the provision of library instruction in higher education, including both practical applications and potential directions for future research.

By providing a picture of library instruction from the perspective of the librarians who teach the sessions, the faculty who schedule them, and the students who attend them, the present study suggests how library instruction helps higher education students gain the IL expertise they need to succeed in their academic careers, personal and civic lives, and beyond.
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CHAPTER I
INTRODUCTION

I attended my first library instruction class as a college junior for an animal behavior course. Google Scholar was still considered new at the time, and I had become adept enough at using it to have been declared the “Google Queen” by my classmates. At some point in my primary or secondary education, a public librarian had tried to teach me about Boolean searching and databases. I had occasionally, and discontentedly, used library databases over the years until I discovered Google Scholar, then presumed I never had to use them again. Thus, I attended that first library instruction session with a marked lack of enthusiasm. Although I obediently completed the exercises and attempted to use the database PsycINFO for a class assignment a short while later, I promptly went back to Google Scholar and would not use a library database again until I trudged off once more to another library instruction session as a graduate student in a biomedical program years later. What I principally learned during that first library session is that mourning doves are monogamous, thanks to the librarian’s choice of “mourning doves and monogamy” as her sample search topic, accompanied by a story about the pair of birds that had recently moved into her front yard. I believe I can safely say this is not what the librarian hoped I would remember from that session.

No one would have guessed back then I would become a librarian, least of all me. Now I am the one who stands in front of a classroom earnestly explaining to a group of uninterested students why library databases are so much more helpful than Google Scholar, a lesson that took me years to learn thanks to my overconfidence and lack of knowledge about what I did not know. I know now that when my students walk into the
library classroom, many of them are thinking there is nothing I can teach them that will be more useful than what they already know. As a teaching librarian, having taught thousands of college students by this point in my career, it appears to me many of today’s students believe themselves to be kings and queens of Google as I once did, and have dismissed library databases as inessential. Each time I start an instruction session I hope I can help my students avoid the mistakes I made or, at the very least, that unlike my past self, they will walk away remembering something more than the sample search topic I use. My hope of helping my students succeed, and my experiences as a student and a librarian, have led me to explore the topic of information literacy (IL) in higher education within the context of library instruction.

Statement of the Problem

The American Library Association (ALA) defines IL as “the ability to locate, evaluate, and use effectively the needed information” (ALA Presidential Committee on IL, 1989, para. 3). With the rapid growth of the Internet, IL has become imperative because of the exponential increase in (mis)information available, which can be easily spread and amplified through social media (Kurbanoglu, 2003; Ross, Perkins, & Bodey, 2016). Although IL has historically been taught as part of higher education, the IL skills of college students are generally found to be poor. For example, one of the largest studies on the topic, which included approximately 3,000 participants, found only 13% of the college students in the study could be considered information literate (Foster, 2006). A more recent study conducted by researchers at the Stanford Graduate School of Education concluded college students are unprepared to assess information online and are “easily duped” by online misinformation (Stanford History Education Group, 2016, p. 4).
Such poor IL skills among students is problematic because as Eisenberg (2008) notes in his seminal paper on IL, “information and technology affects every person in every possible setting—education, public service, and business. Education is fundamentally information-based. That is, every aspect of learning and teaching requires the gathering, processing, and communication of information” (p. 39). He concludes IL is essential from primary to higher education and beyond, in both professional and personal contexts. Moreover, he discusses the roles and responsibilities of librarians and other educators in both teaching students about IL and providing opportunities for them to acquire these skills (Eisenberg, 2008).

College students, however, tend to believe they have better IL skills than they actually do (Gross & Latham, 2012), as I once did. Self-efficacy is a belief about one’s own ability to function and complete a certain task (Bandura, 1993; Schunk and Pajares, 2010). Research suggests students’ belief in their IL skills, or IL self-efficacy, is disproportionate with their actual IL skills (Fields, 2005; Ren, 2000). Such a gap between IL skills and self-efficacy is related to the Dunning-Kruger Effect, which states that people who lack competence in a certain area are not aware they lack competence (Dunning, 2011). An overinflated sense of IL self-efficacy is detrimental to students’ IL skills because if they perceive they do not need to improve their IL skills, they may not be willing to improve their IL skills, regardless of their true (lack of) competence in this area. Thus, as I did when I was a student, they may approach IL instruction with a lack of interest, reducing the opportunities available to them to improve their IL skills, or forgoing these opportunities altogether by skipping library instruction (Latham & Gross, 2013). On the other hand, high self-efficacy encourages additional experience with a task,
which may lead to greater competence (Bandura, 1997; Ross et al., 2016). If, however, the students are reinforcing their poor IL skills with their additional experience rather than improving them (e.g., spending more time using Google Scholar instead of learning to use research databases), the extra time spent on the task may ultimately not increase their IL competence.

Compounding the issue of the low IL skills of college students and the discrepancy between their IL skills and IL self-efficacy is the fact that library instruction in the United States is currently at a crucial juncture. Since 2016, the Association of College and Research Libraries (ACRL), a division of the ALA and the principal professional organization in academic (i.e., higher education) librarianship, has made two major changes to its documents that have shaken the field. In 2017, the ACRL replaced the Standards for Proficiencies for Instruction Librarians and Coordinators, implemented in 2007, with the Roles and Strengths of Teaching Librarians (ACRL, 2017). The change was prompted by an even greater transition that has reverberated throughout American academic librarianship, a switch from the Information Literacy Competency Standards for Higher Education released in 2000 (the Standards) to the new Framework for Information Literacy for Higher Education (the Framework; see Appendix A). In 2016, the Standards were rescinded and replaced with the Framework, an action that has been met with much controversy and confusion. As I will discuss in depth in Chapter II, the Framework takes a more holistic, philosophical, and contextual approach to IL than the Standards previously did, which instead listed a set of universal IL skills that every college student should know.
Research Question

The present study explored the extent to which library instruction influences the IL abilities of higher education students in line with the new Framework that is currently guiding the education of IL in the United States, examining how teaching librarians, teaching faculty, and higher education students experience library instruction within our new information environment. Specifically, the present study was guided by the following research question: how does a group comprised of teaching librarians, faculty, and students experience library instruction at Florida International University (FIU)?

Philosophical Assumptions

Along with a phenomenological case study approach, I used a constructivist paradigm for the present study, which presumes there are multiple realities that are co-constructed by researchers and participants (Creswell, 2013). The phenomenological case study approach suits the study since it supposes participants will have unique experiences and interactions during library instruction sessions that may be captured through the verbal sharing of these experiences in interviews. With a phenomenological approach, researchers examine individuals’ shared experience of a phenomenon and explore the “what” and “how” of individual experience (Creswell, 2013). In the present study, the phenomenon examined was library instruction. I wanted to capture the essence of the librarians’, faculty’s, and students’ experiences in library instruction and how it helped the students (or not) with their IL skills and self-efficacy. Since all interviews were conducted at a bounded location, namely FIU, the present study was specifically a phenomenological case study, examining a particular location in depth.
In addition, since I am a teaching librarian at the institution I am studying, I have my own beliefs regarding the importance and influence of library instruction. Consequently, I attempted to acknowledge my own professional preconceptions and assumptions in accordance with the phenomenological (case study) approach I used.

**Summary of Methodology**

For this phenomenological case study, I conducted semi-structured interviews with teaching librarians, faculty, and students who attended a library instruction session at the FIU Green Library within the 2018-2019 academic year. To capture a variety of perspectives, I interviewed one student from each of three discipline areas: (a) science, technology, engineering, and mathematics (STEM), (b) social sciences, and (c) arts and humanities, as well as a first-year student who had declared a STEM major but was still taking interdisciplinary courses. I also interviewed one librarian and one faculty member with instruction responsibilities in each of these three discipline areas. The interviews focused on the participants’ experiences in library instruction sessions and their conceptualizations of IL. I analyzed the data using descriptive coding, which is used to summarize qualitative data through the use of words and short phrases (Saldaña, 2009; Wolcott, 1994), and axial coding, which is used to organize initial codes into themes and sub-themes (Saldaña, 2009; Strauss & Corbin, 1998).

**Limitations**

Groves et al. (2009) note interviewers can affect the quality of a study, for example, through interviewers’ biases and experiences that may affect interviewees’ responses. In my case, as a librarian, I of course believe library instruction sessions are helpful (otherwise I would not remain in my position). However, as stated above, I tried...
to acknowledge my own biases and experiences, in accordance with a phenomenological approach (Creswell, 2013). For example, while engaging with my participants and analyzing my data, I had to remain mindful of the possibility that library instruction may not be as universally helpful or effective as I assumed from my subjective position. To maintain consistency across the interviews, I conducted semi-structured interviews, with the protocols prepared ahead of time, including separate questions for the librarian, faculty, and student participant groups. On the other hand, since I conducted all the interviews myself, I did not have to account for interviewer variation.

The case study approach of the present study resulted in an additional limitation, namely the limited transferability of the study’s findings to other contexts. However, the results of the present study may be generalized on a case-by-case basis. For instance, institutions that have student populations and library instruction programs similar to those of FIU may consider the findings relevant at their own institutions.

**Ethical Considerations**

The present study was submitted to the FIU Institutional Review Board (IRB) for approval and was deemed exempt. I provided all participants with an informational letter prior to starting the interviews. Once they acknowledged receipt of the letter, I asked for verbal permission to record the interview (audio only). Only one participant declined to be recorded. In that individual case, I proceeded with the interview, taking notes on what was said with her knowledge and consent, but did not conduct any recording, audio or otherwise.

Before beginning each interview, I reminded the participants they were free to end their participation at any time without repercussions. I used pseudonyms throughout
the interviews to protect the participants’ identities. The participants’ real names were not included in any files or documents. All hard copy documents, such as notes, are contained within a locked drawer in a locked office that only I use. All digital files, such as audio recordings, are contained in password-protected computer and device accounts accessible only by me. I share only portions of the transcripts of the interviews and of my notes in this dissertation, and will likewise do so in any future publications, with all individually identifying information removed. Moreover, I did not interview students or faculty members for whose courses I provided library instruction sessions.

**Chapter Summary**

My interest in IL within a higher education context stems from my own overconfidence in my IL skills as a college student, which I see reflected in the college students I teach today as an academic librarian. My anecdotal experiences are mirrored in research on IL skills and self-efficacy among higher education students, which has been found over the years to be discrepant, with low IL skills yet high self-efficacy prevalent among college students, indicative of the Dunning-Kruger Effect at play. Compounding this situation is a recent sharp shift in the library instruction field from the Standards to the Framework, which re-conceptualizes IL.

The purpose of the present study is to explore how teaching librarians, teaching faculty, and students in higher education experience a library instruction session in this new information environment. In order to capture the participants’ experiences in these sessions, the present study used qualitative methods, namely semi-structured interviews. The ultimate goal of the present study is to use this information to provide more relevant and effective library instruction to better help students improve their IL skills. Not only
will this information contribute to the field, and the practice, of library instruction, but it may help create more information literate students and citizens who are well-equipped to competently and confidently navigate today’s complex information landscape, in both the academic context specifically and in their everyday lives generally.

In the next chapter, I will provide a review of the literature in the area of instruction conducted in academic libraries. In Chapter II, I will discuss the Standards and the Framework in detail, provide an overview of recent studies on IL and library instruction with a focus on the methods used, and extensively review existing interview-based studies on IL in higher education.

In Chapter III, I will discuss the methods of the present study, including the epistemology and methodology used. In Chapter IV, I will provide portraits of the study’s participants and present the findings. Lastly, in Chapter V, I will explain how the findings relate to previous research in the area, propose several practical applications of the findings to library instruction at FIU, discuss the empirical and theoretical implications of the present study, and suggest some potential directions for future research.
CHAPTER II

REVIEW OF THE LITERATURE

In Chapter II, I provide a historical context for IL and IL (library) instruction, describe the current IL landscape in higher education, provide an overview of recent studies on IL and library instruction with a focus on the methods used, and review existing interview-based studies on IL in higher education.

IL (Library) Instruction

Information literacy instruction in higher education is also known as bibliographic or library instruction; the terms IL and library instruction will be used interchangeably throughout this document. As the latter name suggests, such instruction has traditionally been conducted by academic librarians, most commonly as a one-time visit to the library or guest lecture by a librarian in a course, colloquially called one-shot instruction (Ross et al., 2016). These sessions typically last between just under one hour to over two hours. In recent years they have been held mainly in technology-enabled classrooms where students may obtain practice using research resources over the course of the session under the guidance of a librarian.

IL instruction has been conducted in person since the last decades of the 19th century. Online IL instruction emerged in the 1990s and has grown in recent years as online learning has become the most rapidly growing portion of higher education (Kaplowitz & Contini, 1998; Tucker, 1980; Unger, 2007; Wang, 2016). Much research (e.g., Anderson & May, 2010; Beile & Boote, 2004; Gall, 2014; Shaffer, 2011) has found in-person IL instruction is comparable to online IL instruction in its effectiveness in teaching students IL skills. Most notably, a recent systematic review (Weightman,
Farnell, Morris, Strange, & Hallam, 2017) that examined 33 studies in the area of library instruction concluded there were no significant differences in student IL skills depending on the format of library instruction. Despite these findings and the general growth of online instruction, online IL instruction in particular is not yet widespread, partly because of the perception among academic staff that blended library instruction is time-consuming and leads to an increased workload (Brown, 2016; Weightman et al., 2017). Although no studies to date seem to have directly compared the preparation time required for in-person versus online IL courses, early explorations of online library instruction courses estimated up to 1,000 labor hours were required to develop each course, an intimidatingly large number that may still be influencing librarians’ perceptions of the workload required today (Kaplowitz & Contini, 1998; Miller & Minkin, 2016; Weightman et al., 2017).

There are several common in-person formats of library instruction used presently, including credit-bearing courses and orientations for incoming students, but one-shot instruction is by far the most popular format (Keller, 2016; Spievak & Hayes-Bohanan, 2013). Keller (2016) found 78% of the librarians in his study worked in academic libraries that provided library instruction principally in the format of one-shot sessions. In comparison, 7% worked in libraries that provided library instruction principally as a combination of one-shot and orientation sessions, 7% in libraries that provided library instruction principally as orientation sessions, and 8% in libraries that provided library instruction principally in the format of credit-bearing courses (Keller, 2016). Nonetheless, the one-shot session has been heavily criticized in recent years, with Bowles-Terry and Donovan (2016) stating “it has overstayed its welcome. One-shot
instruction sessions were born out of necessity and have been maintained in many cases for lack of anything better” (p. 137).

**IL, the Standards, and the Framework**

Regardless of the format, the ultimate goal of library instruction is to teach students IL, a term that is relatively recent but that refers to a concept that has been taught since the earliest library instruction. The ALA’s general definition of IL as “the ability to locate, evaluate, and use effectively the needed information” (ALA Presidential Committee on IL, 1989, para. 3) has been expanded by the ACRL’s Standards and, more recently, Framework. The Standards proposed a set of universal IL skills that every college student must know, regardless of the context, as exemplified by an extensive list of performance indicators with accompanying outcomes (ACRL, 2000; Foasberg, 2015). The standards included, for example, “the information literate student determines the nature and extent of the information needed” (ACRL, 2000, p. 8) and “the information literate student accesses needed information effectively and efficiently” (ACRL, 2000, p. 9). Two performance indicators relating to these standards were, respectively, “the information literate student considers the costs and benefits of acquiring the needed information” (ACRL, 2000, p. 8) and “the information literate student constructs and implements effectively-designed search strategies” (ACRL, 2000, p. 9). Two corresponding outcomes for these performance indicators included, respectively, “defines a realistic overall plan and timeline to acquire the needed information” (ACRL, 2000, p. 9) and “constructs a search strategy using appropriate commands for the information retrieval system selected (e.g., Boolean operators, truncation, and proximity for search engines; internal organizers such as indexes for books)” (ACRL, 2000, p. 10). The
hierarchical structure consisting of measurable outcomes corresponding to performance indicators in turn corresponding to a set of standards demonstrates the high level of specificity of the Standards.

In contrast, the Framework has taken a philosophical approach to IL, defining IL 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” (ACRL, 2016, p. 3). The Framework is more conceptual than the Standards, contrasting with the long-standing trend in education at large towards standardization and predetermined measurable outcomes that was reflected in the Standards. The Framework instead identifies six concepts students should learn over the course of their academic careers as they transition from IL novices to IL experts, each accompanied by a list of both knowledge practices and dispositions: (a) authority is constructed and contextual, (b) information creation as a process, (c) information has value, (d) research as inquiry, (e) scholarship as conversation, and (f) searching as strategic exploration (see Appendix A). One knowledge practice for the concept of searching as strategic exploration, for example, is “match information needs and search strategies to appropriate search tools” (ACRL, 2016, p. 9). One disposition for the concept of searching as strategic exploration is “seek guidance from experts, such as librarians, researchers, and professionals” (ACRL, 2016, p. 9). The above sample knowledge practice and disposition demonstrate how the Framework does not match the Standards’ high level of specificity, though it still identifies some assessable, demonstrable behaviors, as in the examples above. For instance, the Framework does not mention Boolean operators, truncation, or proximity
searching as the Standards do. The Framework is thus a radical change in the conceptualization of IL compared to the Standards, and the reaction to this change has been contentious among academic librarians.

“The Framework is Elitist”

Bombaro (2016) calls the Framework “elitist,” “divisive,” and “counterintuitive” (p. 3). She argues that although it clarifies “how librarians can contribute to [students’] intellectual growth,” it has exacerbated a division in the profession between “philosopher librarians,” who frequently have doctorates, faculty status, and teach credit courses, and “practical librarians,” who tend not to have degrees beyond the terminal Master of Science in Library and/or Information Science (LIS) required for a typical academic librarian position. Most instructors of one-shot library instruction sessions fall into the category of practical librarians yet the Framework appears to favor philosopher librarians, thereby excluding the majority of academic librarians:

Social Constructivism? Postmodernism? Pragmatism? Enduring Questions in upper case letters? I started feeling, frankly, stupid. Did I really need to get myself advanced training in theories related to sociology, philosophy, cultural studies, and literary criticism in order to adopt the Framework successfully? When I found myself opening some online encyclopedias to try to figure out what these messages meant… was when my opposition to the Framework cemented and when I started thinking of it as elitist…. [I]mplementing the Framework should not be this difficult. (Bombaro, 2016, p. 9)

Additional academic librarians have called the Framework “difficult to understand […] so full of academic jargon and so time-consuming to read” (Reed, 2015, p. 242) and one
librarian went so far as to resign from the ACRL task force that created the Framework because of a lack of “faith in threshold concepts as the foundations for information literacy” (Wilkinson, 2014, para. 12).

In contrast, other academic librarians have called the Framework an essential step in enabling librarians, often perceived by non-librarian faculty as assistants rather than partners in instruction (Keller, 2016; Yevelson-Shorsher & Bronstein, 2018), “to move from the kid’s table to a fully adult conversation with academia” (Badke, 2016, p. 73). Badke (2016) argues “the Framework makes information literacy significantly congruent with what the rest of academia is doing” (p. 73). Although he concludes “the Framework is not some alien monster intended to disrupt… information literacy as we know it” (Badke, 2016, p. 73), Bowles-Terry and Donovan (2016) do see it as a disruption to library instruction yet welcome it as the boost the field needs to be rid of the arguably antiquated one-shot session.

The Framework and the One-Shot Session

Regardless of their perspective on the Framework or their library instruction format preference, any teaching librarian’s response to the six concepts the Framework proposes is immediately some variation of “how can we teach this in one hour?!” The ACRL (2016) has foreseen this question, however, stating in its suggestions on how to use the Framework that:

It is important for librarians and teaching faculty to understand that the Framework is not designed to be implemented in a single information literacy session in a student’s academic career; it is intended to be developmentally and systematically integrated into the student’s academic program at a variety of
levels. This may take considerable time to implement fully in many institutions.

(p. 10)

The ACRL (2016) additionally states each library should decide along with its campus partners how to use the Framework, as it is not meant to be prescriptive but rather contextual. The Framework identifies the core concepts, including both knowledge practices and dispositions, a student must know to gain IL expertise; points out IL develops over a student’s academic career; recognizes the difficulty in teaching IL concepts in the common one-shot library instruction sessions; and states IL instruction necessitates extensive time for implementation. However, it provides only vague suggestions for implementation, leaving it up to each individual library to decide how to teach IL, and mentions the importance of assessing students’ IL abilities while providing no guidance on how to conduct such assessment.

Although some librarians may desire more guidance than provided by the Framework, other librarians have embraced the flexibility made possible by the lack of specific guidance. For example, Gammons and Inge (2017) describe a “transition from a multiple-choice survey to an iterative, student-centered, and critically grounded assessment model mapped to ACRL’s Framework for Information Literacy” at their library (p. 170). However, they note the transition required not only “radical changes to the teaching outline” (p. 180) but also the hiring and training of new instructors (Gammons & Inge, 2017). Such time and staffing requirements may not be feasible at all academic libraries, particularly smaller ones. For example, Reed (2015) argues “at the community college level, where librarians see students only for lower-level
undergraduate courses and career-focused programs, it becomes more difficult to
determine the relevance of the Framework” (p. 247).

Is the One-Shot Session Even Working?

Despite the emphasis on IL in today’s higher education, students’ IL abilities
remain poor, both in academic settings and in everyday and civic situations (Foster, 2006;
Stanford History Education Group, 2016). Librarians strongly believe library instruction
is crucial to helping students improve their IL abilities in all aspects of their lives, but
findings on the effectiveness of the one-shot session on IL abilities are mixed (Spievak &
Hayes-Bohanan, 2013), despite the ACRL’s recognition of the prevalence of this
instruction format and its place within the Framework. Although many studies report
one-shot library instruction results in increased library usage, its impact on IL skills has
not been firmly established (Spievak & Hayes-Bohanan, 2013). Indeed, on the basis of
their literature review on the impact of one-shot library instruction, Spievak and Hayes-
Bohanan (2013) concluded “it may still be argued that one-shot sessions are not the best
method for delivery of information literacy instruction” (p. 495). However, they note IL
is perhaps a latent skill that appears only in certain relevant, naturalistic contexts, and
therefore is not captured accurately in most studies, which tend to be conducted in
artificial settings, a potential flaw in how research in this area tends to be conducted.

Additionally, assessment of IL abilities has tended to be haphazard in the library
instruction field. Presently, most librarians create their own IL assessments to test the
effectiveness of their own instruction, often without examining the reliability and validity
of the assessments (Zhang, Watson, & Banfield, 2007). Few IL assessments are used
across the field and the limited number that have gained prominence are often cost-
prohibitive. For example, the well-known Standardized Assessment of IL Skills (SAILS) costs $5-6 to administer per student (Project SAILS, 2016). The IL Test costs $8 to administer per student (Cameron, Wise, & Lottridge, 2007). For perspective, a typical librarian at the FIU Libraries teaches approximately 1,000 students per academic year, making the cost of a paid assessment prohibitively expensive.

Moreover, existing IL assessments are often given to homogenous samples, such as students of a particular discipline (Gall, 2014, Shaffer, 2011) and/or of the same academic level (Churkovich & Oughtred, 2002). Prior assessments have also tended to focus on lower-division undergraduate students (Anderson & May, 2010; Churkovich & Oughtred, 2002) and graduate students (Shaffer, 2011), neglecting upper-division undergraduate students. In addition, many current IL assessments are open-ended or research paper-based, formats that render the assessment process “time-consuming and tedious” (Wang, 2016, p. 623) and cause many librarians to forgo IL assessment altogether. Thus, the haphazard manner in which IL assessment has been conducted may contribute to the disjuncture between librarians’ and faculty’s assumptions about library instruction and students’ assumptions, expectations, and takeaways from these sessions.

**IL Self-Efficacy**

Information literacy skills are distinct from IL self-efficacy, or what students perceive their skills to be. As part of his social cognitive theory, Bandura (1993) states self-efficacy, beliefs about how one is able to function and control the events in one’s life, affects “how people feel, think, motivate themselves, and behave” (p. 118) through cognitive, motivational, affective, and selection processes. Schunk and Pajares (2010) propose self-efficacy hinges on questions beginning with “can I,” as in “can I complete
this task?” Although self-efficacy is independent from actual performance, more successful performances lead to greater self-efficacy, which influences perception of future performances (Ross et al., 2016). Indeed, self-efficacy may predict competence better than performance, as high self-efficacy leads to interest and positive attitudes towards the task, which in turn encourages additional experience with the task, leading to greater competence (Bandura, 1997; Ross et al., 2016). Although a strength of self-efficacy is therefore its association with future task competence, its corresponding weakness is an inability to reliably serve as a marker of current performance.

In one of the first papers connecting IL to self-efficacy, Kurbanoglu (2003) argues it is necessary that students not only be information (and computer) literate, but that they feel confident in their skills. She states a lack of self-efficacy in the domain of IL may lead to an avoidance of lifelong learning, and that increasing IL self-efficacy should be a goal of IL instruction alongside the usual skill-based instruction (Kurbanoglu, 2003, 2010). Since her original paper, various studies have examined self-efficacy in the context of IL, generally finding IL self-efficacy is related to both academic success and greater motivation among college students (Ross et al., 2016). These studies suggest there is a well-established relationship between IL and self-efficacy, firmly grounded in Bandura’s theoretical framework. Additional concepts such as experience, ability, motivation, and influence form part of this relationship (Ross et al., 2016). Fortunately, instruction appears to improve college students’ IL self-efficacy (Ren, 2000). However, although IL self-efficacy appears to increase in the early years of undergraduate education (perhaps even without direct instruction), it may stagnate or even decrease somewhat in the latter years (Kurbanoglu, 2003). Such a decrease in IL self-efficacy is
not necessarily detrimental, though, as a decrease in self-efficacy towards the end of their education may reflect students’ greater understanding of what they do not know in their fields compared to overconfidence in their knowledge when they were novices, as would be expected in accordance with the Dunning-Kruger Effect (Dunning, 2011; Kurbanoglu, 2003). Furthermore, high IL self-efficacy does not necessarily translate to high IL skills; because students believe they have a certain level of ability, it does not necessarily follow they truly have that level of ability. Students tend to be more confident in their own skills than perhaps justified by their performance, as indicated by discrepancies between IL skills rated by librarians compared to the students themselves (Fields, 2005; Ren, 2000). Their self-efficacy appears to be related to an objective, rather than subjective, assessment of their IL skills only after IL instruction, perhaps after they learn what they did not know (Ren, 2000).

The Present Study

In sum, the library instruction field is plagued by numerous problems today: (a) students’ IL abilities are poor and discrepant with their IL self-efficacy; (b) guidance on library-based IL instruction by the field’s main professional organization is vague, which leaves librarians to decide on their own what and how to teach given the broad concepts the ACRL identifies, results in a sense of alienation from the Framework among many librarians, and exacerbates a perceived divide between philosophy and practice; (c) evidence that supports the effectiveness of the most widespread library instruction format is mixed; and (d) there is no widespread, free, and convenient IL assessment that is usable with multiple student groups, dis-incentivizing many librarians from IL assessment altogether.
The present study addressed these problems and was driven by the goal of exploring how teaching librarians, teaching faculty, and students in higher education experience a library instruction session in the current information environment, as well as how librarians, faculty, and students perceive students’ IL abilities. The research question of the present study accordingly was: how does a group comprised of teaching librarians, faculty, and students experience library instruction at FIU?

To address this research question, I conducted interviews with teaching librarians, faculty, and students to understand how they perceived IL in their own words and how library instruction has helped them. Along the way, I also discovered the different expectations of these groups regarding library instruction as well as their commonalities.

**Conceptual Framework**

The shift from the Standards to the Framework has resulted in an important paradigm shift in the library instruction field from postpositivism to constructivism. Postpositivism, prevalent in quantitative research, is an empirical approach to research based on the ideas of cause and effect (determinism), reductionism, and the observation and measurement of variables (Creswell, 2013; Creswell & Plano Clark, 2011). It focuses on group conclusions and generalizations rather than individual differences. In contrast, constructivism is a common qualitative research paradigm based on the assumption that individuals have unique, subjective perspectives of a situation (Creswell, 2013). Whereas postpositivism is deductive, going from theory to data, constructivism is inductive, going from data to theory (Creswell, 2013).

These different philosophical assumptions are evident in the Standards and the Framework, respectively. By presuming there were certain IL skills all students must gain
regardless of their individual contexts (e.g., discipline), the Standards were based on a postpositivist paradigm. In contrast, the Framework acknowledges that application of IL knowledge varies depending on context and purpose, and therefore is more in line with a constructivist paradigm (Foasberg, 2015). Accordingly, the Standards compared students to other students in IL skills, dividing students into information literate and information illiterate groups (Foasberg, 2015). The Framework instead compares students only to themselves, identifying individual developmental trajectories from IL novices to IL experts (ACRL, 2016; Foasberg, 2015). Foasberg (2015) argues that because of the Framework’s foundation in constructivism, it is a mistake to create a one-size-fits-all assessment of IL:

There is a risk that some librarians and library-adjacent institutions will attempt to treat the Framework as another standard by which they can measure supposedly universal skills. Dishearteningly, one company has already created a standardized test that purports to measure students’ achievements based on concepts in the Framework, even though standardized tests seem a poor fit for assessing the context-specific dispositions championed by the Framework. (p. 713)

Assessment of IL abilities under the Framework should be bottom-up rather than top-down, with institutions deciding what to assess based on what they teach and deem important, rather than using premade assessments that may lead to “teaching to the test.” Indeed, the ACRL (2016) calls for “assessment of learning on local campuses” (p. 3) in the Framework document. Paradoxically, despite its postpositivist underpinnings, it is this institution-specific approach that was prevalent while the Standards dominated in the
library instruction field, with most librarians creating IL assessments suited for their particular instruction.

**The Present Study**

The present study adopted a bottom-up approach to IL assessment, in accordance with the Framework, to examine how the librarians, faculty, and students of a particular institution subjectively perceived their library instruction sessions. I sought to understand what these participants perceived to be essential to IL instruction at their institution, and how they perceived students’ IL abilities, in line with a constructivist worldview and a phenomenological case study approach.

**Current Assessment of IL in Higher Education**

In the *Information Literacy Instruction Handbook*, Gilchrist and Zald (2008) state assessment of IL programs may be quantitative or qualitative, noting both surveys and focus groups are frequently used. Assessment in the field of IL in higher education is currently quantitative for the most part, however. Moreover, qualitative research in this area is often analyzed quantitatively, such that data collected as words are converted to numbers, as with rubrics, for analysis. In this section, I will provide a brief summary of both quantitative and qualitative measures currently being used in research on IL. In the following section, I will focus on prior qualitative interview-based studies that used data collection and analysis similar to that used in the present study.

**Summary of Quantitative Measures in Current Research on IL**

Most studies on the effectiveness of IL instruction for college students have used surveys with students (Blank et al., 2016; Dunnington & Strong, 2010; Hufford, 2010; Tewell, 2014; Wang, 2016; Watson et al., 2013), especially pre- and post-instruction
assessments, with a smaller number of studies using unique quantitative measures such as students’ GPA (Bowles-Terry, 2012), plus/delta forms (Houlihan & Click, 2012), and website access statistics (Mahaffy, 2012). The surveys tend to be used either alone or in conjunction with qualitative methods in mixed methods studies. For example, Tewell (2014) used a 10-item multiple-choice survey for the quantitative strand of his mixed methods study on the effectiveness of a one-shot library instruction session for first-year college students, administered at the beginning and again at the end of the instruction session, along with student focus groups.

However, few IL surveys currently in use are suitable for college students of all disciplines and academic levels, or are intended for use with one-shot IL instruction specifically. Moreover, some prominent existing surveys, such as the SAILS (Project SAILS, 2016) and the IL Test (Cameron et al., 2007), are not free. Their cost makes them prohibitively expensive for libraries given current widespread budget constraints and the large quantity of students librarians teach each year, which often number well into the thousands. Indeed, Blank et al. (2016) nicely summarized the current state of IL assessments in a recent literature review, concluding there is “a need for methods of IL assessment that are (1) quantitative, (2) capable of assessing performance, (3) readily scalable to large numbers of students, and (4) adaptable to a wide variety of scientific disciplines and other fields” (p. 686).

Explorations of faculty perceptions of their students’ IL have likewise often been quantitative. For example, Dubicki (2013) used a survey to ask faculty about their students’ IL in the context of the Standards. More recently, Kaletski (2017) also used a survey with faculty to the same end, though in the context of the Framework, specifically
inquiring about the Framework’s knowledge practices and their perceived importance to faculty.

**Summary of Qualitative Measures in Current Research on IL**

In their literature review, Blank et al. (2016) also note several qualitative IL assessments have been used in the LIS field, ranging from observations to annotated bibliographies to logs. However, qualitative data in this research area often do not stay qualitative, instead frequently being transformed into quantitative data for analysis, as when rubrics are used to assign numerical scores to students’ essays or open-ended responses (Carroll, Tchangalova, & Harrington, 2016), or when themes in student reflections are counted and converted into percentages (Squibb & Mikkelsen, 2016). Thus, in the area of research on IL there is a dearth of qualitative research that remains truly qualitative from the beginning to the end of the study. Indeed, a review of 20 randomly selected articles published since 2016 on IL-related topics in the ACRL’s prominent journal *College & Research Libraries* yields seven articles (35%) using a mixed methods research approach, 13 articles (65%) using a quantitative research approach only, and none using a qualitative research approach only.

In mixed methods studies on IL instruction among college students, focus groups (e.g., Bowles-Terry, 2012; Tewell, 2014; Watson et al., 2013) appear to be the most popular qualitative measure used with students. However, using focus groups alone to collect such data is problematic because students may not speak freely in group settings. They may hesitate to speak honestly in the company of their peers or may modify their answers in order to align with those of their peers, stating what they believe will be socially acceptable rather than what they truly think, known as groupthink (Boateng,
They may also limit their words in order to give other students in the group the opportunity to speak. Consequently, the use of focus groups may result in data that are less rich, and more subject to self-reporting bias, than the use of individual interviews. Nonetheless, individual interviews tend to be used with faculty rather than students (e.g., Carroll et al., 2016). Observations have been used with both students (e.g., Watson et al., 2013) and librarian instructors (e.g., Houlihan & Click, 2012). However, observation depends on the researcher’s interpretation of the participants’ actions rather than focusing on the participants’ own words, perhaps particularly when observation protocols are used, which may limit the observations to what the researchers expect to observe a priori. Moreover, participants often realize they are being observed and may alter their behavior accordingly in a form of reactivity.

Interestingly, even librarians who have embraced constructivism and the Framework tend to use quantitative rather than qualitative assessments to assess IL instruction. For example, Gunasekara and Gerts (2017) call constructivism “a breath of fresh air in opening up the contested nature of ‘good’ information and a minefield for instructors and librarians who are guiding the development of information literacy practice in novice learners” (p. 394). However, they use an online questionnaire for assessment. Scott (2017a, 2017b) specifically explored the Framework among undergraduate students yet used pre- and posttests to do so, as was typical during the Standards era in line with a postpositivist perspective. Studies such as this one reveal that though there has been a paradigm shift in library instruction thanks to the Framework, research inquiry has lagged behind in this regard.
Thus, there is a need in the area of research on IL for capturing librarians’, faculty members’, and students’ experiences of library instruction sessions in their own words through individual interviews, especially in reassuring, “non-clinical” environments or natural settings. Such interviews are more closely aligned with the constructivist nature of the Framework than the quantitative, usually postpositivist assessments currently used in the field. The present study attempted to fill the aforementioned need in the research area by conducting individual interviews with higher education teaching librarians, faculty, and students, and using qualitative analysis of these qualitative data rather than transforming them into quantitative data.

**Interview-Based Studies on IL in Higher Education**

**Search Strategy**

To comprehensively examine previous research on IL and library instruction in higher education that used interviews, I searched for studies using four databases in the disciplines of library science and education: (a) Library Literature & Information Science Full Text (LLIS), (b) Library, Information Science & Technology Abstracts (LISTA), (c) Library & Information Science Abstracts (LISA), and (d) Education Resources Information Center (ERIC). I used four concepts in the searches, each described by one or more keywords (see Appendix B): (a) phenomenon: IL and/or library/bibliographic instruction, (b) setting: higher education, (c) population of interest: students, faculty, and/or librarians; and (d) method: interview, including keywords referring to approaches (e.g., phenomenology) that use interviews as their primary data collection method. I limited the results to articles from scholarly publications published since the year 2000, to coincide with the release of the Standards (ACRL, 2000). I obtained a total of 1,071
results in these four databases, 602 of which were original results (the remainder being
duplicates between the databases). Following screening of the titles for relevance, I
reviewed the abstracts of 459 of the articles, as I found three additional duplicates at this
stage and the other 140 articles were clearly irrelevant on the basis of their titles (e.g.,
conducted in countries other than the United States, about K-12 students, etc.). Of the 459
abstracts I reviewed, I deemed 185 of the articles irrelevant, with another 274 articles
passing to the full text screening stage. Of these 274 articles, 41 passed the full text
screening (i.e., met all the inclusion criteria) and were correspondingly evaluated in
depth.

My inclusion criteria for keeping the articles in the final literature pool were that
they must have been conducted at a college or university, and be about either higher
education students (of any major or academic level) or about librarians and/or faculty
who teach higher education students. Moreover, the studies must have discussed library
instruction in some capacity. In addition, the studies must have been conducted in the
United States, since the Standards and Framework are set by the ACRL, which is a
division of the ALA, and thus guide the conceptualization of IL and library instruction in
the United States in particular. I excluded articles that did not meet these criteria, that
were not from academic journals (e.g., trade journals, magazines, etc.), and/or that were
not available in English from the final pool of results.

Of the 41 studies in the final article pool (see Table 1), 18 included students as
participants, 19 included faculty as participants, and 12 included librarians as
participants. Just six of the studies included two participant group types, with four studies
including both students and faculty (D’Couto & Rosenhan, 2015; Holliday & Rogers,
one study including both students and librarians (Small, Zakaria, & El-Figuigui, 2004), and one study including both faculty and librarians (Adams, Gaffney, & Lynn, 2016). Only one study (Aytac, 2016) included all three participant groups, but this study focused specifically on English as a Second Language (ESL) students. Thus, it is rare among interview studies on IL and library instruction to obtain perspectives from more than one participant group in the same context, a gap the present study addressed. Furthermore, only two of the studies (Adams et al., 2016; Maybee, Doan, & Flierl, 2016) were specifically situated within the Framework, though an additional study (Perry, 2017) noted the Framework was adopted while the study was underway. The other studies either mentioned the Standards or did not refer to the ACRL’s conceptualization of IL (see Table 1).

**General Trends**

Despite several notable differences between the three groups, students, faculty, and librarians have various shared preferences when it comes to library instruction. First, they all prefer in-person to online library instruction (Buck & Steffy, 2013; Kuruppu & Gruber, 2006; Latham & Gross, 2013; Lebbin, 2005). Within the library instruction session, they favor the use of hands-on activities (Buck & Steffy, 2013; Chen & Van Ullen, 2011; Latham & Gross, 2013; Lebbin, 2005; Manuel, Beck, & Molloy, 2005; Quinn & Leligdon, 2014; Roselle, 2009; Small et al., 2004). In addition, all three groups find supporting materials (e.g., handouts, web-based tutorials, etc.) to be useful accompaniments to library instruction (Buck & Steffy, 2013; Latham & Gross, 2013; Manuel et al., 2005).
### Table 1

*Characteristics of 41 Prior Studies on Library Instruction in Higher Education Using Interviews for Data Collection*

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>ACRL Standards/Framework Mentioned?</th>
<th>Librarians</th>
<th>Faculty</th>
<th>Students</th>
<th>Discipline(s) of Focus</th>
<th>Student Academic Level</th>
<th>Qualitative or Mixed Methods Research (MMR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams, Gaffney, &amp; Lynn</td>
<td>2016</td>
<td>Framework</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Education</td>
<td>N/A</td>
<td>Qualitative</td>
</tr>
<tr>
<td>Adler</td>
<td>2003</td>
<td>N/A</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Various</td>
<td>Undergraduate and Graduate</td>
<td>Qualitative</td>
</tr>
<tr>
<td>Aytac</td>
<td>2016</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>English-as-a-Second-Language</td>
<td>Undergraduate and Graduate</td>
<td>MMR</td>
</tr>
<tr>
<td>Brown, Murphy, &amp; Nanny</td>
<td>2003</td>
<td>Standards</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Various</td>
<td>Undergraduate and Graduate</td>
<td>MMR</td>
</tr>
<tr>
<td>Buck &amp; Steffy</td>
<td>2013</td>
<td>N/A</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Various</td>
<td>Undergraduate and Graduate</td>
<td>MMR</td>
</tr>
<tr>
<td>Authors</td>
<td>Year</td>
<td>Type</td>
<td>Standards</td>
<td>Health Sciences</td>
<td>Undergraduate Rate</td>
<td>MMR Type</td>
<td></td>
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<td>-------------------------------</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Carroll, Tchangalova, &amp; Harrington</td>
<td>2016</td>
<td>Standards</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Undergraduate</td>
<td>MMR</td>
<td></td>
</tr>
<tr>
<td>Chen</td>
<td>2015</td>
<td>N/A</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Various</td>
<td>MMR</td>
<td></td>
</tr>
<tr>
<td>Chen &amp; Van Ullen</td>
<td>2011</td>
<td>N/A</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Various</td>
<td>Undergraduate and Graduate MMR</td>
<td></td>
</tr>
<tr>
<td>Cope &amp; Sanabria</td>
<td>2014</td>
<td>Standards</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Various</td>
<td>Undergraduate (Mostly) Qualitative</td>
<td></td>
</tr>
<tr>
<td>D’Couto &amp; Rosenhan</td>
<td>2015</td>
<td>N/A</td>
<td>No</td>
<td>Yes</td>
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Students

According to students, library instruction affects various aspects of students’ IL. For example, library instruction has been found to enhance students’ search skills (Blummer, Watulak, & Kenton, 2012; D’Couto & Rosenhan, 2015; Lebbin, 2005); citation skills (Lebbin, 2005); understanding of the research process and how to avoid plagiarism (Chen & Van Ullen, 2011; Rempel, 2010); knowledge and use of as well as comfort with the library and its resources and services, to the extent that they view the library website favorably compared to ubiquitous online resources such as Google following instruction (Chen, 2015; Colon-Aguirre & Fleming-May, 2012; D’Couto & Rosenhan, 2015; Lebbin, 2005; Rempel, 2010; Tewell, 2014; Webster & Rielly, 2003); awareness and recognition of scholarly sources (Lebbin, 2005); and ability to find both library and non-library sources for their research assignments (Rempel, 2010; Spackman, 2007). Students moreover tend to learn about specific databases in library instruction and are more likely to use the databases demonstrated by their librarian later (Spahr, 2015; Tewell, 2014). In addition, library instruction helps students feel they are better searchers, improving their research self-efficacy (Blummer et al., 2012; Rempel, 2010). Of note, various types of library support (e.g., research guides) have been found to improve students’ IL. For example, students who have had library instruction, met with a librarian, or used their high school library are all more likely to use library resources as their research starting point (Mizrachi, 2010). However, although these varying types of library support may be helpful, the improvement in IL skills is more pronounced for students who attend library instruction sessions in particular (Spackman, 2007; Webster & Rielly, 2003). On the other hand, findings on the long-term effects of library
instruction are mixed, with some studies (Chen, 2015) finding the benefits are short-term and others (Chen & Van Ullen, 2011; D’Couto & Rosenhan, 2015) finding they may be long-term, perhaps extending throughout the students’ academic careers.

Immediately after attending library instruction, most students state the session was at least somewhat interesting, that they feel at least somewhat confident applying the content taught, and that the most important skill they learned at the session was how to search different resources (Small et al., 2004). They profess a belief that they will use this skill for academic purposes. However, very few students believe what they learn at these sessions will help them personally (as opposed to academically; Small et al., 2004). Indeed, over time students who attend library instruction tend to believe the session taught them research skills they can use to find specialized information but not everyday information, suggesting that academic research skills do not transfer to everyday research skills in students’ view (Holler Phillips, 2011). Students also struggle to transfer their academic research skills to professional, not just personal, environments, although some students do use what they learn in library instruction sessions in their professional work (Quinn & Leligdon, 2014). In general, students tend to have trouble applying what they learn in IL sessions outside the sessions (Aytac, 2016; Becker, 2003), despite the importance of skill transferability (Buck & Steffy, 2013; Maybee et al., 2016), although some studies (Chen & Van Ullen, 2011; Lebbin, 2005) have found evidence of transferability.

The format of library instruction may matter when considering its effects on students’ IL abilities. Although a one-shot session may help students become more comfortable with the library and its staff, it may not be sufficient in helping them
improve their IL skills (Hensley, Murphy, & Swain, 2014). On the other hand, integration of a librarian in a course for as little as two weeks has been found to be beneficial for students’ IL skills (Heathcock, 2015). The timing, not just the time, of library instruction within the students’ academic careers may also be critical. Students believe library instruction, or at least a library orientation, during the first year of college is helpful (Lebbin, 2005; Mayer, 2015), but they do not think first-year library instruction alone is sufficient (D’Couto & Rosenhan, 2015; Lebbin, 2005; Mayer, 2015). They report they would also prefer to receive discipline-specific library instruction at a later point in their academic careers (Chen & Van Ullen, 2011; D’Couto & Rosenhan, 2015). Indeed, a combination of general and discipline-specific IL instruction may best help students improve their IL skills (Spackman, 2007).

In general, students who seek research help tend to approach their faculty before approaching librarians (D’Couto & Rosenhan, 2015). However, students who attend library instruction are more likely to seek research help from librarians than students who do not attend library instruction (Vinyard, Mullally, & Colvin, 2017). Indeed, Vinyard et al. (2017) found library instruction was more effective in encouraging students to seek research help from a librarian than even faculty referrals. The timing of the library instruction may matter in this regard as well, though, as students who attend such instruction in their first year of college rarely ask librarians for research help later in their undergraduate careers (Montgomery & Robertshaw, 2015). Of note, students who choose to meet with a librarian after attending library instruction tend to meet specifically with the same librarian who taught the session (Vinyard et al., 2017).
When asked what they like about instruction, students state they prefer instructors who care about their students and are enthusiastic about the material they teach (Latham & Gross, 2013). They like receiving individual feedback from instructors as well as collaborating during the sessions (Latham & Gross, 2013), and thus prefer small class sizes because they allow for greater interaction than large ones (Lebbin, 2005). In addition, students tend to be more motivated during library instruction when given hands-on activities and when there are enough computers for all the students in the session to use (Small et al., 2004). Students specifically prefer active learning library instruction sessions that provide the opportunity to practice researching and citing at the session itself (Chen & Van Ullen, 2011; Latham & Gross, 2013; Lebbin, 2005; Quinn & Leligdon, 2014). However, although students who attend library instruction sessions equipped with computers appreciate being able to use computers during the session, those students who take notes rather than using computers during such sessions are able to use the resources well when on their own later (Spackman, 2007).

In contrast, students tend to lose interest in library instruction when teaching strategies are repeated throughout the session (Small et al., 2004). In general, they do not want to attend IL sessions if they believe they already have good IL skills or do not think the session is relevant to them (Latham & Gross, 2013). Indeed, Roselle (2009) found library workshop attendance might be low unless required by faculty or an incentive is provided. Some students outright state they need such incentives to attend IL instruction, such as extra credit in a course or food provided at the session, although other students state gaining research skills is sufficient reason to attend library instruction (Latham & Gross, 2013). As most library instructors are aware, students generally do not think
highly of library instruction prior to attending a session, but fortunately tend to be 
surprised at how useful library instruction sessions can be after they attend (Tewell, 
2014). However, although one-shot sessions may be viewed favorably, students tend not 
to want to take credit-bearing IL courses and may respond negatively when required to do 
so (Jardine, Shropshire, & Koury, 2018; Kuruppu & Gruber, 2006).

Students prefer to apply the IL skills they learn in a library instruction session 
shortly after learning them (Lebbin, 2005), but it is with practice and repetition over time 
that the students gain comfort with the library research process (Rempel, 2010). 
Interestingly, Tewell (2014) found that use of popular culture in library instruction (e.g., 
clips from television shows) might especially help students remember the material 
covered during sessions.

Perhaps not surprisingly, students struggle to define the concept of IL, even when 
the more common term “research skills” is used (Holler Phillips, 2011). However, they 
may understand the concept of IL even if they are not familiar with the term itself 
(Latham & Gross, 2008). Their definition of IL may be limited, though. For example, 
students state library workshops are where they learn to search for and find information 
et rarely mention learning about scholarly communication in such workshops (Riehle & 
Hensley, 2017). Furthermore, they struggle both with the idea and application of critical 
thinking (Holliday & Rogers, 2013).

A few student populations have been studied in detail in this research area, 
including first-year students, graduate students, teaching assistants, international students, 
and developmental students.
First-year students. Upon entering college, first-year students rarely have had formal IL training in their K-12 education and those who have had such training may have had it as early as elementary school (Gross & Latham, 2009). Nonetheless, these students may not desire formal IL instruction, as they feel confident in their information-seeking abilities and prefer to receive informal assistance when they need help (Gross & Latham, 2009; Latham & Gross, 2008). Despite a general belief that this population is dependent on technology, Gross and Latham (2011) found first-year students prefer to learn about research from people rather than from online resources.

Graduate students. Graduate students notably differ from undergraduate students in both their research experience and goals. Incoming graduate students tend to believe the library instruction they received as undergraduate students was “moderately helpful” (Monroe-Gulick & Petr, 2012, p. 328). Moreover, graduate students who have not previously attended library instruction are willing to do so (Kuruppu & Gruber, 2006).

Library instruction for graduate students may be more helpful when provided early in their graduate careers (Rempel, 2010). However, although graduate students believe courses on research skills (as opposed to one-shot sessions) would be beneficial, they are hesitant to attend such courses, expressing a preference for short sessions instead (Kuruppu & Gruber, 2006). Interestingly, despite a general inclination towards in-person versus online library instruction, graduate students view online library instruction positively, highlighting its convenience and appreciating the ability to archive the sessions so that live attendance is not required (Moorefield-Lang & Hall, 2015). In addition, they perceive archived online sessions as useful supplements to in-person
sessions, referring to them as refreshers (Quinn & Leligdon, 2014). On the other hand, unlike undergraduate students, graduate students may hesitate to seek help from librarians because they believe librarians lack the disciplinary expertise to be able to provide assistance at the graduate students’ more advanced academic levels (Rempel, 2010).

**Teaching assistants.** Students who are also teaching assistants have varying degrees of experience with research and the library, yet they are expected to teach less advanced students. When teaching assistants have poor IL skills themselves, they may unwittingly perpetuate a cycle of poor IL in higher education (Lantz, 2016). Fortunately, teaching assistants tend to appreciate receiving “train the trainers” library instruction (Spackman, 2007). However, even when trained to do so, they may not teach their students IL formally because of a perceived lack of time (Spackman, 2007). On the other hand, teaching assistants tend to believe library instruction is helpful for their students and state it leads to higher quality research among their students as well as better questions asked (Spackman, 2007). Despite this belief, they may not seek the help of librarians in formal discipline instruction such as lab sessions (Lantz, 2016).

**International students.** International students express particular interest in library orientations, and especially appreciate it when their instructor takes them to the library to explain its resources and services (Flierl, Howard, Zakharov, Zwicky, & Weiner, 2018; Kuruppu & Gruber, 2006). In library instruction, they find overviews of the research process useful as well as learning how to find and evaluate information, and how to avoid plagiarism (Chen & Van Ullen, 2011).

**Developmental students.** Library education for developmental students is not too different from typical library instruction. Although the sessions tend to be conducted at a
more basic level and utilize more scaffolding than typical library instruction, such library instruction is effective in reducing library anxiety and improving self-confidence among developmental students (Roselle, 2008). Multiple library instruction sessions may be particularly beneficial for developmental students, as multiple sessions allow extra time for additional review and practice as well as enable better librarian-student relationships (Roselle, 2009). Of note, collaborations between librarians and faculty are especially prevalent in the preparation of these sessions for developmental students (Roselle, 2008, 2009).

**Faculty**

The faculty expectation of IL is that students will “be able to locate, assess, and synthesize reliable information gathered primarily from recognizable academic resources into coherent and well-cited papers” (Cope & Sanabria, 2014, p. 488). However, they tend to believe their students’ IL skills are poor, reporting students have difficulties using the library and its resources (Neumann, 2016) and need to be more discerning when selecting resources (Saunders, 2012). Moreover, faculty believe students are overconfident of their research skills (Carroll et al., 2016; Douglas & Rabinowitz, 2016), which may lead them to think they do not need IL instruction (Douglas & Rabinowitz, 2016).

However, faculty expectations of students’ IL are not consistent across all higher education. For example, faculty expectations differ between community colleges and four-year colleges (Cope & Sanabria, 2014). In addition, some faculty believe graduate students already have the necessary research skills (Thaxton, 2002), but others state courses on research skills would be beneficial for graduate students (Kuruppu & Gruber,
Faculty who support library instruction for graduate students state such instruction is beneficial both for the sake of their students’ research and for the sake of their own research, so that the graduate students are able to help with faculty research appropriately (Zoellner, Hines, Keenan, & Samson, 2015).

Among faculty, there are conflicting beliefs as to who is responsible for teaching IL. Many faculty believe IL instruction is a “shared responsibility” throughout the university (Saunders, 2012, p. 231). Some faculty want librarians to provide IL instruction to their students (e.g., teach them research skills) while others prefer to provide such instruction themselves (Perry, 2017), although faculty generally prefer to collaborate with librarians on IL instruction for their students (Carroll et al., 2016; Edwards & Black, 2012; Edwards, Kumar, & Ochoa, 2010). Overall, about half of faculty express interest in librarian-provided IL instruction for small groups and/or IL courses (Feltenberger Beaver, Johnson, & Sinkinson, 2014). The precise faculty perception of the importance of IL instruction may impact students greatly. For example, some faculty expect graduate students to learn research skills on their own rather than directing them to librarians, placing the burden of learning without assistance on their students (Kuruppu & Gruber, 2006). In contrast, faculty who are heavy users of library instruction strive to ensure their students receive support when acquiring research skills (Manuel et al., 2005).

Faculty who are heavy users of library instruction may have started using library instruction in their courses in the first place because the faculty-librarian collaboration for the course was already in place, as they inherited the course from another faculty member (Manuel et al., 2005). Faculty who initiate library instruction in their courses themselves
report doing so mainly because they believe their students lack library research skills and that such skills are necessary to succeed academically (Manuel et al., 2005). They do not wish their students to rely (entirely) on the Internet and want their students to learn to evaluate information (Manuel et al., 2005). Indeed, faculty believe evaluating literature is an essential skill (Perry, 2017; Saunders, 2012), even more so than searching for it (Perry, 2017).

Those faculty who do not seek library instruction for IL may choose not to do so because they believe they already teach IL as part of their courses (Cope & Sanabria, 2014) or that IL instruction is only necessary for courses that include a research paper assignment (Saunders, 2012). However, some faculty simply may not be aware libraries provide instruction and, when informed, attribute this lack of knowledge to poor library marketing of the available services (Kuruppu & Gruber, 2006). Other faculty may view library instruction as “an add-on” (Saunders, 2012, p. 231) rather than seeing librarians as partners. Indeed, some faculty who do not collaborate with librarians state they believe librarians are not trained appropriately to be instructors (Saunders, 2012).

Fortunately, faculty who do collaborate with librarians for library instruction in their courses are generally happy with the collaborations (Douglas & Rabinowitz, 2016; Edwards & Black, 2012; Edwards, et al., 2010; Heathcock, 2015), with good faculty-librarian communication leading to better library instruction (Manuel et al., 2005). Faculty working with librarians tend to think the librarians are effective in their teaching (Douglas & Rabinowitz, 2016; Edwards & Black, 2012) and view them as experts (Manuel et al., 2005; Saunders, 2012). Indeed, faculty frequently view themselves as discipline but not necessarily library research experts (Manuel et al., 2005). They prefer
when librarians tailor library instruction to their specific course content rather than providing a general session (Manuel et al., 2005). Moreover, faculty who collaborate with librarians believe the quality of their students’ coursework is higher (Edwards & Black, 2012; Manuel et al., 2005); that library instruction helps their students succeed and become more efficient researchers who are better able to synthesize and evaluate information, and write research papers (Manuel et al., 2005; Webster & Rielly, 2003); and that their students are more confident in their research abilities following library instruction (Heathcock, 2015). However, Manuel et al. (2005) report some faculty may value library instruction for affective reasons only (e.g., confidence in research abilities and comfort with library resources), in contrast to librarians, who tend to value library instruction for both affective and cognitive reasons.

Even when faculty and librarians value library instruction similarly, they may view it as being useful for different reasons. Faculty deem library instruction useful for short-term research needs related to their courses whereas librarians value it for long-term, large-scope reasons such as critical thinking, lifelong learning, and citizenship (Manuel et al., 2005). Indeed, Adams et al. (2016) note librarians and faculty have different instructional goals, such that the education faculty in their study were concerned with preparing future professionals whereas the librarians were concerned with helping students gain IL skills. Moreover, although faculty believe students need to develop critical thinking skills (Neumann, 2016; Perry, 2017), they may not schedule library instruction for the purpose of helping their students improve these skills, failing to see the connection between IL and critical thinking (Manuel et al., 2005; Thaxton, 2002). They may instead believe critical thinking skills are developed as part of a comprehensive
university education rather than as a result of library instruction specifically (Manuel et al., 2005).

In general, faculty tend to think highly of the library and librarians (D’Couto & Rosenhan, 2015; Manuel et al., 2005) but, interestingly, they may use the library for instruction purposes yet not for their own research (D’Couto & Rosenhan, 2015; Edwards & Black, 2012). They often believe one library instruction session is not sufficient (Aytac, 2016; Carroll et al., 2016) and recommend up to three sessions (Aytac, 2016), though students tend to think two sessions are sufficient (Aytac, 2016; Monroe-Gulick & Petr, 2012). Faculty’s belief in the number of sessions that would be sufficient varies by student level, as faculty tend to believe students, especially lower-division undergraduate students, need several interventions to help them develop their IL abilities (Cope & Sanabria, 2014), and that IL is essential for first-year college students in particular (Neumann, 2016).

Although there is disagreement as to what exactly IL entails among faculty, they tend to agree it is vital (Saunders, 2012). Veach (2009) found that most faculty had not heard of the term IL before taking a course on it. However, though few faculty use or are even familiar with the term, many are acquainted with the concept, have at least some idea of what it means, and tend to view the concept similarly to how it is described in the LIS literature (Cope & Sanabria, 2014; Manuel et al., 2005; Veach, 2009). After asking faculty what they thought about the Standards specifically, Veach (2009) found they agreed with the Standards but believed the Standards should be taught throughout a semester or even throughout the students’ entire college careers, not specifically within one assignment in a course, as is often done. Indeed, several studies (Cope & Sanabria,
2014; Farrell & Badke, 2015; Maybee et al., 2016) have found faculty tend to believe IL is not a separate construct but rather integrated within disciplines. However, some faculty do view the learning of information skills as separate from course content, albeit skills that are necessary for both general academic success and to complete discipline-specific course assignments (Maybee et al., 2016). Regrettably, some faculty have a limited view of IL, viewing information solely in the context of scholarly materials (Maybee et al., 2016) or believing computer literacy translates into IL (Thaxton, 2002). Regardless of their specific conceptualization of IL, most faculty believe it is at least somewhat important, though a comparatively small but nonetheless considerable number report believing it is not important (Veach, 2009).

Although some research has found disciplinary background does not influence how faculty define IL (Cope & Sanabria, 2014), there is evidence to suggest differences between the disciplines in how faculty react to library instruction. For example, Veach (2009) found faculty of different disciplines reacted differently to the requirement that they themselves take an IL course, with faculty in mathematics reacting the most negatively. When it comes to incorporating IL into their courses, faculty in general education courses tend to do so the most, whereas mathematics and business faculty tend to do so the least, expressing a belief that IL does not apply in their disciplines (Veach, 2009). In general, however, faculty tend to believe IL consists of some competencies that are relevant to all disciplines (e.g., finding, accessing, and evaluating information) as well as others that are unique to their disciplines (e.g., which sources are relevant and appropriate to their specific research area; Saunders, 2012). They thus prefer when
librarians providing instruction have disciplinary expertise as well as IL expertise (Manuel et al., 2005).

Regarding their own IL instruction, faculty may not recall library orientations they attended as new faculty (Kuruppu & Gruber, 2006). When required to take a course on IL themselves, faculty tend to dread it, much like their students, although some faculty anticipate it will help them learn about library resources (Veach, 2009). Faculty who take such courses report appreciating the opportunity to create an IL assignment for their students, but only about half of these faculty actually use the assignment in their courses. Those who do use it report it results in improved student work and makes the faculty themselves feel better equipped to help their students (Veach, 2009). Overall, though, such IL courses tend to reinforce faculty’s love of the library, perhaps above more concrete outcomes (Veach, 2009).

Whether they acquire them in faculty-focused IL courses or learn them as students, it is important for faculty to have strong IL skills, especially as some instructors choose to teach students how to use academic databases and library resources themselves (Gross & Latham, 2011). Indeed, for better or worse, faculty instruction may influence students’ research process more than library instruction (D’Couto & Rosenhan, 2015).

Librarians

Much research suggests there is a somewhat tense relationship between librarians and faculty. Some librarians believe they have an imbalanced relationship with faculty, such that faculty do not think highly of what librarians can contribute (Tewell, 2018). Indeed, librarians point to academic politics as one of the aspects they like least about instruction (Small et al., 2004). Librarians note feeling that neither faculty nor students
understand their abilities and potential contributions (Walter, 2008). Although most librarians who teach report they collaborate with faculty, those who do not often attribute the absence of collaborations to a lack of interest on behalf of the faculty or an unwillingness on the faculty’s part to give up class time to a librarian (Adler, 2003; Small et al., 2004). Interestingly, Tewell (2018) proposes that a critical IL program may help build relationships between librarians and non-librarian faculty.

Librarians consider administrative support to be important for library instruction (Walter, 2008), and fortunately most teaching librarians do believe their library administration supports instruction (Small et al., 2004). Indeed, some librarians report library instruction is mandated by library and/or university administration rather than originating from librarians themselves (Jardine et al., 2018; Ziegenfuss & Borrelli, 2016; but see Adler, 2003).

Many librarians report they have had little instruction on how to become instructors themselves and express a desire for additional instructional training, especially for teaching upper-division and graduate students, as well as discipline-specific training (Adler, 2003; Miller & Minkin, 2016). To be effective as instructors, librarians who teach state they need support from their colleagues, role models in the profession, and/or supervisors, whether the support is demonstrated by substituting for the teaching librarians in other responsibilities (e.g., coverage on the reference desk) or by providing professional development opportunities related to instruction (Walter, 2008).

Librarians also believe their own preparedness and enthusiasm during instruction are important factors in student performance (Small et al., 2004). Instead of lecturing, librarians prefer to provide active, multimodal learning opportunities and believe
demonstration followed by student practice is the most important teaching technique (Krause, 2010; Small et al., 2004). However, Tewell (2014) notes the content of library instruction may matter more than how it is taught. Librarians consider the most important IL instruction topics to be identification of popular versus scholarly publications, scholarly communication (including open access), and data literacy (Miller & Minkin, 2016). They tend to assess their instruction informally through avenues such as student and faculty feedback (Krause, 2010; Miller & Minkin, 2016), and consider visible student engagement and active participation indicators that an instruction session has been successful, as well as invitations by faculty to provide sessions again in the future (Miller & Minkin, 2016). Unfortunately, these may be the only “assessments” of the session conducted by librarians, as they rarely use formal assessment of their instruction (Adler, 2003; Miller & Minkin, 2016). Of note, librarians generally do not name student learning outcomes as indicators of a successful library instruction session (Miller & Minkin, 2016).

Indeed, librarians appear to place great emphasis on the affective aspects of instruction as well as the cognitive ones. They state they want students to feel welcome and comfortable in the library following instruction, with some librarians noting that creating a comfortable classroom environment is the most important aspect of their instruction (Krause, 2010; Small et al., 2004). They also report wanting their students to feel excited, enthusiastic, and empowered about research after instruction (Krause, 2010). Along these lines, librarians state their favorite aspect of instruction tends to be active, motivated teaching, followed by being able to share their knowledge with and help students. A critical IL approach in particular may lead to greater student and librarian
engagement, as well as more meaningful student and librarian experiences (Tewell, 2018).

Similarly, one of the aspects librarians report liking least about instruction is apathetic students (Small et al., 2004). They also report a lack of time is often an obstacle to their instruction, whether the lack of time is during the instruction session itself or prior to the session, hampering their ability to prepare and/or collaborate with faculty (Miller & Minkin, 2016; Small et al., 2004; Tewell, 2018; Walter, 2008). Librarians point to the one-shot session in particular as limiting their ability to teach (Tewell, 2018). To counteract the lack of time, librarians are accustomed to being flexible when it comes to providing library instruction (Jardine et al., 2018).

Regarding the timing of library instruction, librarians have varying views. Some librarians believe students should be taught IL skills in college. Others believe students should have learned IL skills in K-12 education. A small proportion believe students should acquire IL skills on their own (Small et al., 2004). Librarians are thus not unlike faculty in their belief of when IL skills should be acquired, yet it is evident students rarely receive formal IL training in their K-12 education (Gross & Latham, 2009). Therefore, if students do not attend IL instruction in college, they may never do so at all.

**Other Studies**

Although two studies were not included in the final study pool because they did not meet all the inclusion criteria (i.e., were not conducted in the United States), they are sufficiently relevant to the present study to merit mention nonetheless. In a study conducted in Canada, Bury (2016) used semi-structured interviews with faculty members, purposefully recruiting a diverse sample consisting of faculty from the sciences, social
sciences, and business, with a one-third proportion in each discipline area. Faculty reported that students needed to know how to search for, access, and evaluate information, and emphasized their students needed to improve their critical engagement with the information they found, as their critical thinking abilities were not as strong as the faculty thought they should be (Bury, 2016), echoing the findings of similar studies conducted in the United States (Cope & Sanabria, 2014; Neumann, 2016; Perry, 2017; Saunders, 2012). After receiving their initial answers, Bury (2016) gave the faculty members an outline of the Standards and asked them to react to the list. The faculty members generally responded positively to the Standards, as did the American faculty studied by Veach (2009), and deemed them important, though many of the concepts included in the Standards had not been mentioned earlier in the interviews.

Yevelson-Shorsher and Bronstein’s (2018) study examining librarian, faculty, and student perceptions of IL in Israel is also highly applicable to the present study. They interviewed 15 students, 10 faculty members, and seven librarians at an Israeli university using semi-structured interviews. All students were art history majors and all faculty members were in their university’s Department of Arts so although the methodology of their study is similar to that used in the present study, the researchers focused on one specific discipline area. Moreover, although they discuss IL in the context of the Framework in the published article, the interviews were conducted in 2013 and 2014, predating the Framework, and thus the Framework did not guide the interview questions. In addition, the researchers did not ask about the participants’ experiences in library instruction sessions in particular, although some interview questions alluded to their academic library’s IL programs and “library training classes” (p. 549).
Yevelson-Shorsher and Bronstein (2018) found students tended to avoid the library and librarians because of a sense of intimidation and confusion, yet acknowledged the importance of developing their IL skills. Students specifically requested hands-on training from librarians and library instruction early in their academic careers. Faculty members likewise acknowledged the importance of IL skills and training students to search in complex information environments, yet believed students received help from the library more often than the students reported doing so, both of their own volition (e.g., at the reference desk for time-sensitive research needs) and in library instruction sessions provided for other courses. Faculty members also preferred that librarians teach students IL skills instead of doing so themselves, often expressing a lack of confidence in their own IL skills. Meanwhile, librarians believed it was important to integrate IL training into the academic curriculum and stated all faculty members who had requested such training believed it had been beneficial. However, they believed faculty members did not see them as colleagues and reported faculty resisted adding IL training to their courses, making it difficult to initiate librarian-faculty relationships for IL instruction. On the other hand, once these relationships were established, they tended to be well-received by both parties (Yevelson-Shorsher & Bronstein, 2018). The results of Yevelson-Shorsher and Bronstein’s (2018) study thus parallel those of comparable American studies, as discussed in detail above.

Chapter Summary

In Chapter II, I have presented the theoretical context for the present study and have thematically reviewed existing relevant literature on library instruction and IL. Relatively few studies in this area have used interviews to explore how students, faculty,
and librarians perceive library instruction, and even fewer studies have examined two or more of these participant groups in the same context concurrently. However, research suggests the three participant groups share similar preferences regarding library instruction, including favoring in-person to online library instruction, hands-on activities during sessions, and supporting materials accompanying the sessions. Of these three groups, only librarians are generally familiar with the term IL, although all three groups have varying understanding of what this concept entails. Library-based IL instruction is generally found to be beneficial in some respects, such as comfort with the library and its resources, but its precise impact, and the duration of the impact, is still undetermined and may depend on factors such as the timing and recurrence of the instruction sessions. Moreover, academic discipline and level affects perceptions of both the students’ IL skills and the usefulness of library instruction among students and faculty. In addition, the relationship between faculty and librarians when it comes to their students’ IL tends to be fraught, perhaps especially as perceived by librarians, yet collaborations between the groups are generally successful when they occur and favorably met by both parties. In sum, there remains a notable opportunity in the research field to explore how students, faculty, and librarians in the same context, especially of different academic levels and disciplines, perceive library-based IL instruction, which the present study addressed.

In Chapter III, I will discuss the methodology of the present study in detail, including the research site; sample and sampling method; procedures; data collection, management, and analysis; and ethical considerations.
CHAPTER III

METHODOLOGY

In Chapter III, I describe the present study’s epistemological and methodological beliefs; outline the study’s research design; describe the research setting, participants, and sampling procedures; and discuss the collection, management, and analysis of the data, as well as the ethical issues that emerged over the course of the study.

Epistemology and Methodology

Epistemology is the viewpoint a researcher takes toward research, addressing the question of “what counts as knowledge?” (Creswell, 2013, p. 20). Several approaches, or themes of knowledge, are possible that shape how researchers conduct their investigations. Herein, I used a constructivist epistemology, which is founded on the idea that “reality is co-constructed between the researcher and the researched and shaped by individual experiences” (Creswell, 2013, p. 36). I explored how teaching librarians, faculty, and students in higher education perceived library instruction sessions, thereby examining their individual experiences in these sessions. I did not assume there was one pre-determined conceptualization of IL or library instruction, but rather examined how librarians, faculty, and students each conceptualized IL and library instruction in their own words and worlds. Thus, in the present study, I co-constructed a definition of IL with my participants and an experience of library instruction, and therefore a constructivist epistemology suited the study well.

Methodology refers to the approach a researcher takes towards the process of inquiry (Creswell, 2013). Constructivist methodologies use an inductive approach, which proceeds from data to theory (Creswell, 2013). Observations, interviews, and text
analysis are all commonly used methods in constructivist studies, gathering the data from the participants’ own words and actions to address the study’s research question (Creswell, 2013). From the data, the researcher derives a consensus. Thus, a constructivist methodology suited the present study well, as I strove to derive a consensual definition of IL and an experience of library instruction from librarians, faculty, and students in a higher education setting using their own words, and gathered data by interviewing the participants. I was mindful of the differences between the groups that emerged over the course of the study and strove to respect the participants’ unique perspectives while exploring their commonalities.

**Phenomenological Case Study**

I used a phenomenological case study approach for the present study, which blends characteristics from both phenomenological and case study approaches.

**Phenomenology.** In a phenomenological study, researchers examine individuals’ shared experience of a phenomenon, and explore the “what” and “how” of the individual lived experience (Creswell, 2013). In the present study, the phenomenon examined is library instruction. I sought to capture the essence of what librarians, faculty, and students perceive in a library instruction session; how librarians teach in their instruction; how students learn from library instruction; and how faculty perceive library instruction helps their students. Van Manen (1990) states “the point of phenomenological research is to ‘borrow’ other people’s experiences and their reflections on their experiences in order to better be able to come to an understanding of the deeper meaning or significance of an aspect of human experience” (p. 62). Thus, in the present phenomenological study, the participants’ individual lived experiences were essential to understanding the
Moustakas (1994) identifies a procedure for conducting phenomenological research. He states researchers should choose a topic that has both autobiographical and social significance. Since I am a teaching librarian, the topic of IL instruction is personally significant. Moreover, as the Framework is a new guiding document in my field of academic librarianship, the present study’s findings have the potential to influence library instruction greatly as the field moves forward in accordance with the new Framework. Moustakas (1994) also states researchers should review the professional and research literature associated with their topic thoroughly, as I did (see Chapter II). Researchers should also adhere to ethical research standards, develop interview questions ahead of time, conduct one or two lengthy individual interviews with participants, and lastly analyze, synthesize, and report the data, according to Moustakas (1994). I followed all these steps in the present study, as detailed below.

**Case study.** The goal of the case study approach is to study a phenomenon in depth, with Merriam (1998) and Miles and Huberman (1994) both describing a case study as the investigation of a bounded system in particular, such as an institution. The case study approach is reflected in the present study since the phenomenon under investigation, library instruction, was studied in depth within a particular institution (FIU) to explore how IL is conceptualized, taught, and learned at this particular institution via library instruction.

There are several notable approaches to case studies (Yazan, 2015), but the present study was most closely aligned with that of Merriam (1998), which focuses on
generating thick description of a particular phenomenon. As Moustakas (1994) does for phenomenological studies, Merriam (1998) recommends conducting a literature review as an initial step in a case study to guide the research question. She further states researchers should identify a research problem, create research questions accordingly, and use a purposive sample as part of the case study research design, all of which I did in the present study. Moreover, Merriam’s (1998) case study approach is compatible with phenomenological analysis (Yazan, 2015).

**Phenomenological case study.** Dreyfuss (2012) notes a phenomenological case study combines these two approaches to use in-depth individual interviews to explore a phenomenon within a bounded system. The phenomenological approach reflects the chosen data collection method (i.e., interviews), which examines in depth how individuals experienced a phenomenon. The case study approach reflects the choice to explore the phenomenon of interest within a specific setting.

**Assumptions.** One of the assumptions associated with phenomenological research is bracketing, the idea that researchers should acknowledge their assumptions to remain open to descriptions of lived experiences that differ from their own (Creswell, 2013). Accordingly, I acknowledged the assumptions I have prior to starting the study, especially since I am a teaching librarian at the research site. I also wrote field notes and memos that reflected my thoughts and perspective, and discussed the findings and my conclusions with both other librarians and my non-librarian dissertation committee members. Furthermore, one of the assumptions associated with Merriam’s (1998) approach to case studies is that “reality is constructed by individuals interacting with their social worlds” (p. 6). To this end, I used interviews in the present study to examine how
librarians, faculty, and students engage in their social environments within an academic
context in order to teach and learn IL via library instruction. In addition, Creswell (2013)
identifies epistemology as a philosophical assumption that underlies and informs
research. Epistemology is linked to constructivism both in phenomenology and
Merriam’s (1998) approach to case studies (Creswell, 2013; Yazan, 2015), and thus a
constructivist epistemology was an assumption underlying the present study, as discussed
above.

Research Question

The research question of the present study was: how does a group comprised of
teaching librarians, faculty, and students experience library instruction at FIU?

Research Design

I used a qualitative research design for the present study because I wanted to
understand how the study’s participants, including librarians, faculty, and students,
conceptualized IL in their minds within the parameters of library instruction. Merriam
(2002) states qualitative research examines how phenomena are viewed through the eyes
of participants, with the goal of searching for meaning and understanding, which is what I
set out to do with the present study, specifically focusing on the phenomenon of library
instruction. I wanted to learn from the participants, in their own words, how they
experienced a library instruction session in our current Framework-based IL context.
Because qualitative research prioritizes providing rich description, this design is
appropriate in the context of the research question, helping me learn from the participants
in their own words, thereby permitting a deeper understanding of how librarians, faculty,
and students perceive IL and library instruction than a quantitative study would have done.

**Research Setting**

The present study was conducted at the Green Library (GL) of FIU, a large, urban, research university located in Miami, Florida. As of the 2018-2019 academic year, during which I conducted the present study, there were 52,640 students enrolled at the university (FIU Analysis and Information Management, 2018). During this academic year, the vast majority (42,193) of the students were degree-seeking undergraduates, whereas 8,604 students were degree-seeking graduate students and 1,843 were non-degree-seeking students (FIU Analysis and Information Management, 2018). Most (65.5%) of the students were enrolled full-time whereas about one-third of students (35.5%) were enrolled part-time (FIU Analysis and Information Management, 2018). The student body at FIU, a minority-majority institution, is diverse, approximately 63.3% Hispanic, 10.3% White non-Hispanic, 12.2% Black, 2.8% Asian or Pacific Islander, and 11.4% of another race or ethnicity (FIU, 2018a).

Florida International University contains five libraries, distributed across its various campuses. The GL is the largest of these libraries, located at the heart of the university’s largest campus. The GL contains two classrooms used for instruction. The smaller classroom seats 40 students whereas the larger classroom seats 64 students (FIU Office of Academic Space Management, 2019). Both classrooms have numerous computers for students in the class to use during a hands-on experience component to the instruction sessions, though the classrooms were designed to include one computer for approximately every two seats.
The number of students in each library instruction session conducted at the GL can range between less than five (usually in doctoral courses) to well over one hundred (usually in undergraduate courses). Because of the space constraints of the GL classrooms, instruction sessions for courses with over 50 students are usually conducted outside the library in larger classrooms and auditoriums throughout campus. At these very large classes, the hands-on experience component of the session is usually not conducted unless the students bring their own laptops since, unlike the library classrooms, these out-of-library classrooms and auditoriums usually do not contain computers for the students to use.

Instruction at the GL is conducted by the library’s liaison librarians, who are mostly employed by the Department of Information and Research Services. Each liaison librarian provides instruction for his or her liaison disciplines, though a group of librarians with varying liaison areas share the library instruction responsibilities for the most general first-year courses. For example, as the Health Sciences Librarian, I provide library instruction for health sciences students specifically (e.g., nursing, public health, dietetics and nutrition, etc.). Such an arrangement means that the librarians can customize their instruction on the basis of their unique expertise and experiences to best meet their particular students’ needs. However, this arrangement also means FIU students can have widely different library instruction experiences on the basis of which librarian taught their particular instruction session.

During the 2018-2019 academic year, GL librarians taught 282 instruction sessions. The library’s statistics do not include detailed information on how many students were taught, as this number may be difficult to gauge precisely depending on the
class size. Instead, library statistics provide general class size estimates. The median class size was an estimated 25 students, with nearly half (48%) of the sessions containing between 15 and 30 students. Accordingly, these sessions reached approximately 7,000 students at FIU during the 2018-2019 academic year. Most of the sessions (83%) lasted between 50 and 75 minutes. All but 23 of the sessions were conducted in person instead of online. Instruction was nearly evenly divided among lower-division undergraduate students (32%), upper-division undergraduate students (30%), and graduate students (28%), with a few sessions conducted for special groups (e.g., visiting high school students, staff members, etc.).

In past years, the GL has used existing IL assessments such as SAILS with students. However, currently each GL teaching librarian makes the decision individually to use an IL assessment or not during library instruction. Those librarians who do use IL assessments currently have created their own for use with their specific classes. These assessments tend to be designed for specific disciplines and/or academic levels, are for the most part not shared between librarians, and (with the exception of my own) do not undergo reliability or validity testing.

Participants and Sampling

The target population of the present study was all students (undergraduate and graduate; in-person, hybrid, and online; part-time and full-time) at FIU who attended a library instruction session provided by the FIU GL as part of a semester-long course (in-person, online, or hybrid, of any discipline) during the 2018-2019 academic year; the faculty who scheduled these sessions with the library; and the librarians who taught the sessions. I chose my sample for the present study based on the suggestions for sample
size by research design discussed by Onwuegbuzie and Collins (2007). I used non-
random sampling, specifically purposive sampling, which is common in both
phenomenological studies and case studies (Creswell, 2013; Yazan, 2015). Onwuegbuzie
and Collins (2007) recommend between three and five participants for case studies and
between six and 10 participants for phenomenological studies. Since the present study is
a phenomenological case study, I thus interviewed three teaching librarians at FIU (one
with liaison responsibilities in STEM, one with liaison responsibilities in the social
sciences, and one with liaison responsibilities in the arts and humanities), three faculty
members who scheduled library instruction sessions for their courses at FIU with their
respective disciplinary liaisons, and four students who attended a library instruction
session at FIU (one STEM major, one social sciences major, and one arts and humanities
major, plus one first-year student regardless of major). I included both undergraduate and
graduate students in the study because although undergraduate and graduate students
have different academic research goals and thus may have different conceptualizations of
IL on the basis of the particular research needs of their academic level, the library
instruction literature has tended to neglect graduate students relative to undergraduate
students (Blummer, 2009). I wanted to ensure graduate students’ perspectives were
included in the present study and therefore intentionally recruited from this population.
Thus, the present study had a sample of 10 participants (three librarians, three faculty
members, and four students including two undergraduate students and two graduate
students). Portraits of all 10 participants are provided in Chapter IV.
Data Collection

I recruited my participants through targeted emails and/or face-to-face invitations to participate in the present study, informed them of the study’s purpose, and emphasized its ultimate goal of helping improve library instruction at FIU. I recruited librarian participants at departmental gatherings, and I recruited student and faculty participants at various library instruction sessions after receiving permission from the session’s teaching librarian to do so. Some teaching librarians themselves mentioned the study to their students and the faculty with whom they worked, and provided them with my contact information.

I recruited students who had attended a library instruction session, faculty members who had scheduled a library instruction session for their course(s), and librarians who had taught library instruction sessions at the GL during the 2018-2019 academic year. Those participants who expressed interest in being interviewed for the study arranged an appointment with me at the GL at a day and time of mutual convenience. Upon arriving at the interview, participants reviewed an informational letter. Once they acknowledged receipt of this letter, I asked for verbal permission to record the interview (audio only). One participant consented to be interviewed but did not consent to be recorded. I therefore took detailed written notes of our conversation. Before beginning the interviews, I reminded the participants they were free to end their participation at any time without repercussions. I also told them I would be using only pseudonyms for the study and that their real names would not be included with the data or in the report.
I used semi-structured interviews for the present study following the recommendations provided by Rubin and Rubin (2012), using a standard list of main questions with all participants and customizing follow-up questions during each individual interview (see Appendix C). I used a different set of questions for librarians, faculty, and students, as I expected the three participant groups to have different perspectives on the library instruction sessions. The interviews lasted between 18 and 66 minutes, with an average of 34 minutes for the recorded interviews. I conducted one interview with each participant, as in phenomenological (case) studies the goal is to capture a variety of participants’ perspectives rather than focusing on individual participants in depth, to better encapsulate the essence of their experience. To minimize the effects of interviewer and setting variations, I conducted all the interviews myself in the same setting, the GL Department of Information and Research Services office suite.

In accordance with the recommendations made by Rubin and Rubin (2012), the interview protocols for all three participant groups began with simple questions, specifically about the participants themselves, and progressed to more targeted questions about their instruction and research experiences. The questions mostly began with “how” and “what,” as Rubin and Rubin (2012) recommend. I also created a list of follow-up questions and probes that could be used with any of the participant groups, in accordance with the recommendations provided by Rubin and Rubin (2012). The interview protocols for all three groups of participants are included in Appendix C.

**Data Management**

After each interview, I created a detailed memo with my initial thoughts on and impressions of the interview, as well as any notes that seemed relevant. I used
pseudonyms for all the interviewees and transcribed the interviews verbatim for data analysis, with the exception of the interview with the participant who did not wish to be recorded. Throughout the research process, I added memos as new thoughts, analytical insights, and connections arose so there would be documentation of the research process throughout the project (i.e., an audit trail; Akkerman, Admiraal, Brekelmans, & Oost, 2008; Koch, 1994; Lincoln & Guba, 1985; Rodgers & Cowles, 1993). The memos were partly handwritten and partly digital, depending on the circumstances (e.g., immediate access to a computer). In general, notes taken during the interviews were handwritten and memos written following the interviews were digital.

As the present study was deemed exempt by the FIU IRB, informational letters, which do not require the participants’ names or signatures, were used instead of informed consent documents, which need to be signed. Thus, there are no documents containing the participants’ real names in the present study. All hard copy documents (e.g., printed interview transcripts, handwritten notes) are being stored in a locked drawer accessible only by me within a locked office used only by me. All digital files (e.g., audio files, digital transcripts and memos) are being stored in password-protected computer and device (i.e., iPad) accounts accessible only by me.

**Data Analysis**

I conducted data analysis using two coding cycles following the guidelines of Saldaña (2009). First Cycle coding is an initial round of coding used to analyze the data at a basic level (Saldaña, 2009). I utilized descriptive coding in particular for First Cycle coding, which is used to summarize qualitative data through the use of words and short phrases (Saldaña, 2009; Wolcott, 1994). Descriptive coding “addresses the question
‘what is going here’” (Wolcott, 1994, p. 12), which may then be explored further in an analysis of the situation and a later interpretation of the meanings of the findings.

Second Cycle coding is used for “reorganizing and reanalyzing data coded through First Cycle methods” (Saldaña, 2009, p. 149). For Second Cycle coding, I used axial coding (Saldaña, 2009; Strauss & Corbin, 1998). Through axial coding, the initial codes identified during the first cycle are organized into “conceptual categories” (Saldaña, 2009, p. 160) and subcategories, or themes and sub-themes. One goal of axial coding is saturation, “when no new information seems to emerge during coding” (Strauss & Corbin, 1998, p. 136).

Following this two-cycle coding process, I utilized a word processor (Microsoft Word) to code the data using the digital transcripts or, in the case of the interview that was not recorded, my detailed notes of the interview content. During this initial coding, I summarized portions of the transcripts/notes relevant to the research question using words and short phrases (e.g., critical thinking, multiple sessions, overconfidence, transferability, etc.). After coding the data for each participant, I created an analytic memo for the participant that summarized the codes. I then compared and contrasted the individual participants’ analytic memos within participants groups to create a group-level analytic memo. I categorized the codes into emergent themes for the groups. I then repeated this process, comparing and contrasting the group-level analytic memos, to form an overall analytic memo for all the participants, at which point I identified the final themes and sub-themes of the present study (see Chapter IV). Throughout this process, I kept the research question in mind to guide the coding and analyzed the data until I reached saturation (i.e., no new codes emerged).
In Chapter IV, I describe the data analysis process further, and discuss the themes and sub-themes that emerged in detail.

**Data Considerations**

Tracy (2010) has proposed eight criteria that high-quality qualitative research should demonstrate regardless of the approach and perspective taken: (a) worthy topic, (b) rich rigor, (c) sincerity, (d) credibility, (e) resonance, (f) significant contribution, (g) ethics, and (h) meaningful coherence. These criteria are meant to reflect qualitative research values in a way that is parsimonious and universal.

Tracy (2010) defines a worthy topic as one founded on the priorities of the discipline or timely events. Since the IL abilities of higher education students are generally found to be poor and the Framework is a new document in the field of academic librarianship guiding library instruction, as discussed above, the topic of the present study is a timely topic and I believe a worthy one. Rich rigor does not necessarily refer to precision, as in quantitative research, but rather to research that is abundant and complex. Sincerity refers to research that is authentic and genuine, including self-reflexivity and transparency, and may be achieved using a first-person approach, such as the one I am using in this document and used throughout the present study. Credibility refers to research that is trustworthy and plausible, not to reliability, replicability, etc., as in quantitative research, but rather to “thick description, triangulation or crystallization, and multivocality and partiality” (Tracy, 2010, p. 843). Resonance refers to the ability of the research to “affect an audience” (Tracy, 2010, p. 844), either through aesthetics or through transferability and generalization. A significant contribution can be made to theories, heuristics (e.g., for future researchers, policy makers, etc.), or in practical
applications. The present study contributes to both theoretical knowledge in the field, specifically which aspects of IL and library instruction are most important to librarians, faculty, and students at their institution, and to practical applications, specifically how to provide library instruction for higher education students to better help them improve their IL abilities and self-efficacy. Ethics may be procedural/categorical (e.g., IRB approval), situational (when issues arise in the field), relational (when researchers reciprocate with participants), or exiting (the presentation of the research, including consideration of potential misinterpretations or adverse effects). The present study was submitted to the FIU IRB and deemed exempt. Moreover, I strove to act ethically throughout the research process, including respecting and complying with participant preferences (such as not recording the interview when the participant did not wish to be recorded). Lastly, meaningful coherence refers to studies that achieve their research purpose using methods in alignment with the chosen theories/paradigms and connecting to the literature, as demonstrated by this study.

According to Golafshani (2003), reliability and validity are considered together in qualitative research, unlike in quantitative research, represented by ideas such as credibility and trustworthiness. Merriam (2002) states specifically that triangulation, or crystallization, may be used for both reliability and validity in qualitative research, through the use of multiple investigators, theories, sources of data, or methods. Accordingly, I used multiple sources of data in the present study, interviewing three participant groups consisting of librarians, faculty, and students to address the same ultimate research goal, as well as referring to my memos and field notes, and the existing literature. Merriam (2002) also states reflexivity, in which researchers clearly explain
their position and relation to the topic they are studying, may be used for reliability and validity in qualitative research. I demonstrate reflexivity in the present study by addressing my subjective position as an academic teaching librarian. Merriam (2002) adds that audit trails may also be used for reliability, thus I documented every step of the research process throughout the present study so that future researchers may view how I arrived at my findings, and to aid with the trustworthiness of the study. Wolcott (1994) states “the reader ought to have sufficient information to be able to arrive independently at the same conclusions as the researcher or to arrive at alternative and equally plausible explanations” (p. 58). To aid in this regard, I wrote memos after every interview and throughout the study, so that a set of documents that reflects my thoughts and actions throughout the study is readily available. I aimed to be transparent at every step of the research process.

In my report of the results, I used thick (detailed) quotes from the interview transcripts to support my findings, thereby privileging the voices of my participants and facilitating multivocality (see Chapter IV). I used expert checks, providing the findings to other librarians in order to obtain feedback from my peers, as seen in the personal communications cited in Chapter V.

The results of the present study may be generalized on a case-by-case basis. For instance, institutions with student populations and library instruction programs similar to those of FIU may determine the results of the present study are relevant in their own environments, and thereby apply the lessons learned from this study in their own contexts. Such transferability of the knowledge gained from a study to similar contexts
and settings is an important component of qualitative research (Golafshani, 2003; Tracy, 2010).

**Ethical Issues**

The present study was submitted to the FIU IRB for approval and was deemed exempt (IRB Protocol Exemption #: IRB-18-0331). As stated above, informational letters, used for studies deemed exempt, do not require the names or signatures of participants as informed consent documents do, so no documents containing the participants’ real names were used in the present study. All other hard copy documents (e.g., printed interview transcripts, handwritten memos) are being stored in a locked drawer accessible only by me within a locked office used only by me. All digital files (e.g., audio files, digital transcripts and memos) are being stored in password-protected computer and device accounts accessible only by me.

To protect the confidentiality of the participants, I used pseudonyms for all participants in the study. The interviews were not administered as part of a course (e.g., were not for extra credit or other incentives), so students did not feel obligated to participate in the study. I told all participants they would be able to end their participation in the study at any time regardless of any progress made. As part of the interview, I asked participants to provide their academic level or rank (e.g., sophomore, associate professor, etc.) and major/discipline. However, because of the large number of students and faculty in each academic level/rank and major/discipline at FIU, it is highly unlikely the interviews may be matched to any individual person on the basis of this information. Moreover, I avoided using individual job titles in the participant descriptions of the
librarians to protect their confidentiality, and generalized individual details such as their years of experience in the profession, using vague titles and descriptors instead.

With the interviewees’ permission, the interviews were recorded (audio only). All but one participant gave me permission to be recorded. Each recorded participant’s voice is the only personally identifiable data in the present study that may be potentially linked to unique individuals. The recordings are being kept on password-protected computer/device accounts accessible only to me, the interviewer. Pseudonyms were used throughout the interviews as they were conducted so that the audio files do not contain the participants’ real names. In addition, I did not include any students I teach or faculty members I work with to coordinate library instruction in the study, so that no participants felt obligated to participate in the present study because I have previously provided library instruction for them.

**Chapter Summary**

The present study uses a constructivist epistemology and methodology along with a phenomenological case study approach to examine how teaching librarians, faculty, and students conceptualize IL and perceive library instruction. It was conducted at FIU, a large, urban, research university located in Miami, Florida with a highly diverse population. Ten participants were interviewed for the study, including three librarians, three faculty members, two undergraduate students, and two graduate students, of three discipline areas (STEM, social sciences, and arts and humanities), to gather a variety of perspectives. I used semi-structured interviews for data collection, and descriptive and axial coding for data analysis. In addition, I strove to maintain a strong sense of ethics throughout the research project by taking precautions such as using pseudonyms, keeping
all data in locked and password-protected locations and accounts accessible only by me, and following the planned procedures as submitted to the FIU IRB. Moreover, I followed the criteria outlined by Tracy (2010) for high-quality qualitative research.

In the next chapter, I will describe the 10 participants of the present study in detail and present the results of this study, including the themes and sub-themes that emerged over the course of the interviews, how the participants perceived their library instruction sessions, and the similarities as well as differences that appeared among the participants, both between and within the participant groups.
CHAPTER IV

RESEARCH FINDINGS

In Chapter IV, I introduce the 10 participants of the present study. I also describe the themes and sub-themes that emerged over the course of the interviews, with a focus on how the participants perceived library instruction and IL, and the similarities as well as differences among their viewpoints.

Participants

I interviewed 10 participants for this study (see Table 2): three librarians (Audrey, Andrea, and Sam), two undergraduate students (Nick and Stacy), two graduate students (Owen and Kovu), and three faculty members (Hayley, Raj, and Butterfly). All names used in this document, both of participants and of third parties mentioned during the interviews, are pseudonyms in order to protect the identities of the participants and others with whom they have worked. Within each of the three participant groups (librarians, faculty, and students), all interviewees were of different academic levels/ranks and disciplines (for the students and faculty) or liaison areas (for the librarians), to gather a variety of perspectives. There was one exception, as two students (Nick and Kovu) shared an academic discipline area, STEM. However, since Nick was a first-year undergraduate student at the time of the study, he was still enrolled in interdisciplinary introductory courses. Thus, although his declared major was a STEM discipline, his studies were not yet focused on any particular discipline area, and I therefore interviewed an additional student concentrating in a STEM discipline (Kovu) who was at a later stage of his academic career.
Table 2

Study Participants and their Academic Levels/Ranks and Discipline Area

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Academic Level/Rank</th>
<th>Academic Discipline Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nick</td>
<td>First Year</td>
<td>STEM</td>
</tr>
<tr>
<td>Stacy</td>
<td>Senior</td>
<td>Social Sciences</td>
</tr>
<tr>
<td>Owen</td>
<td>Master’s</td>
<td>Arts and Humanities</td>
</tr>
<tr>
<td>Kovu</td>
<td>Doctoral</td>
<td>STEM</td>
</tr>
<tr>
<td>Hayley</td>
<td>Adjunct Lecturer</td>
<td>Social Sciences</td>
</tr>
<tr>
<td>Raj</td>
<td>Assistant Professor</td>
<td>Arts and Humanities</td>
</tr>
<tr>
<td>Butterfly</td>
<td>(Full) Professor</td>
<td>STEM</td>
</tr>
<tr>
<td>Audrey</td>
<td>Assistant Librarian</td>
<td>Arts and Humanities</td>
</tr>
<tr>
<td>Andrea</td>
<td>Associate Librarian</td>
<td>STEM</td>
</tr>
<tr>
<td>Sam</td>
<td>University Librarian</td>
<td>Social Sciences</td>
</tr>
</tbody>
</table>

Interviews and Coding

All the interviews were recorded except for Hayley’s, who stated she did not wish to be recorded when we met. Thus, all themes, sub-themes, and quotations are based on coding of the interview transcripts except for Hayley’s, which are instead based on detailed notes I took during the interview. The interviews lasted between 18 and 66 minutes, with an average of 34 minutes for the recorded interviews. (Owen’s interview was the shortest and Andrea’s was the longest.)

The data collection and coding process is detailed in Table 3. Throughout the analysis process, I continually referred to the research question. After conducting the semi-structured interviews, I transcribed them, then reviewed the transcripts for accuracy while listening to the recordings again. I then read through each transcript (or detailed notes of the interview, in Hayley’s case) and annotated them with analytical comments, using descriptive coding (Saldaña, 2009; Wolcott, 1994) to assign codes to all statements.
that seemed significant based on the research question and my review of the literature. 

Next, I reviewed the codes in each transcript (or notes, in Hayley’s case) and created a comprehensive memo for each participant. I then synthesized the individual memos into three group memos, one per participant group (librarians, faculty, students). From the group memos, I identified emergent themes using axial coding (Saldaña, 2009; Strauss & Corbin, 1998). I then cross-analyzed the individual and group memos for convergence and divergence, combining the emergent themes into major themes. Finally, I compiled a final list of themes and sub-themes, as reported in this chapter.

Table 3

Data Collection and Coding Process

<table>
<thead>
<tr>
<th>Step</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data collection</td>
<td>Semi-structured interviews (all but one recorded)</td>
</tr>
<tr>
<td>Transcription</td>
<td>Recorded interviews transcribed</td>
</tr>
<tr>
<td>Transcript review</td>
<td>Transcripts read for accuracy while listening to recording</td>
</tr>
<tr>
<td>Annotation</td>
<td>Transcripts and notes annotated with analytical comments</td>
</tr>
<tr>
<td>Individual memos</td>
<td>Data for each participant synthesized into comprehensive individual memos</td>
</tr>
<tr>
<td>Group memos</td>
<td>Data for all participants in each group synthesized into three comprehensive group memos (librarians, faculty, students)</td>
</tr>
<tr>
<td>First identification of themes and sub-themes</td>
<td>Relevant themes and sub-themes identified based on group memos</td>
</tr>
<tr>
<td>Cross-participant thematic analysis</td>
<td>Individual and group memos cross-analyzed for convergence and divergence</td>
</tr>
<tr>
<td>Final identification of themes and sub-themes</td>
<td>Final list of themes and sub-themes compiled</td>
</tr>
</tbody>
</table>

First, I provide a brief portrait of each of the 10 participants, with a focus on their academic backgrounds and experiences with library instruction. Next, I present the
findings by theme and sub-theme (see Table 4), addressing the present study’s research question and discussing additional topics that emerged over the course of the interviews.

**Portraits of the Participants**

**Librarians**

**Audrey.** Audrey is a reference and instruction librarian who has worked in a variety of library settings. She has provided instruction throughout her career and currently teaches primarily in her liaison areas, which focus on the arts and humanities. Audrey mainly teaches upper-division undergraduate students and Master’s-level graduate students, although she occasionally works with lower-division undergraduate students. Some of her courses include a mix of undergraduate and graduate students.

**Andrea.** Andrea is a reference and instruction librarian, and the liaison to various departments, including several in STEM disciplines. She began teaching shortly after commencing her current position, following the opportunity to observe a couple of classes taught by other librarians. Her initial library instruction was for general library workshops and for courses targeted at lower-division undergraduate students. She now teaches mostly upper-division undergraduate students and graduate students.

**Sam.** Sam is a reference and instruction librarian, and the liaison to several social sciences departments. She has been providing library instruction since she taught one-shot sessions while in graduate school. Sam currently teaches the full range of students who attend FIU, from first year to doctoral, including some courses that combine undergraduate and graduate students. She teaches both in person and online, although she provides in-person instruction more often.
Faculty

Hayley. Hayley is an adjunct faculty member in the FIU College of Arts, Sciences & Education. She has worked at FIU for over a decade and has used library instruction in her courses for all but the first one or two of those years. She previously worked as a full-time faculty member for several decades at various universities. She currently teaches four courses (two undergraduate, two graduate) in the social sciences. During the semester we held our interview, she reported teaching mostly Master’s and a few doctoral students in various disciplines. Hayley has used library instruction throughout her academic career. The semester we conducted our interview, she had worked with her liaison librarian to provide three library instruction sessions for three of her courses, two graduate and one undergraduate.

Raj. Raj is an assistant professor at FIU with a dual appointment in two disciplines, though he self-identified as being primarily in the arts and humanities. He had recently applied for promotion and tenure when we held the interview, and was awaiting the final decision. He was teaching “3 or 4 courses,” one for graduate students and the remainder for upper-division undergraduates. He said the students in his courses tend to be from a variety of majors, though mostly in the arts and humanities, because these courses were designated part of a university-wide interdisciplinary initiative required for graduation at the undergraduate level. Raj currently teaches exclusively in hybrid and online formats.

Butterfly. Butterfly is a full professor in the FIU College of Arts, Sciences & Education. She is a scientist who currently teaches specialized upper-division undergraduate and graduate courses in her discipline. She previously taught general
undergraduate courses in her field but had not done so for several years by the time of our interview. Butterfly has worked at FIU for over three decades and has spent her entire faculty career at the university. She first started using library instruction in her general courses and has continued doing so in her current specialized courses, though only at the undergraduate level. She said she does not include library instruction in her graduate courses.

Students

**Nick.** Nick is a first-year undergraduate student at FIU majoring in Mechanical Engineering. The semester we held the interview was his third semester at the university and he had attended library instruction twice. The first session was held for a Public Speaking course in his usual classroom the semester before we conducted the interview. He attended the second session the week before our interview in a computer classroom at the library as part of a Writing and Rhetoric course. The two library instruction sessions were provided by different librarians, the first by Audrey and the second by Sam. Neither of these librarians are Nick’s liaison librarian, however, because of his major.

**Stacy.** Stacy is a senior undergraduate student at FIU majoring in Political Science and International Relations. She was scheduled to graduate the year we held the interview. Stacy is in an intelligence community workforce development program at the university and conducts geospatial analysis as an intern for a firm. After graduating, Stacy hopes to continue working at the firm, but she is also applying to geographic information system (GIS) Master’s programs, with the goal of eventually working for the government. Stacy first attended library instruction as part of her program the summer before we held the interview. She had attended an additional library instruction session a
few weeks before our interview as part of an International Relations course. Both sessions were held in the library’s computer classroom.

Owen. Owen is a graduate student at FIU completing his Master’s degree in Latin American and Caribbean Studies. He expected to graduate the semester we held the interview. He started the program in 2014, originally taking classes at night while working full-time. The summer before our interview, he had retired and had begun taking classes during the day while working as a peer tutor at the university. Owen has two additional degrees, including a Bachelor’s in Economics and another Master’s degree in Business Administration (MBA) from FIU. He was recently offered, and had accepted, a part-time job at a local college that includes many library-related responsibilities. Owen had attended a library instruction session nearly every semester since starting his current degree, all conducted by his liaison librarian. He had not been to a library instruction session while pursuing his previous degrees. All the sessions he attended were optional, presented as invitations by different professors to a lecture by his liaison librarian in the library’s conference room at the beginning of each semester.

Kovu. Kovu is a first-semester PhD student in Engineering and Computing Education. He has both undergraduate and Master’s degrees in Computer Science obtained from other universities. He originally wanted to work for a technological company such as Google but now hopes to obtain a tenure-track position primarily in computer science, though he would also be willing to work in engineering or a similar field. Kovu first attended a library instruction session at his undergraduate institution as part of his STEM program, most likely as a junior, though he was not certain. He had not attended any library instruction sessions during his Master’s education but had already

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attended one as a first-semester PhD student as part of an Education course the week before our interview.

**Themes and Sub-Themes**

Having briefly introduced the participants, I now present and explain the themes and sub-themes of the present study. As a reminder, the guiding research question of the present study was: how does a group comprised of teaching librarians, faculty, and students experience library instruction at FIU? To pursue that question, I inquired about each participant’s experience of their library instruction session(s). However, over the course of the interviews, additional themes emerged, as discussed below. The themes and sub-themes are summarized in Table 4.

**Theme 1: The Library Instruction Sessions**

The 10 participants provided a thorough picture of the library instruction sessions conducted at FIU from their varied perspectives, including session content; duration, timing, and frequency; and format and location, as well as attendance at these sessions and how assessment is conducted for the sessions.

In sum, library instruction at this university is provided almost exclusively in the format of one-shot instruction, primarily in person rather than online. Sessions last between 20 minutes to two and a half hours, with 75 minutes appearing to be the most common duration. Generally, longer sessions are provided for graduate students than for undergraduate students. The sessions tend to focus on helping students navigate library resources and are a mix of lecture-based and interactive formats. Library instruction is most commonly, but not always, scheduled by faculty members for individual courses and taught by the faculty member’s liaison librarian (who may or may not be their
Table 4

*Themes and Sub-Themes*

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The library instruction sessions</td>
<td>a. Content</td>
</tr>
<tr>
<td></td>
<td>b. Duration, timing, and frequency</td>
</tr>
<tr>
<td></td>
<td>c. Format and location</td>
</tr>
<tr>
<td></td>
<td>d. Attendance</td>
</tr>
<tr>
<td></td>
<td>e. Assessment</td>
</tr>
<tr>
<td>2. Purpose of library instruction</td>
<td>a. Learning to use the library</td>
</tr>
<tr>
<td></td>
<td>b. Cognitive and affective goals</td>
</tr>
<tr>
<td></td>
<td>c. Writing research papers</td>
</tr>
<tr>
<td></td>
<td>d. Saving time</td>
</tr>
<tr>
<td></td>
<td>e. Substitute instructors</td>
</tr>
<tr>
<td>3. Influence of library instruction</td>
<td>a. IL abilities</td>
</tr>
<tr>
<td></td>
<td>b. IL self-efficacy</td>
</tr>
<tr>
<td></td>
<td>c. Use of research resources and requests for help</td>
</tr>
<tr>
<td></td>
<td>d. Affective attitudes towards research</td>
</tr>
<tr>
<td>4. Relationships with librarians and libraries</td>
<td>a. Librarian-student relationships</td>
</tr>
<tr>
<td></td>
<td>b. Librarian-faculty collaborations</td>
</tr>
<tr>
<td></td>
<td>c. Librarian names</td>
</tr>
<tr>
<td></td>
<td>d. Image of librarians</td>
</tr>
<tr>
<td></td>
<td>e. Personal connections to libraries and librarianship</td>
</tr>
<tr>
<td>5. Information literacy</td>
<td>a. Use of and reaction to term</td>
</tr>
<tr>
<td></td>
<td>b. Definition of term</td>
</tr>
<tr>
<td></td>
<td>c. IL instruction and library instruction</td>
</tr>
<tr>
<td></td>
<td>d. Critical thinking</td>
</tr>
</tbody>
</table>

students’ liaison librarian). Sessions provided for courses tend to be mandatory, whereas those provided for programs tend to be optional. In-person library instruction sessions are
held in various locations around campus, but the participants tend to prefer sessions held in the technology-enabled library classrooms. Moreover, although the participants generally articulated that online library instruction is convenient and satisfactory, they strongly preferred in-person library instruction, even those otherwise partial to online instruction. There is no formal assessment of library instruction or IL being conducted by either librarians or faculty, though some informal assessments are used.

The individual facets of library instruction are discussed in detail below, grouped into five sub-themes. Of note, the participants’ perspectives converged in some regards but diverged in others. However, overall, several cohesive patterns emerged from the interviews.

**Sub-Theme 1a: Content**

The library instruction sessions provided at FIU focus on helping students navigate library resources, especially the library catalog and databases. The librarians and faculty provide library instruction for courses in their liaison areas/disciplines specifically, yet the students attend library instruction for a variety of courses that may or may not be within their major, especially earlier in their academic careers. Collectively, the students had been taught by eight different librarians at FIU; none of them had been taught by the same librarian. I interviewed only two of the librarians who had taught these participants, Audrey and Sam, both of whom had taught Nick during different semesters. Although I spoke with two STEM students, neither had been taught by their liaison librarian. Only Stacy and Owen had attended a session conducted by their liaison librarians.
Despite the different contexts and circumstances described by the participants, many similarities emerged between the sessions the librarians taught, the faculty requested, and the students attended. That convergence suggests some agreement between the participant groups regarding what basic information should be taught and learned in library instruction. For example, all the participants reported the sessions focused on:

- Showing library resources (e.g., library website, catalog, research guides, etc.);
- Demonstrating specific databases and how to create search strategies (e.g., keywords, subject terms, Boolean operators);
- Managing search results; and
- Selecting and evaluating sources.

The librarians, however, customized the sessions by student level and discipline, and covered different resources depending on these factors. For example, Audrey mentioned that when teaching lower-division undergraduate students, she covers “basic things” such as pointing out features of the library website. In contrast, when teaching upper-division undergraduate and graduate students, she “just kind of skip[s] over a lot of it.” The students’ comments reflected that the librarians demonstrated interdisciplinary databases to lower-division undergraduate students, but discipline-specific databases to upper-division undergraduate students and graduate students. Indeed, although Stacy noted the resemblance between the two sessions she had attended, she said the session provided by her liaison librarian was “more specifically geared towards political science and INR [international relations, her majors] and also intelligence, so a lot of the
databases were intelligence databases and defense and military databases.” In contrast, Stacy noted the session provided by the humanities librarian “was more general, about just conducting research in general.” It is interesting in light of this comment, however, that Butterfly requested library instruction for only her undergraduate students, stating her graduate students had already acquired the necessary knowledge by that point in their academic careers. The students’ and librarians’ comments suggest the content undergraduate students learn at such early academic career library instruction sessions is more basic than that provided to graduate students.

In addition to student level and discipline, the teaching librarians’ preferences influenced the session content. For example, only Andrea mentioned teaching about library services such as Interlibrary Loan, and only Sam mentioned she taught her students about peer review and how to identify experts in their fields. Even when they covered the same content, the librarians taught the content to varying degrees. For instance, although they all taught their students about citation, Audrey taught basic copy/pasting of pre-formatted citations from databases, Andrea taught her students to use a citation manager (RefWorks), and Sam taught her students to create and proofread citations individually.

Moreover, several of the librarians mentioned covering certain content because of requests by faculty. For example, Audrey noted she teaches specific databases that faculty ask her to teach in her sessions. Sam, in turn, mentioned the undergraduate research methods courses she teaches have a library assignment created by the faculty member who coordinates the library instruction sessions, and her instruction content addresses this assignment. Correspondingly, Butterfly appreciatively mentioned her
liaison librarian, Andrea, had demonstrated to her students “one or two of the databases
that I think are good for the subject.”

Indeed, there was a great correspondence between how the librarians described
the content of their sessions and how the faculty, who had attended the sessions multiple
times, in Butterfly’s and Hayley’s cases for many years, described the session content.
For example, Andrea’s and Butterfly’s descriptions of the sessions conducted by Andrea
were nearly identical. On the other hand, it is likely the students had covered much more
content in their sessions than they reported in their interviews, as suggested by comparing
the students’ descriptions of the sessions they attended with the descriptions of the
sessions provided by the librarians and faculty. For example, since the librarians
mentioned teaching their students how to conduct Boolean searches in their interviews,
which I conducted before the student interviews, I asked the students about the use of
Boolean operators specifically. Not all the students brought up Boolean operators
spontaneously, but all reported remembering and/or using them. Such a discrepancy
between what the students reported when prompted as opposed to unprompted suggests
they remembered more about the sessions than they described unprompted, although they
may not have been applying what they learned after the sessions. Nick, for example,
remembered learning about Boolean operators, though he did not recall the term, and said
he was not currently using them in his searches. Stacy, in contrast, was using them
appropriately in her searches and demonstrated her use with some examples without
prompting, though she did not recall the term either. Similarly, Owen reported he was
using Boolean operators, though he also did not recall the term, but misremembered them
(naming a term that was not a Boolean operator among those that were). Kovu said they
had been covered during the session, but only after I specifically asked. Moreover, he said he was not sure if these were the same Boolean operators he had learned about in computer science, suggesting a lack of transferability between contexts:

It was like AND, OR, but we do it kind of like different ways… we do it more like switching theory or like circuitry classes…. I knew it was Boolean, but I didn’t know, like, is it or is it called something different when it’s dealing with searching things on the database… so when he asked, I was like “should I say Boolean? But I’m not sure if that’s what it is…” but yeah, that’s what it was.

Most of the students reported that navigating databases was the principal content covered in the sessions rather than mentioning more specific points such as Boolean operators or subject terms. For example, Nick said “the main point we learned about was all the different search engines [databases] you can use from the library.” Stacy similarly stated

The most important thing was just generally learning how to navigate these databases, because that can be difficult and if you don’t know how they work, you’re not going to be able to find the documents you want specifically and you’re going to end up with a lot of things that have a lot of fluff and you don’t need fluff, you want a document that gives you exactly what you want.

Likewise, Kovu stated “being able to navigate between the databases was huge,” specifically pointing out the applicability to a paper due in the course for which he had attended the session. Owen, however, was more general than the other students, stating “how not to spin my wheels on non-productive work, that was the most valuable” aspect of library instruction, yet his comment echoes Stacy’s mention of avoiding “fluff.”
Thus, the interviews reveal that despite great differences in contexts and circumstances, library instruction sessions at FIU generally contain similar content, namely use of library resources and specific databases as well as how to create search strategies that may be applied in these resources. Such content is targeted, focusing expressly on the information seeking aspect of IL. The content is also customized, changing in specifics, such as the particular databases used, depending on the level and discipline of the students, as well as the preferences of the librarians who teach the sessions and the faculty who request them. Interestingly, although participants in all three groups made references to aspects of the sessions they would change, such as duration and format (as discussed below), none of them made references to changing the content, suggesting librarians, faculty, and students at FIU are content with the current content of library instruction regardless of its perceived purpose and value.

**Sub-Theme 1b: Duration, Timing, and Frequency**

Regardless of their specific content, the one-shot sessions the participants in all three groups described lasted anywhere between 20 minutes to two and a half hours, but tended to last between 45 minutes to one hour and 45 minutes, with 75 minutes appearing to be the most common session length. The sessions for graduate students were generally longer than those for undergraduate students. Most of the sessions had been held during the students’ usual class times, except for the optional sessions Owen attended.

One undergraduate student, Nick, had attended a brief 20- to 30-minute session in a previous semester, which he believed was too short, attributing his dislike of that session to both the duration and the presentation format: “just having [a librarian] in front of the classroom, presenting to you, you don’t grasp any information. It also doesn’t help
that she had a lot to cover and 20, 30 minutes.” Like Nick, Kovu’s initial library instruction session (as an undergraduate at a different institution) was a 30-minute presentation he described as “‘welcome to the library, this is what we have.’” Of this session, he stated “it wasn’t really geared towards research, it was just ‘people don’t come to the library as much as they should, so hey, this is what we have to offer.’” Neither Nick nor Kovu seemed able to recall any specific content from their initial sessions, nor the librarian’s name, although much more time had elapsed between Kovu’s first session and the interview than between Nick’s first session and the interview.

Nick’s second and most recent session had been 75 minutes long, as was that of the other undergraduate student, Stacy, but both Nick and Stacy thought 75 minutes was perhaps too long for the session. Nick specifically mentioned “maybe it was a little bit long,” though he noted “I didn’t actually notice until we got to the end and I looked at my watch.” Stacy suggested shortening the session for “those few [students] who don’t pay attention and they’re like ‘oh, this is taking forever,’” though she was careful to note she did not consider herself one of those students. Nonetheless, the length of the session was what she reported liking least about it. The graduate students, on the other hand, each had different session lengths. Owen’s multiple sessions had lasted about 45 minutes to an hour each, which he thought was “just about right.” Kovu’s session, in turn, had lasted approximately one hour and 45 minutes, and he commented “probably an hour” would have been sufficient.

All the students’ sessions had been held in person. However, interestingly, Sam, the librarian who had most frequently taught online, noted that in her experience there was a difference in session duration depending on whether the sessions were held in
person or online. She mentioned her online sessions generally lasted an hour whereas her in-person sessions were longer, lasting up to two and a half hours at the graduate level, although her sessions at the lower-division undergraduate level similarly tended to be an hour long. Moreover, she stated that “online there’s more time [spent] retracing our steps.” The difference in duration between the in-person and online formats, and the manner in which the time is used, is noteworthy because it limits the extent of the content that can be covered, such that in person, Sam’s students are “learning like five, six resources. Online, I’m able to cover maybe two or three. Really two.”

It appears students prefer library instruction sessions that last between 45 minutes to an hour in duration, regardless of their academic level and discipline. However, librarians and faculty are happy to devote more time to the sessions, with the librarians in particular mentioning they wanted to spend more time with their students. They noted a longer duration of the sessions would allow more, and more comprehensive, content to be covered. For instance, Andrea stated she had taught the information cycle in a previous credit-bearing IL course, but no longer did so in the one-shot sessions she currently teaches because “time is so constrained.” Sam similarly noted the time allotted for the session affected what she was able to cover: “if I have a short amount of time… I’ll just kinda go over the resources and say ‘contact me.’” The duration of the sessions also impacted their format. For example, Andrea stated that because of a lack of time, she does not often provide individual research time, utilize group work, or conduct “planned activities” in her sessions. Nick and Kovu both described their initial approximately 30-minute-long sessions as presentations, as stated above, which may be, as Sam implies, the only feasible format for such a short time frame.
Regarding the timing of the sessions, all three librarians seemed to prefer meeting with students at a point in the semester when the students already had research topics and/or assignments to complete. Audrey specifically asks to see the students’ assignment prior to teaching a session, stating:

I usually have their assignment, their syllabus, everything, yeah. And I ask for it, I always ask for it, so I usually know exactly what they’re doing. And I reference it in the class too, I say “I know you have this and this and this required for this assignment, and I know that you have this,” because I find that there’s more of a connection with the instructor, but I think there’s more of a connection with the students too, when I’m standing up there and I’m not just speaking in abstract terms of database searching, I can say “you have this coming up and I know about this assignment…” I think it works well, I like doing that.

She added: “I don’t like it when I’m asked to do them too early in the semester because I want them to have topics and already be kind of in gear thinking about everything.” Raj likewise noted that the liaison librarian who teaches for his courses asks for his course syllabus in advance. Sam, in turn, spoke of one professor she deemed “excellent,” expressing an appreciation for his preparedness, stating “he’s always sending me, like, semester and a half out, he’ll send me ‘Sam, I need to start thinking about these, you know, these are my classes, when can you teach?’ And he’ll send me the assignment.”

Indeed, the librarians’ preference for a pre-existing assignment was so strong that Sam referred to instances wherein the students did not arrive at the sessions with a research assignment as “baby-sitting.” She stated that, as Audrey’s students do, the students she teaches usually have to write a research paper for their courses, whether
individually or in groups, yet some students arrive at her sessions with no awareness of the assignment or no assignment at all. However, she noted the latter case is “not that common.”

None of the students stated at which point in the semester they would like to attend the sessions, but Butterfly noted that Andrea provides the sessions “usually about a month into the term, or a few weeks into the term.” Moreover, Hayley mentioned she disliked that “sometimes I couldn’t get it [the session] booked as quickly as I would like to.” She said this issue was “not terrible,” but that it would be better if the library provided more instructors and locations in which to conduct the sessions. Hayley, thus, implied she preferred sessions to be conducted earlier in the semester than was currently feasible because of the library’s staff and classroom limitations. Moreover, the students and faculty all referenced attending or requesting the sessions, or using the session content, for a specific class assignment or research project. For example, Butterfly stated her students attended the library instruction session with topics for their research projects already selected. Such comments suggest students and faculty agree with the librarians in that they would prefer to time library instruction to coincide with work on a specific research endeavor, after the assignments have been given and topics have been selected, but before research for the project is underway.

Regarding the frequency of library instruction, all the participants indicated that library instruction at FIU is provided exclusively in the format of one-shot instruction. However, somewhat surprisingly, all of the students interviewed had attended multiple one-shot sessions, either at FIU or at FIU and at a prior institution. The students overall seemed to think one required session was sufficient, but appreciated the option to attend
additional sessions. Nick, for example, stated one session was enough for him because “I was able to grab everything just then and there,” but added “maybe there will be someone who didn’t entirely grasp it that first time around. So I’m sure they would appreciate either a one-on-one kind of session at the end of it all. Or just a way to opt in to do another class.” Owen, in turn, supported making an initial library instruction session mandatory for all students “right away” and “every semester,” but then clarified “well, you couldn’t require it every semester, but the first semester should be required and from then on optional.” Similarly, Kovu suggested providing an hour-long mandatory session during first-year welcome week to both new undergraduate and graduate students, then reinforcing the sessions through faculty facilitation of a second library session, noting “that would be good…. If you can get them at least twice.”

In contrast, none of the faculty suggested they would prefer multiple to one-shot library instruction sessions. The librarians, however, did. Both Audrey and Andrea, the latter of who has provided multiple sessions in the past as part of a previous credit-bearing IL course at FIU, mentioned they liked the idea of providing library instruction through multiple sessions instead of one-shot sessions, even if only in the format of a single follow-up session with the students later in the semester. Andrea noted the library instruction component of the prior credit-bearing course, provided through the university’s Honors College, had taken up six of the 14 weeks in the course. Although she was uncertain of the efficacy of her current one-shot instruction, she was confident about the benefits of providing multiple sessions thanks to the ability to assess the students and provide feedback in this structure:
What does work is having the students... having us do repeated sessions… We actually could break it down as a course and actually we did assignments for them, and actually were able to grade those and give them back for credit for them, and that did make a difference.

Thus, the typical library instruction session currently provided at FIU appears to be a 75-minute one-shot session provided for a course in which students must complete a research project. However, a comparison of comments from all three participant groups suggests the desired library instruction session at FIU would be a mandatory hour-long session during the students’ usual class time with one or more optional follow-up sessions later in the same semester or in subsequent semesters outside of the usual class time. The sessions would be connected to a specific research project that the librarians would be aware of in advance, but could be scheduled at the departmental level rather than through a specific course, taught by the department’s liaison librarian. Indeed, Stacy explicitly suggested holding library instruction sessions for specific majors through departments, not courses, because she believed her own attendance in library instruction had been a fluke:

Had I not been in the fellowship, and had I not taken this class, what are the chances that I would have been in that research workshop and learned about RefWorks or how to use the databases? So maybe if they were more general and held maybe through departments, worked with a librarian.

Kovu likewise suggested providing library instruction by discipline but attributed this approach to the size of the university: “this school’s a lot bigger than mine [previous universities], so probably by discipline it’ll be a lot better.” Of note, Stacy and Kovu had
both previously attended library instruction as part of discipline-based programs, including the fellowship Stacy mentioned in this context, so their previous attendance through such programs may have influenced their perceptions.

Interestingly, their descriptions of the ideal library instruction program sound similar to that which Owen attended: optional hour-long sessions provided every semester by his department’s liaison librarian outside of his usual class time. Whereas the other students expressed preferences for shorter sessions or ones that differed in format (as discussed below), Owen mentioned he would change only the pace of the sessions he attended, such that “I would slow it, slow it down a little bit for some other students like me who are a little slower understanding and taking notes.”

It thus may be that the desired duration and frequency of library instruction at FIU for all groups is not the currently dominant approximately 75-minute-long one-shot session, nor the defunct semester-long credit-bearing course, but rather a hybrid consisting of a series of hour-long one-shot sessions that accumulate over multiple semesters, timed to coincide with one or more specific research projects.

Sub-Theme 1c: Format and Location

Most of the library instruction sessions the participants had taught, scheduled, or attended were conducted in person, even in cases where the librarian or faculty member was experienced in online instruction. For example, although Sam and Andrea had both taught library instruction sessions online, with Sam having extensive experience in this instruction format, all three librarians preferred to provide in-person instruction. They stated online instruction lacks the energy and two-way communication of in-person instruction, and that it was not as easy to gauge students’ engagement and comprehension
in the online environment as in an in-person setting. Sam noted, “it’s hard in the online,” adding “it needs improvement, I need more ideas.” Comparing her in-person and online library instruction, she mentioned she encourages conversation (both written and spoken) in both formats, but noted that in the online sessions she is able to cover fewer resources since more time is needed for “retracing our steps,” and she is not able to conduct the group assignments she uses in her in-person instruction. Andrea described her current forays into online library instruction as awkward “because it was just me standing there going through the motions, going through the whole thing, the material, so I wasn’t really interacting with anyone.” She emphasized, “I really, truthfully prefer to do them in person.” Although Audrey had not yet provided online library instruction, she agreed, stating

*I don’t think it’s really the same. I think that watching someone give a lecture in video just doesn’t have the same energy as being in person, so... I mean, I think the best thing is to be there in person, for me.*

Her comment reflects affective concerns as well, as will be discussed in sub-theme 2b.

Despite their reservations and preferences, all three librarians were willing to teach online, citing such factors as convenience. Andrea, for instance, stated a recording of herself teaching to an empty room that was posted on course sites had replaced the in-person instruction she had provided for the courses in previous academic years, which had required her to conduct 10 sessions in a week, leading to 12-plus-hour workdays. She moreover spoke favorably of hybrid courses
because you get a lot of the opportunity to do the work online… that you can do on your own, but then you do have that opportunity to come to campus once a week, have that discussion in person. And I think that’s a great idea.

Unlike the librarians, none of the students I interviewed had experienced online library instruction. Of the faculty, only Butterfly had scheduled library instruction in this format for her courses, working with Sam and Andrea to do so for the first time during the summer semester before our interview. She described the session as “very good,” though in a tone of surprise. Interestingly, a preference for in-person library instruction was evident even among faculty who otherwise preferred online instruction; although Raj teaches hybrid and online courses exclusively, he scheduled the library instruction sessions for these courses in person.

The in-person library instruction sessions were held at various locations around the main FIU campus, with the exception of one session provided at an academic center in an adjacent county. However, participants from all three groups expressed a preference for holding the sessions in the Green Library’s computer classrooms, many of them citing the technological capabilities of these rooms. For example, Raj stated he liked scheduling the library instruction sessions for his courses in the library classrooms “because I think here you guys have nice computer labs… it’s just easier, she [Lynn, his liaison librarian] knows the system here, it’s just much easier to do it from here.” Butterfly similarly noted “the library teaching rooms are so nice, with the big screens and so on, I think that’s really good.” She also liked the idea of requiring the students to visit the library for the sessions so they would become acquainted with the building: “I love to have it in the library ‘cause it’s a special thing and it brings people physically to the library who may
not ever come to the library. ‘Cause nowadays they don’t have to.” However, she mentioned it was not always possible to hold sessions for her courses in the library computer classrooms because of the large class sizes, sometimes of over 80 students. In these cases, the sessions were held in the course’s usual classroom and the students were asked to bring their own computers to the session.

Although such an approach may be necessary because of space limitations, it perhaps may be ineffective based on the students’ experiences. For example, Nick’s first library instruction session, taught by Audrey, had been a presentation held in his usual classroom. He had taken his laptop to the session, as the students in Butterfly’s large courses are asked to do, but embarrassedly admitted, “I was playing video games and not paying attention.” He could not remember any specific content from this first session nor Audrey’s name. However, Sam taught Nick’s second session at a library computer classroom instead and his description of that session perfectly matched Sam’s own, indicating he had been paying attention when attending a session held at one of the library’s computer classrooms and using one of the library computers (devoid of video games) rather than his own.

Participant accounts suggest the location and modality of library instruction sessions may affect how interactive they are. Nick’s and Kovu’s more recent sessions, and all of Stacy’s, were held in one of the library computer classrooms, which allowed the students to follow along on computers while the teaching librarians presented, and later to explore the resources on their own, a capability they all stated they appreciated. In contrast, Owen’s sessions had been held in a conference room at the library, where he
had used his tablet to take notes instead of using the resources himself as the other students did.

As mentioned above, neither Nick nor Kovu had liked their initial presentation-style library instruction sessions. Sam felt similarly, and dismissed presentation-style library instruction as “a dog-and-pony show.” She preferred to format her sessions as interactive learning with a peer instruction component, a format only she seemed to be using based on how the participants described the sessions they taught, scheduled, and attended. As both she and Nick described her sessions, Sam divided her students into groups, gave them a worksheet with questions, and instructed the students to learn about a particular resource as a group based on the worksheet. She then asked each group to present on their assigned resource to the remainder of the class, prompting them with questions as needed during the presentations. Although the resources covered in each course depended on the particular student level and discipline, the format of her sessions was similar across the various levels and disciplines. In contrast, Andrea preferred a lecture format, and Audrey preferred a combination approach that included a presentation followed by activities. This latter combination approach seems to be common among teaching librarians at FIU, as most participants in the other two groups described having attended sessions formatted in this manner. Moreover, both Audrey and Sam mentioned providing time in their instruction sessions for individual or group hands-on work doing research, but Andrea stated she does not do so.

The students seemed to prefer a more interactive library instruction session format. Nick called his most recent session with Sam “fun” and “enjoyable,” specifying that “being able to go hands-on with the search engine [sic] and having those guiding
instructions but not being told what to do, being *advised* on what to do, was extremely helpful.” He appeared to have learned how to use the resource his group had been assigned well, mentioning several of its features, yet could not recall much about the resources the other groups had presented on, which he had not used himself. Although Nick enjoyed exploring a database with his group, he had disliked

when the groups stood up and talked to everyone, just because I am a very hands-on kind of person. When I’m taught something, it’s very hard for it to stick to me, even for class. Like I can sit down in an hour, hour and a half class, but when I go back to my room I go over my notes and re-teach myself. So personal taste, [he disliked] just being told everything and having to watch it be done.

He said he would have preferred to try the other groups’ resources himself rather than simply listening to the other groups present on them:

As the kids go up and present, they go “okay, this is what you click to get here,” and then everyone goes on their computer and clicks it. And then “okay, this how you search something,” then everyone searches their own title… so instead of just *watching* something happen as it’s done, you do it yourself so you learn “okay, this is what I clicked, this is how I would search something. This is how I make that citation.” Rather than trying to recall the lesson.

Similarly, Kovu, although at the other end of his academic career, spoke favorably of the interactive way his most recent session had been conducted, noting the teaching librarian

was very, very hands on with his students and he kind of wouldn’t move on to the next subject until everyone kind of caught on. He would go around and monitor,
which… you don’t really see that as much with doctoral students, ‘cause they kind of assume we already got it, but we do still need, you know, hands-on people, people to help us with it… so that was really, really good.

Both of Stacy’s sessions had been interactive and she shared the same sentiment as Nick and Kovu, specifying she liked being able to use the resources on the computer along with the instructor:

Watching it and I think doing it, there’s a connection in your brain where you kind of muscle memory remember “okay, click this, I did this.” So being able to see it and then experience that yourself was really helpful too.

These comments suggest technology-enabled classrooms that permit students to follow along with teaching librarians on computers may not only be preferred by students but also help them learn the content taught at the session better. Moreover, Stacy stated the technological aspect of the library instruction session was what she had enjoyed most about it:

They [the teaching librarians] had it up on the TV screen and we were able to pull it up… Elke and Lynn encouraged us to pull it up and do it with them so that we had that experience of actively, like, “okay, we know what to click now.”

In contrast, Owen was the only student I interviewed who had attended library instruction in a presentation format exclusively, stating his teaching librarian “didn’t actually do any activities, it was more like a lecture.” Of note, Owen was also the only student who had attended sessions repeatedly of his own volition, nearly every semester he had been in the program. It is possible a more interactive session would have helped Owen retain the information better so that he did not feel the need to attend the sessions
as often, especially since, as he noted, the sessions changed “not too much” each semester. However, he did not express a preference for a more interactive format in his interview.

The faculty members did not explicitly state they preferred one instruction format over another either, but their comments suggest they, like the majority of the students, preferred interactive sessions. Raj, for instance, complimented his liaison librarian’s combination use of a presentation and activities during the session:

It was great! She does a really good job. She’s really well-prepared, really good PowerPoint… the students are engaged, and then she also gives them like a little assignment, so then everyone has their own computer and they can also navigate and stuff like that.

Hayley described the sessions for her courses similarly, specifying the first 45 to 60 minutes of the sessions consisted of a presentation provided by her liaison librarian, Cecil, after which both she and Cecil would “go around and… individually help people who seem to be struggling” while the students worked on activities. Butterfly, in contrast, did not describe any activities conducted for her courses’ sessions, but as her primary teaching librarian was Andrea, who noted she conducts lecture-style sessions without activities, this was not unexpected.

Thus, there was an overall preference among participants in all three groups for in-person library instruction provided in the library computer classrooms. Most of the participants preferred an interactive session format with time built in for activities and individual practice. Several of the participants believed online library instruction
hampered interactivity and engagement, which may partially account for the overall aversion to online library instruction.

**Sub-Theme 1d: Attendance**

The students only obliquely referred to attendance in library instruction sessions in their general allusions to students not attending the sessions unless they were required, which suggests they viewed the library as a support resource rather than an instructional space. However, attendance arose often in the librarian and faculty interviews, regarding both student and faculty attendance. For instance, Andrea mentioned a credit-bearing library instruction course at FIU, stating “nobody ever registered for it because it was an elective and people don’t do that kind of thing if it’s a choice.” She thus connected the format of library instruction available to the students’ attitudes regarding attendance. Sam expressed a preference for having faculty, not just their students, attend her sessions. She noted student engagement in her sessions often depends on faculty engagement, such that if the faculty member appears to be interested in the library instruction session, their students are as well.

Not all of the faculty members, however, believed being present for the library instruction sessions was necessary. Butterfly and Hayley strove to attend the sessions, but Raj did not. Butterfly and Hayley also differed in how they saw their attendance at the sessions. Butterfly, for example, seemed to consider herself part of the audience, whereas Hayley saw herself as a co-instructor. Audrey noted this difference in how faculty who attended library instruction sessions seemed to perceive their role in the sessions, with some viewing her as a co-instructor and contributing to the session content, and others deferring to her almost entirely, speaking up only to remind their students to pay
attention. Audrey suggested this distinction varied based on both academic discipline and level, and noted that at the upper academic levels “the professor will also kind of add on to things that I’m saying and talk to them with me when they’re… doing their active learning about their topics and what they’re finding and things like that.” On the other hand, she stated that at “the lower division, they’ll just say nothing [or] the only thing they might say is ‘remember to listen to her.’”

Audrey’s observation of the different roles faculty take at the sessions was echoed in the faculty’s own comments. For example, Butterfly noted she almost always attends the library instruction sessions and when she is unable to do so, she asks a teaching assistant to attend in her place to ensure either she or her representative attends every session. When speaking of the last session provided for her course prior to our interview, she mentioned three teaching assistants had attended with her and used the phrasing “Andrea taught us,” indicating she positioned herself and her teaching assistants as part of the audience. Hayley, in contrast, strives to attend the sessions (“I usually go”) but has told the students to attend without her on occasion. When describing the sessions, she stated, “both the librarian and I would go around to help the students…. They [the librarians] will work with the students… and I’ll do it too.” Her phrasing indicates that, in contrast to Butterfly, she considers herself in the same instructional role as the teaching librarian. Raj, conversely, used to attend the library instruction sessions provided for his courses but had not done so for about two years by the time of our interview. He seemed to admit this fact with some embarrassment or guilt, exclaiming, “I feel bad!” He added he appreciates having time off when his students attend the library instruction sessions:
“for me it’s also an opportunity to let the kids go do something else and I can finish my research.”

Whether or not they attended the library instruction sessions themselves, all three faculty members required students to attend the sessions. Hayley stated the “sessions are required… you’re not allowed to be absent.” Raj also makes the sessions mandatory but noted that nonetheless some of the students “don’t show up… because it’s not a regular class so they’re like ‘aww, we don’t have to show up.’” Butterfly, who noted poor class attendance was related to poorer class performance, went further than Hayley and Raj by not just making the sessions mandatory, but also tying them to the students’ grades, assigning 10 points for attendance (equivalent to a quiz in her course). She was disappointed that several students nonetheless did not attend the sessions and attributed their absence to overconfidence: “people think they know it all but every time I go, and I’ve been going for 25 or 30 years, I learn new stuff! So how can they say they know everything?” However, she noted attendance was an issue throughout her courses, not only the library instruction session, as she had discovered years earlier to her surprise:

What I learned was that a lot of people skip class. That was so surprising to me.

You know, anyone who teaches will say “well, the class is much fuller on the day you have exams.” But that was a surprising result, that someone who didn’t go to the library, chances were they didn’t go to class either.

Thus, there was an overall belief among the participants that students would not attend library instruction sessions unless they were required to do so, and even when the sessions were required, some students chose not to attend anyway. Moreover, although the librarians seemed to want faculty to attend the sessions along with the students, some
faculty chose not to do so, whereas others attended and positioned themselves as part of the audience, and yet others attended and positioned themselves as co-instructors.

**Sub-Theme 1e: Assessment**

No formal assessment of library instruction or student IL abilities was conducted according to the participants. The primary form of feedback for all three librarians seemed to be comments from the faculty who scheduled the library instruction sessions, and it was generally positive. Audrey, for example, mentioned the “really nice emails” she receives from the faculty who schedule the sessions with her, paraphrasing one as saying “‘everyone said that they were so happy and grateful that you came to the class.’” The librarians tended to informally formatively assess their students, checking in with them throughout the sessions, whether verbally, by observing their reactions, or by using interactive polling software. Sam, for instance, uses the online polling tool Socrative to ask her students what they know about libraries at the start of a session, and to write one thing they learned from the session at the end, as well as what they wish would have been covered during the session that was not. She uses pre/post questions especially with special student groups such as international students, noting “that’s the big difference” in her instruction for international compared to domestic students, aside from a slower pace of speech because of occasional language barriers. In addition to using informal assessment with students, Andrea also asks faculty about their perception of their student’s abilities “because the professor usually has a pretty good idea before they even bring them in.” She added, “the faculty seem to think that they do better after they do the session… but that’s really the only feedback we actually do have because we don’t test them.”
The librarians want to have better indicators of what their students learned from the sessions. Audrey, for example, was unsure of the impact of her library instruction, stating that “finding out in more detail how that helped students and how they were able to apply some of these skills would be important.” She said she would like to see the students in follow-up sessions specifically in the context of assessment of her instruction, because she has “always kind of wondered” how her sessions “helped students and how they were able to apply some of these skills.” She commented she would like to see her students’ assignments after teaching them to evaluate the effectiveness of her instruction, yet Sam, who has seen such student assignments in the past, did not find them helpful in terms of assessment. Sam noted one professor had previously shared the students’ final research papers with her but did not appear to consider this form of feedback valuable: “I mean, some of them get it, some of them don’t.”

Like Audrey, Andrea mentioned she would like follow-up sessions with students, but she was skeptical of post-session evaluations: “I know we’re supposed to have those evaluations after class, but those are, to me, honestly, not very useful.” She noted it often appeared from immediate post-session evaluations that students had retained the information taught but that without practice and repetition, the students would forget the content shortly afterwards:

When you’re doing something that’s an hour and a half or two hours … unless you continue it, continuously do it after, it’s very difficult to remember. So evaluations maybe show you how well you [the librarian] explained things in terms of their understanding what you’re saying, but in terms of what they
actually learned and can continue to apply throughout all the years they’re here…

who knows?

However, she looked favorably upon “some sort of long-term assessment” that would show at a later date, such as a year after the session, what the students had learned that they were still using at that time.

Are they able to continue to apply those [skills] throughout the rest of the time they’re here or moving to… another university or a career, where they’re doing research, that’s what I would like to know. Because otherwise it’s pretty useless.

Although Andrea was uncertain of the efficacy of her current one-shot instruction, she was confident about the benefits of providing multiple sessions thanks to what she stated was the ability to assess the students and provide feedback in this format. Speaking of the previous credit-bearing IL course she had taught, she noted the credit-bearing course assignments “really did give us much more better feedback” compared to her current one-shot instruction. Her comment implies it is the one-shot session format in particular, and the limited time with the students it permits, that serves as an obstacle to assessment of library instruction.

Like the librarians, none of the three faculty members assessed library instruction specifically, but they mentioned evaluating its effects through assignments the students in their courses submitted. Both Butterfly and Hayley used what the latter called a qualitative approach she described as “I see what they send me,” but both used a quantitative rubric as well. Butterfly noted she includes several assignments in her courses that require a library research component, “twice, at least, after she [Andrea] teaches us.” Her students have an initial group assignment prior to the session “where
they just look stuff up on the Internet or wherever they want.” After the session, they give
a presentation, graded via a rubric the students receive ahead of time, that assesses
research skills the students should have learned at the session, including article relevance,
use of “at least five peer-reviewed articles,” and use of “the proper citation format.”
Butterfly noted “there’s three places in the rubric [for scoring] ‘were relevant articles
found?’” She also stated that generally “I’m judging the quality of their presentations and
the relevance and use of the literature that they find.” She added she uses group
assignments because of her large class sizes, stating it is onerous “to grade a paper from
every one of 80 students, but if they’re five people in a group, that’s a more reasonable
number of papers.”

Hayley, on the other hand, has her students individually submit articles to her that
meet certain criteria, such as being published within the last two years, using only
quantitative data, and having a sample size of 50 or greater, and likewise scores the
assignment using a rubric. She noted that although “one or two will struggle,” for the
most part her students learn how to conduct and use research appropriately. Like the
librarians, she relied on informal feedback about the library instruction sessions,
mentioning “I get students who thank me for it” (scheduling the session).

Raj similarly noted that after his students attend a library instruction session,
“their sources are better,” and he mentioned peer-reviewed sources in particular, as
Butterfly did. He said he did not directly assess what his student learned at the library
instruction sessions, but “it comes through in the final paper eventually. The quality of
the final paper seems [to] get better.” He explained that before they attend the session, his
students approach him with preliminary topics that are too broad to be usable, but after
the session their topics are refined: “she [the librarian] also helps them to look at sources, and then as they look at those peer-reviewed sources, then it helps them to narrow down their search.” Like Hayley, he mentioned his students “really appreciate what she [the librarian] does, especially if it’s their first time doing it.”

None of the students I interviewed mentioned taking any kind of assessment relating to their library instruction sessions either in their sessions or in their courses. However, all four students commented they used the information they learned at the sessions for various class and research projects. Thus, it appears the effectiveness of library instruction at FIU is being assessed only informally and indirectly, yet participants from all groups believed library instruction was beneficial. Indeed, Hayley called the sessions a “home run” because “so much was done,” stating they were “always helpful” and affirming “I will continue to do it until the day I leave.”

**Theme 2: The Purpose of Library Instruction**

Although every participant group thought library instruction was essential enough to make it a requirement in higher education, they all articulated different perceptions of its purpose. These purposes included teaching students how to use the library, various cognitive and affective goals, helping students write research papers, saving time, and using librarians as substitute instructors. Faculty generally believed the primary purpose of library instruction is to teach students to use the library and its resources, with a focus on finding peer-reviewed articles. In contrast, students believed the primary purpose of library instruction is to help them save time and be more efficient when working on research papers. Librarians, however, differed as to the primary purpose of library
instruction even amongst themselves, although all believed skill transferability was important. These sub-themes are discussed in detail below.

Sub-Theme 2a: Learning to Use the Library

Most of the librarians and faculty, though not the students, indicated one of their perceived purposes of library instruction, if not the primary purpose, was to help students learn how to use the library. For example, Audrey hoped her students would learn at her sessions how to navigate library resources and formulate questions to ask librarians as follow up. Sam, in turn, focused on students’ understanding and appreciation of librarians. When asked what she hoped her students would learn from her sessions, she immediately replied “that librarians have the best job in the world!” She added she hoped “they know they can come to us for help if they need help” and that “if they walk away with one thing, I hope it’s that they have help available.” She also stated she hoped her students would learn how to find relevant pages on the library website, but although she wanted her students to learn how to use the library (website), helping students form a positive perception of librarians and be willing to seek help from them seemed to be the most important goal of her instruction.

Although none of the faculty mentioned they hoped library instruction would help their students learn how, and be willing, to work with librarians, all mentioned they hoped the sessions would help their students learn how to use the library and its resources, taking a utilitarian perspective. For instance, Raj’s stated purpose for having his students attend library instruction was to help them navigate library resources, specifically to obtain peer-reviewed articles. All three faculty members, in fact, wanted their students to be able to locate peer-reviewed articles following library instruction.
Hayley also mentioned an assignment for which she hoped her students would use “educational websites, educational communities, research organizations,” thereby demonstrating she expects her students to use a variety of sources as appropriate to their research needs. Hayley directly stated her principal goals in requesting library instruction sessions were “two things: (1) what a great facility it is, what a great resource it is” plus (2) the value of research. She tells her students their student fees pay for the library so they might as well use it, seeming to give a transactional nature to her use of library instruction. She emphasized “I insist that all my classes, whether undergraduate or graduate, understand the [library] facilities and how to access” them. In contrast, Butterfly commented she does not include library instruction in her graduate courses because she believes graduate students “know how to use the library pretty much.” Her statement implies Butterfly believes the goal of library instruction is to teach students how to use the library. This belief was echoed by various statements she made throughout the interview, such as when she mentioned her students had previously “only been in the library for studying or going to Starbucks” and when she noted she prefers library instruction sessions that are held at the library because “it brings people physically to the library who may not ever come to the library.”

Sub-Theme 2b: Cognitive and Affective Goals

Most of the librarians and faculty also spoke of cognitive goals they had for library instruction. For instance, Audrey mentioned she hoped her sessions would lead to greater student attention, retention, and knowledge. Sam also mentioned student attention as being vital, as well as that she hoped her students would remember how to create search strategies (e.g., craft Boolean searches, use subject terms). Andrea mentioned
critical thinking several times, emphasizing this was an important skill for her students to have.

The faculty, in contrast, focused on more specific research skills than the librarians’ more general aims. For example, Butterfly directly stated, “most importantly, my goal [for library instruction] is that they should learn how to find articles on the topic that they’re researching” and that the students examine the research deeply, not superficially. Raj stated he includes library instruction in his courses because a lot of the students don’t know how to access peer-reviewed materials.

So they understand how to get a Wikipedia article or they know how to copy something from the Internet, but they don’t understand what’s peer-reviewed and what is the quality, and especially the databases are kind of complex, like EBSCOHost and all those, it’s not very easy to navigate, and then when you’re out of, off campus and it’s hard to get access, you have to do VPN and stuff like that… there’s so many databases, there’s JSTOR, there’s this, there’s that, not everything is linked together either.

Although his purpose for using library instruction thus included helping students learn how to use the library resources, Raj also wanted them to acquire the specific research skill of finding peer-reviewed sources.

Interestingly, all three librarians mentioned the importance of skill transferability as a cognitive goal of library instruction, such that they wanted their students to apply what they learned in the sessions in other contexts. Transferability did not emerge in interviews with the other two participant groups, who instead focused on more context-
specific goals such as finding peer-reviewed articles or completing course assignments. Nevertheless, Andrea stated transferability was the primary goal of her instruction:

For me the most important thing is that they learn how to think of their topic and how to figure from what it is they’re trying to find what it is they need to use. And how everything is transferable, so even though I’m teaching them something very specific in that session, because I have to use an example of… a particular database, etc., it doesn’t mean… that’s the only thing they can do with that… they can take their own subject and apply everything I’m showing to their subject and then move across all the different sources we have.

Similarly, Sam alluded to hoping her students would be able to transfer her instruction content to professional contexts, stating as an example that she teaches students in a law course to find information they can use in their firms.

The students did not discuss cognitive goals of library instruction, including skill transferability. Moreover, none of the students mentioned using what they learned in library instruction outside the academic context, or even in disciplines other than the ones for which they had attended their library instruction sessions. For example, although Owen mentioned specialized resources in his area several times and furthermore had met with his liaison librarian individually for a research consultation, he spoke only of applying what he had learned to his current research project and did not make any comments that suggested he had transferred this knowledge to other areas or projects. Indeed, all of the students tied the applicability of the library instruction content to specific research projects, naming individual assignments for which they were using what they had learned and mentioning specific resources rather than overarching skills such as
retention and critical thinking like the librarians did. The students were even more specific than the faculty, who in turn were more specific than the librarians. Whereas the faculty mentioned discrete skills (e.g., finding peer-reviewed articles) that could potentially be applied to various research projects, the students spoke of using such skills for one-time research projects (e.g., a research paper for the course for which they had attended the session), as discussed in detail in sub-theme 2c below.

Affective goals of library instruction, in contrast, came up in interviews with all three participant groups, though to a varying and lesser extent than the cognitive goals. For example, Audrey stated she hoped her library instruction would lead to greater comfort with the research process among her students. Similarly, Raj described the research process as daunting, mentioned each field requires its own unique resources, and spoke of library instruction as a way to make the process appear more accessible. Ideas related to IL self-efficacy such as these appeared often in interviews with all three participant groups, as detailed in sub-theme 3b below in the context of the influence (rather than perceived purpose) of library instruction.

Sam emphasized the affective aspects of library instruction and mentioned curiosity and engagement several times, but not all librarians and faculty agreed in this regard. For instance, speaking of a previous instruction approach she no longer used, Andrea appeared to dismiss the importance of enjoyment relative to retention, stating: “yes, it was fun while they were there, but then at the end they didn’t understand that they could apply what they had learned to other topics or to other types of research…. It didn’t help retain any more information.”
Unlike the cognitive aspects of library instruction, the students did discuss the affective aspects frequently, but in contrast to the librarians and faculty seemed to perceive changes in affect as a byproduct of library instruction rather than as a purpose. Changes in the students’ affective attitudes towards research following library instruction are discussed in detail in sub-theme 3d below.

Sub-Theme 2c: Writing Research Papers

The disconnect between the librarians’ perceived purpose of library instruction compared to that of the other participant groups was especially evident on the matter of writing. Some of the faculty, and all of the students, mentioned writing in the context of library instruction whereas none of the librarians did. For example, when I asked Raj what he hoped his students would learn from the library instruction sessions, he immediately replied “be better writers,” though this particular skill seems to be out of the scope of library instruction (I posit as a librarian myself), particularly in the one-shot format his liaison librarian provides for his courses. There thus appears to be a mismatch between Raj’s stated goal of library instruction and its purpose as perceived by librarians. It is possible he was referring to stronger student papers due to their use of higher-quality resources rather than to improvements in the writing itself, but he did not explicitly say so. Interestingly, Stacy, who was Raj’s student, believed he had requested library instruction for her class for this reason, telling me her “professor had set that [library instruction session] up because… some people… don’t have a very formal way of doing research or they maybe have never written a research paper before until they got to his class, so he just wanted everyone to be informed [and] wanted us to have that knowledge
going into this research paper and not come out blind or have… a[n] ill-quality product to
give him.”

Like Stacy, all of the students connected library instruction specifically to writing
research papers. For example, Nick said he was only using the database he had learned
about in his latest library instruction session, Academic Search Complete, because it was
required for his assignment: “we only need to bring up search results from one of the
academic searches, and so I’m using [Academic] Search Complete because it’s the one
I’m most comfortable with.” Owen remarked all students should attend library instruction
“in this degree, and all of them, because they all require research papers.” Kovu simply
stated he intended to apply what he had learned at his latest session because “I have a
paper due in Dr. Mitchell’s class.” It thus appeared none of the students considered the
library instruction session would be useful outside of the academic research context or
even in the context of information seeking for purposes other than research papers or
similar class assignments, in contrast to the librarians.

Sub-Theme 2d: Saving Time

Although they believed library instruction was important for writing research
papers, the main idea that arose across the student interviews was that library instruction
makes students more efficient researchers and helps them save time. All four students,
regardless of their discipline area or academic level, raised the goal of efficiency on their
own. For instance, speaking of the database Academic Search Complete, Nick said “that
saved me… all the time in the world.” Stacy, meanwhile, similarly remarked of
RefWorks “I’ve just been manually citing everything for such a long time and you’re
telling me I can just click and save and they’re already cited?!” Of note, both students
mentioned automatic citation functions (in Academic Search Complete and RefWorks, respectively). Stacy also spoke of Google (Scholar) searches as time-consuming and said that having library instruction earlier in her academic career would have taken down the mental toil of sitting there and doing Google searching for hours and kind of picking out all these sites and vetting them. Also the mental toil… it would have decreased the time and a lot of the stress that I went through when writing previous research papers and searching for sources, because now all that time is shortened, and now I’m like “everything is in here, I just need to know the proper search tools and what I’m looking for, and it’ll come to me.” So it takes away all that stress and it decreases the amount of time you have to spend doing that.

Like Stacy, Kovu named RefWorks as a time-saver, noting it was what he had liked most about his library instruction session: “RefWorks ‘cause that’s going to make my dissertation so much easier.” He also echoed Stacy’s sentiment regarding saving time while researching thanks to library instruction:

I’m always looking for the more efficient way to do things, so having someone sit down and kind of walk me through it was really, really good…. I think [the library instruction session]’s going to save me a lot of time because now I can get to exactly what I want to get to without wasting so much time.

He noted this was a benefit because my time is very, very limited so… if I have an hour to dedicate to writing, it needs to be to writing, and not figuring out where I need to go, how to get to this, and then I only spend 20 minutes writing. So having a very finite way to get to what I
want to get to and then get started, I think that’s what’s going to help me most. So it was quick, it was efficient, and it got me exactly to where I wanted to be within a few clicks, and I’m there, so I can get the paper, read it, and then I can start writing instead of having to “okay, how do I find this?”

Owen expressed a similar idea, noting that conducting research after library instruction was “much more efficient. It’s not easy, but it’s a lot more efficient to find what you’re looking for and don’t waste time on what you don’t need.” He specified that after attending various library instruction sessions, “it gets more and more efficient… I learn how to search, how to use search terms, it gets better and better, so I don’t waste time” and added that “how not to spin my wheels on non-productive work, that was the most valuable” aspect of library instruction.

Interestingly, as important as being efficient and saving time while researching was to the students, this idea did not come up in either the librarian or faculty interviews. Although these other groups’ intended goals of library instruction did not necessarily contradict the students’ goals of efficiency and saving time, the deeper, more critical thinking and more sophisticated research approach desired on behalf of the students by the librarians and faculty may be at odds with the students’ desire to complete their research as quickly as possible, particularly earlier in their academic careers when they are still research novices.

**Sub-theme 2e: Substitute Instructors**

Similar to their students, two of the faculty members (Hayley and Raj) spoke of how library instruction saved them time, though in a different context. Specifically, both faculty members referenced using librarians as substitute instructors. Hayley, for
example, stated she tells her students to attend library instruction without her during religious holidays, when she is unable to teach, rather than canceling her classes. Sam mentioned one of the professors she worked with did the same. Raj, in contrast, spoke of wanting more time for his research and sending his students to library instruction sessions without him to gain extra time. Indeed, Raj, who had recently applied for tenure, often mentioned needing more time for his research in the context of tenure:

I’m a tenure-track professor. So… we get tenure based on research, not really on teaching, so I can’t really devote all my time to teaching because then I would never get my research done and I won’t get tenure. And you know, I have to get grants as part of tenure, I have to get research done as part of tenure. So those are also incredibly time-consuming.

He seemed somewhat overwhelmed by the research responsibilities required for tenure, especially since he had been through the process recently, and sought resources at the university that would help him expedite his instruction responsibilities so he could devote greater time to his research. He viewed library instruction as one such resource. Perhaps students learn from faculty to view library instruction in the same manner, as a supplementary resource to aid with their efficiency, and therefore as an optional resource, leading to decreased student attendance. On the other hand, Hayley is a retired full-time professor currently working as a non-tenure track instructor, and Butterfly is a tenured professor, so it is not surprising to me that tenure did not come up in either of their interviews.

The librarians viewed faculty absences during library instruction unfavorably, and preferred that faculty attend the sessions, as discussed above. Sam said of such instances
“sometimes if they need a baby-sitter, they might say ‘can you do this for me?’” She described one recent session wherein the faculty member had requested library instruction for this purpose:

He emailed me like the day before yesterday and said “can you do the session? […] just show them, give them a tour,” la-da-da…. And he wasn’t there. So I kinda showed them around, I didn’t give them the tour, I just showed them around the databases, and I told them how great of a job I had…. I kinda goofed off with them. And then… he sent me an email the next time he saw them. He said “you know, they loved you.” And then I don’t know if he felt guilty ‘cause he gave me a gift card for Starbucks.

Sam laughed as she related the incident, but her use of the term “baby-sitter” reveals her displeasure at being viewed as a substitute instructor. Moreover, her story suggests the faculty member may have perceived the library instruction session as a transaction wherein he paid for the librarian’s role as a substitute instructor with a gift card, though Sam interpreted the gift card as a sign of guilt on his part.

In sum, although the three participant groups tended to perceive the library instruction sessions similarly, their perceived purpose for teaching, requesting, or attending the sessions differed to the extent that there was little agreement as to the purpose of the sessions between, and at times even within, the groups.

**Theme 3: The Influence of Library Instruction**

Regardless of the precise nature of the library instruction sessions, or their perceived purposes, they appeared to have an influence in various areas, namely the
students’ IL abilities, IL self-efficacy, use of research resources and requests for help, and affective attitudes towards research.

Sub-Theme 3a: IL Abilities

Although it is difficult to gauge the students’ IL abilities solely from these interviews, it appeared evident to me as a librarian which students seemed to have more robust IL abilities, based on their descriptions of how they were currently conducting research. Stacy, for example, described her research approach unprompted. Although she did not recall the names of the databases she used, the search strategy she explained was sophisticated. She demonstrated good use of keyword selection for her topic, mentioned Boolean operators (“the AND OR statements”) and applied them correctly (“I can just type in Iran AND cyber AND infrastructure”), then discussed how she approached her searches and results:

We’ll tackle it by going to the databases and… I’ll do a broad search first, so I’ll talk about Iran and cyberwarfare, Iran and cyber capabilities. And I’ll search up broad topics that’ll kind of bring me towards understanding first, I have to understand their cyberinfrastructure, how they work, and then I’ll start doing more specific searches that are more geared towards Iran and social media.

Moreover, she mentioned different publication types she used as well as several prominent names in her field, both of researchers and of organizations. Owen, who was graduating the year of our interview, as Stacy was, also named specialized databases in his discipline and described his research process.

In contrast, first-year students Nick and Kovu (at the undergraduate and graduate level, respectively) were just beginning to learn how to create research strategies using
tools more sophisticated than Google Scholar, whether these tools were introductory and interdisciplinary (as in Nick’s case) or more advanced and discipline-specific (as in Kovu’s case). Although they had good recall of the content covered in their more recent library instruction sessions (at least the content they had practiced using personally themselves), the research strategies they described were still developing, though on the right track.

Thus, it appears that over the course of their academic careers, whether undergraduate or graduate, students’ IL abilities do improve. Both of the first-year students, Nick and Kovu, still seemed to be learning about the research process beyond the basics, such as starting to use more complicated search approaches than trial-and-error keyword selection in Google Scholar. As a graduate student, however, Kovu did have a more sophisticated search strategy than Nick, such as using citations from published articles to locate additional sources, which was a result of his additional experience doing research in higher education, namely his previous Master’s-level research project. On the other hand, the graduating students, Stacy and Owen, spontaneously mentioned specialized resources in their fields and described how they used them, incorporating more advanced search techniques such as Boolean operators in their strategies.

It is unclear, however, based solely on the interviews, to what extent library instruction played a role in helping the students develop these more sophisticated IL abilities over the course of their academic careers, because of the lack of assessment in this area. Nick and Kovu specifically said they had started to learn about more sophisticated research strategies thanks to their more recent library instruction sessions.
Owen also attributed his knowledge of discipline-specific resources to instruction sessions and consultations provided by his liaison librarian. However, Stacy told me that though her first teaching librarian had mentioned how to search from broad to specific topics at the session, she had already known to do this before the session simply because of her own prior research attempts: “I picked it up generally… but also that was reinforced in our research workshop.” It may be that library instruction early in students’ academic careers serves to introduce students to research resources available beyond Google Scholar and research strategies beyond trial-and-error. Practice using these resources and strategies over time may help the students improve their IL abilities so they demonstrate stronger IL abilities closer to graduation, with subsequent library instruction later in their academic careers serving, as Stacy stated, to reinforce what they learned in earlier sessions and through their own experimentation and experiences. However, it is unclear how well the students are able to transfer such learning to different contexts, whether inside or outside of academia, as opposed to applying it to specific research projects. The students did not mention transferring their learning to varying contexts, as discussed in sub-theme 2b.

Nonetheless, the faculty members did appear to think it was library instruction specifically that helped their students improve their IL abilities, stating the sessions helped their students do better in their courses’ research-based assignments. For example, Raj stated his students’ “sources are better” following library instruction. Butterfly’s impression of her students’ IL abilities was mixed. She noted with a chuckle, “some people get the point. Some don’t.” However, she requests library instruction semester after semester because she believes it helps her students and notes the library instruction
content seems new even to her stronger students: “one thing I can see in the class, in the session, is that students who I think are pretty with it… it might be very new to them. ‘Oh, I didn’t know that we could use this stuff.’”

On the other hand, the librarians appeared to doubt whether the library instruction sessions they taught were having an influence on their students’ IL abilities. Audrey, for instance, mentioned she has “always kind of wondered” about the impact of her instruction. Andrea mused “what they actually learned and can continue to apply throughout all the years they’re here… who knows?”

Thus, although the students closer to graduation appeared to have stronger IL abilities than the first-year students in the study, the influence of library instruction on the students’ IL abilities cannot be assessed based solely on these interviews. Although faculty believed the library instruction sessions helped their students improve their IL abilities, the librarians were unsure. The students, like the faculty, tended to attribute improvements in their IL abilities to the sessions, but the extent to which it was the sessions that caused the improvements relative to practice and experience is unknown, and likely to remain unknown without formal assessment.

Sub-Theme 3b: IL Self-Efficacy

The students’ IL self-efficacy did not necessarily match their IL abilities. Three of the students (Nick, Stacy, and Owen) appeared to have high IL self-efficacy, but one (Nick) seemed overconfident relative to his IL abilities. Specifically, Nick stated he did not think he needed to attend another library instruction session again in the future because “I was able to grab everything just then and there.” At the other extreme, Owen voluntarily attended nearly every library instruction session offered to him because he
believed “it really has helped me write my papers ever since the first one in 2014. Every semester… I try to go, because I knew that it was going to help me write my research papers.” However, he seemed confident in his research strategies by the time of our interview, though he still sought his liaison librarian for research advice in individual consultations. Like Owen, Stacy seemed confident in her research abilities and, as stated above, her seemingly high IL self-efficacy seemed to correspond with her strong IL abilities. Kovu, in contrast, made several comments throughout his interview that suggested he had low IL self-efficacy and was still learning how to approach research: “we [graduate students] do still need hands-on people to help us with it, ‘cause I had no idea”; “there’s a big assumption with graduate students, ‘cause they assume we already know, which we don’t most of the time”; and “I wouldn’t even know where to begin.” Such comments suggest Kovu, unlike Nick, is aware of what he does not know and thus has adjusted his IL self-efficacy accordingly to be more in line with his IL abilities.

Several of the students specified library instruction had made them feel more comfortable with the research process, which suggests library instruction helps improve IL self-efficacy. Hayley pointed to increased student IL self-efficacy as one effect of library instruction, stating what she liked most about the sessions was “the fact that the students left feeling more confident… about the databases.” She explained each library instruction session “helps [student] confidence, helps them appreciate research, and also get coursework done.” Moreover, she mentioned that before library instruction, her students are “so overwhelmed and the anxiety level goes way down” afterwards, referring to an increase in their “confidence level.”
None of the librarians named increased IL self-efficacy as an influence of their instruction, however. As discussed in sub-theme 2b, the librarians did cite ideas related to IL self-efficacy as their perceived purpose of library instruction, such as Audrey’s hope that her sessions would help increase her students’ comfort with the research process. However, they were not certain whether their instruction truly has an influence in this regard, once more demonstrating a disconnect between the perceived purpose and influence of library instruction.

Furthermore, from this participant group, only Andrea mentioned she believed students were overconfident in their research skills. She spoke of a recent “emergency session” in which a faculty member requested immediate library instruction because her doctoral students, who were working on their dissertations, had turned in poor quality research papers. Andrea remarked she had said to the students at the session: “well, I hate to tell you this, but the reason why you’re in this room is because whatever you think you’re doing well is not working. Your professor really doesn’t think it’s working.” Interestingly, the professor she mentioned was Butterfly, who told me in her own interview that “people [referring to students] think they know it all.”

Thus, though it is not possible to know solely from the interviews whether library instruction influenced students’ IL self-efficacy, the students and faculty appeared to believe it did whereas the librarians hoped it did. However, this perceived improvement in student IL self-efficacy could potentially be problematic since the students I interviewed tended to have high IL self-efficacy following library instruction whether or not it was in proportion to their IL abilities.
Sub-Theme 3c: Use of Research Resources and Requests for Help

Although their influence on the students’ IL abilities and self-efficacy was uncertain, the interviews strongly suggested that library instruction sessions changed the students’ use of research resources. Prior to library instruction, most of the students (Nick, Stacy, and Kovu) reported using Google Scholar for their research, often as their principal research resource, even though they were not completely happy with it. For example, Nick referred to his information seeking using Google Scholar prior to the session as a time-consuming, trial-and-error process:

That took a lot of research, maybe two or three days alone…. it was hard because I actually discovered… I had to get more specific… and I had to really focus in on the words to get what I was looking for. And even then it was hard ‘cause a lot of the articles were outdated.

Although he stated he “was panicking, just ‘I need to find results,’” he also mentioned that “for the most part I was pretty happy with what I found, what I was able to convey [but] I wish I could have gotten some more specific details like more names or more historical records.” Like Nick, Stacy described her use of Google Scholar before the sessions as time-consuming, stating she “would click Google Scholar, and it would kind of filter you towards like academic journals and things like that but also Google searches are so large and varied so I would just be clicking through sources and sources.”

Even as a graduate student working on his second graduate degree, Kovu reported he had used “mostly Google Scholar” for research to date like the undergraduate students had, stating “that was our biggest thing [in his discipline].” However, he noted “Google
Scholar wasn’t much help, especially in the education field” in which he is currently taking classes. He added:

The university [where he completed his undergraduate education] had databases but I wasn’t very familiar with how to access them correctly…. I don’t think most people are familiar with the library databases and how to use them, but that’s coming from my perspective, but based off of my Master’s and how many people were lost in the actual session, I think that’s something that everybody should do.

Some of the faculty likewise commented on their students’ use of Google Scholar. For example, Butterfly noted Andrea had added instruction of Google Scholar to her sessions in the last four or five years. Butterfly’s opinion of Google Scholar did not seem to be high, and she characterized it as a commercial site that is “not as objective,” which Andrea had stated at the session. However, she commented her “students are using it a lot” and described it as “a shortcut, a fast way, of getting to know about something.” She remarked that after recently using Google Scholar herself for the first time, she had “thought ‘this is why the students use this.’”

Despite the prevalence of the students’ use of Google Scholar, only Nick mentioned having been taught how to use Google Scholar at his library instruction session, though Andrea, Butterfly, and Sam all mentioned having covered Google Scholar in their (course’s) library instruction sessions. Andrea positions it as a “supplement or complement” to the databases. Although Nick was taught by a different librarian (Sam), he had learned to use Google Scholar as a complement to library databases, rather than using the databases instead of Google Scholar. After his most recent library instruction session, he stated he was still using Google Scholar to search for
articles, then searching for the articles he found using that search engine within the Academic Search Complete database to use the database’s more robust filters. He stated he was aware there is no need to use both resources yet does so nonetheless:

I am using [Google Scholar]… it’s sort of necessary because the [Academic] Search Complete is so extensive that you really don’t have to use it, but there are some things in Google Scholar, certain articles, that aren’t on [Academic] Search Complete, just by the nature of the two programs…. And I’m also referencing back to the website itself, so if I look it up on Google Scholar and see it there, I’ll maybe go back to [Academic] Search Complete and see if it’s on there ‘cause in [Academic] Search Complete, you do have all the options you can use.

However, he was the only student who mentioned still using Google Scholar after library instruction.

Interestingly, Nick mentioned he had learned at the session to link his FIU account to Google Scholar, but had misconstrued the reason for doing so. Although such library linking is done so that affiliated users will be able to view articles included in Google Scholar results free of charge, Nick had understood the purpose of this linking was evaluative in nature. He believed the library had evaluated the results and deemed them appropriate: “you’re not just pulling out of thin air, it’s articles that the library itself says ‘yeah, these are good,’ not just, you know, some dude in his basement writing a blog post that pops up.” Nick seemed to have delegated the source evaluation process entirely to the library after his instruction session, whether warranted (e.g., Academic Search Complete) or not (e.g., linking a library account to Google Scholar):
Academic Search Complete. We used that one, and I actually enjoyed it so much that for my paper I do next week, I’m actually using that one…. It’s extremely helpful because everything is there for you. And you know it’s all valid articles. He specified that learning about the library databases is “definitely keeping me only using academic journals or reviewed journals or something that I know for a fact is legitimate and it’s not someone’s bias.” Likewise, Stacy stated she had needed to be mindful of evaluating her results and choosing credible sources prior to library instruction, but after attending library instruction this seemed to be less of an issue for her:

After the sessions… a lot of those things are consolidated into those databases, like JSTOR, so you don’t have to second guess. You’re like this is coming from here, I know for a fact they wouldn’t put miscellaneous or misinformed articles or news sites in here, if it’s not a credible source… there is a reason they’re in those credible databases. They’ve already been vetted.

Most of the students mentioned source evaluation to some extent, although they prioritized different facets of evaluation. For example, both of the undergraduate students mentioned credibility whereas both of the STEM students mentioned currency. However, interestingly, the graduate students appeared to be less interested in evaluating the sources they found than the undergraduate students. Owen did not mention any type of evaluation whatsoever and Kovu only mentioned using recent research in his discipline:

When we create something in computer science it has to be original or something tied into something as being done at the moment. So they really frowned upon
using papers from like the 70s, the 80s, the 90s. They had to be something that was current.

Perhaps their lack of comments about source evaluation could be attributed to a belief that by this point in their academic careers, graduate students have already developed a sense of which sources are appropriate to use and which are not, particularly in their discipline area, as Kovu suggests, and therefore no longer feel a need to vocalize their evaluation process.

Regardless of their (vocalized) evaluation process before or after attending a library instruction session, none of the students reported using databases prior to library instruction yet all of them mentioned using them after library instruction. Nick, for example, stated his “biggest change [following library instruction] is I’ve definitely been keeping with those search engines [sic] and using them.” He added “I’m using [Academic] Search Complete because it’s the one I’m most comfortable with,” suggesting he chose this database because of his familiarity with it, as this was the database his group had explored and presented on during his most recent library instruction session. Nick also mentioned using the Discovery search on the library website, which is a Google-like interface that searches a variety of library resources, meant for introductory users. None of the other students mentioned using it. However, Owen did mention using an “advanced search” on the library website, but did not elaborate; this may have been a reference to the Discovery search.

The more advanced students (Stacy, Owen, and Kovu) mentioned using specialized databases that were applicable to their current research fields rather than interdisciplinary ones. Stacy did not recall any database names (except JSTOR, which she
mentioned in contrast to the ones she currently uses as an example of a resource that was
too general), but her search strategy was sophisticated, as discussed above, and she
mentioned a LibGuide her first teaching librarians had created for her program, which
included links to databases. She described the LibGuide as

  a website that had basically all the databases that pertain to us, so like anything
  that had to go with government, international relations, intelligence databases, all
  those, they compiled those for us so that it’s easier for us to specifically go
  through those.

She also mentioned several searches she had conducted using the resources on the
LibGuide, which she said was “very easy to follow.” Owen, in turn, mentioned both
LAPOP and HAPI by name, and Kovu mentioned ERIC by name. Both the graduate
students were able to describe what the databases’ specialties were and how they
did/would use it. Kovu mentioned learning about an additional database during the
session (PsycINFO), but did not recall the name of that one. He said most of his more
recent library instruction session had been devoted to learning how to use ERIC.

  Furthermore, three of the four students (Nick, Stacy, and Kovu) mentioned
citation managers and other similar citation functions in particular as being beneficial to
them, and stated they greatly appreciated learning about them at their library instruction
sessions. Speaking of a limited citation manager Nick had used in high school after a
teacher’s recommendation (Citation Machine), Nick said he had been unhappy and
appeared unconfident: “I’d have to mash it together as best as I could.” In contrast, he
stated he liked the citation feature included in the database Academic Search Complete.

Stacy and Kovu, in turn, both praised RefWorks highly. Reflecting on her first library
instruction session, during which she had initially learned about RefWorks, Stacy exclaimed “excuse me, hello! I’ve just been manually citing everything for such a long time and you’re telling me I can just click and save and they’re already cited?!?” Kovu, who stated learning about RefWorks had been his favorite part of library instruction, said the resource “was going to make my dissertation so much easier,” adding

I’m still learning APA format ‘cause we didn’t have to submit as many papers, so just being able to cite in APA without having to actually take the time to do it, and I don’t know how many papers I’m going to use, to keep a running bibliography is my favorite part [of library instruction].

He and Nick thus seemed to relate the benefits of citation managers and functions to their lack of confidence in being able to use citation styles properly. Perhaps this is because they were both first-year students and, although Kovu already had a prior graduate degree, he noted his current degree is in a different field and he is therefore unaccustomed to working with the citation style (APA) used in his new discipline.

Neither the librarians nor the faculty I interviewed knew which research resources their students used following library instruction, as none of them had observed their students doing research or heard from the students themselves in this regard. The faculty members saw only the results of their students’ post-session research (e.g., their assignments and reference lists) whereas the librarians for the most part had no indication of how their instruction had influenced their students’ research process. Thus, the students’ own reports of their use of research resources is the only indication of how library instruction influenced the students’ research process. Nevertheless, it appears all the participants believed library instruction is highly effective in encouraging students to
use library resources such as databases, whether as replacements for or complements to their pre-library instruction reliance on Google Scholar.

Moreover, the students often mentioned they had relied on teacher and faculty, but not librarian, recommendations for research to varying degrees prior to attending library instruction sessions, in addition to using Google Scholar. Stacy, for example, specified “certain professors would recommend certain databases or websites that you could get your information, credible sources, so I’d go either straight to those and see if whatever I needed was in there, or I would just Google search.” Her current mentor, who was serving as her advisor for her fellowship program, was the first person who had helped her start her current research project:

When I started this research project, I talked to my mentor and I literally told her I was, like, “where do I start?” And she was like, “well, ask yourself these questions. This is your topic, ask what needs to be answered in order for you to achieve your answer, basically. What are questions that need to be asked to achieve the answers?”

Kovu likewise relied on his advisor for his previous research, specifically using his previous advisor’s papers as a starting point to gather references:

I used some of my advisor’s old papers and used some of his references ‘cause he was doing exactly want I wanted to do at the time. So Google Scholar was a big tool, using my advisor’s papers that he published as well, using that and clicking on those references and seeing what papers he read and where to get to those.

Owen, in contrast, had sought research help from his peers prior to library instruction, noting he was not happy with what he had been told:
Before I started this Master’s degree…. I really didn’t know how [to do research], it was hit and miss. I sort of guessed where to go to look for sources…. I’d usually do it here in the library and I’d ask another student. And what they told me wasn’t always the best way to do it.

Notably, although he had been present in the library building, he had sought research help from other students rather than librarians prior to attending library instruction.

Following library instruction, only Owen mentioned meeting with a librarian individually for a research consultation, and he seemed happy with the advice he had received. Thus, the students’ comments suggest that prior to library instruction, students request research help from their (non-librarian) instructors and peers, but not librarians. Although the present participant pool is too small to make any conclusions on this point, based on Owen’s comments it is possible students are more likely to request help from librarians following library instruction.

Sub-Theme 3d: Affective Attitudes Towards Research

Affective attitudes towards research and library instruction came up in interviews with all three participant groups, to varying degrees, and there were clear differences in the affective connotation used when describing research before and after library instruction. Among the three participant groups, the students spoke of affect in the context of the research process most often. When describing their research process prior to library instruction, they frequently used negative affective terms. For example, Nick stated “I would get annoyed” when doing research prior to library instruction and noted the session.
very much clarified how the library searches work and it’s made them less
daunting. ‘Cause when you first go on it yourself, you’re just presented with this
huge database that says “okay, look for something,” but when you’re instructed
with someone directly in front of you, and they give you that leaflet that you do it
yourself, it becomes a lot more manageable. It actually becomes fun.

He explicitly linked increased knowledge of how to conduct research with increased
enjoyment while researching: “you learn ‘ok, what words can I put in that will work more
as a keyword and what words will act more as a distraction.’ And so it becomes more fun
and more enjoyable when you do that.” In addition, he described the session itself as a
positive experience: “it definitely felt more like a scavenger hunt, less like an
assignment.”

Stacy spoke of how library instruction had abated the negative emotions
associated with research she had felt prior to attending the sessions, specifically the stress
she had experienced: “now I’m like ‘everything is in here, I just need to know the proper
search tools and what I’m looking for, and it’ll come to me.’ So it takes away all that
stress.” Like Nick, she explicitly linked increased knowledge of how to conduct research
with decreased stress while researching. Owen likewise associated decreased difficulty
researching to increased enjoyment of the research process:

I don’t want to use the word “easy,” but technology makes research now much
more efficient and productive…. In my Bachelor’s degree, I hated writing
research papers ‘cause you had to go to the library and… you had to look through
little cards, then go find the book... I hated doing that. Now I love it!
Compared to the other students, Kovu used fewer affective terms to describe his research and library instruction experience, but he expressed positive emotions when speaking of his most recent session, stating he “really enjoyed it.”

In addition, having a personal interest in their research topics, whether used for practice during the library instruction sessions or for formal research projects, was important to all the students. Nick stated “having free range of whatever topic we wanted to search up [during the session] was really cool.” He remembered the topic another group had chosen for their presentation (a recent pop culture event), yet not the resource they had used to find information on that topic. Kovu likewise mentioned using a topic of personal interest to practice during the session: “we would type in things that we were interested in and then see what papers we could pull up based off of that….. One of mine was HBCU computer science and African American, and [we would] see what would pop up.”

Unlike Nick and Kovu, who are still in the first years of their programs, Stacy and Owen, who were close to graduation, were working on long-term research projects. Stacy explicitly stated, “I think if you pick a topic that you’re interested in, it’s easier for you to research because you’re actually interested in looking up these documents and reading them and being all ‘okay, this is why they do that.’” She stated that when starting her current research project, she already had a topic in mind ‘cause I saw an NPR article where they noted that they found this event occurred, the information campaign, and it wasn’t specific in nature but it showed implications… and I thought “okay, this is a good topic to go with.”
Owen is likewise doing research of personal interest as part of his internship. Both students expressed that having a personal interest in their research topics made the research process more enjoyable.

Of the faculty members, Hayley mentioned the affective influence of library instruction most frequently. She stated each library instruction session “helps [students] appreciate research,” noting that before library instruction, her students are “so overwhelmed and the anxiety level goes way down” afterwards. Hayley remarked she also works to ameliorate their research anxiety herself, telling them “don’t let the research overwhelm you because I’m going to walk you through it.” These comments of hers perfectly parallel the students’ own comments about how library instruction helps abate the stress they felt while conducting research prior to attending the sessions.

Audrey hoped her students would feel comfortable with the research process following library instruction, as the students said they did. Similarly, Sam spoke of the effects she hoped her library instruction would have using positive affective terms, explaining she wanted her students to think of librarians as approachable and available to help them. In contrast, Andrea did not seem to think affective outcomes were as important as cognitive ones in library instruction, as stated above in sub-theme 2b.

Thus, library instruction appeared to positively influence students’ affective attitudes towards research, whether the librarians made it an intentional aim of their instruction or not. Prior to library instruction, students, both in their own words and in the words of their faculty, tended to perceive the research process discouragingly, using negative affective terms such as annoying and stressful. However, they tended to describe library instruction sessions using positive affective terms such as fun and enjoyable.
Notably, the positive affect associated with library instruction extended to research conducted after the sessions, such that the students likewise described the research process following library instruction using positive affective terms, commenting that it seemed less stressful, less daunting, easier, and even fun; or, as Owen exclaimed, “now [they] love it!”

**Theme 4: Relationships with Librarians and Libraries**

Often extending beyond the context of the library instruction sessions, the participants frequently spoke of, in the case of the students and faculty, their relationships with librarians and libraries both past and present or, in the case of the librarians, their relationships with students and faculty.

**Sub-Theme 4a: Librarian-Student Relationships**

The librarians tended to speak positively of students, and all the students spoke positively of their teaching librarians at FIU. However, different aspects of the teaching librarians appealed to the students, whether their enthusiasm, expertise, or instruction approach. For example, Nick praised Sam’s enthusiasm and noted the way she provided feedback in a reassuring manner, pre-emptively addressing student questions:

Whenever a group finished presenting, if there was something they might have missed or they would miss, she would jump in… it was awesome. So she wouldn’t jump and say ‘hey, you forgot to do this.’ She would raise her hand like a student and ask a question that we would all have asked, but none of us wanted to raise our hands… you know, there’s this whole thing, when you’re a student of, if you raise your hand and your question’s dumb, everyone’s gonna judge you for it. I remember how many times the teacher says, “there are no dumb questions.”

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Someone’s gonna say “that was dumb.” And so, the way she would handle that was just really cool.

Similarly, Kovu praised his teaching librarian’s approach to instruction, stating “he did a really good job” and highlighting how “he was very hands on” in particular.

Owen, on the other hand, praised his teaching librarian’s expertise rather than enthusiasm, noting she “didn’t need any [supplemental] materials.” Moreover, he seemed to trust her advice, not only her knowledge, mentioning how he had chosen to use (or not use) resources for his current research project based on the recommendations she had shared with him at a recent consultation. Like Owen, Stacy spoke of one of her teaching librarian’s knowledge and followed her advice:

Elke was telling us how to use the AND OR statements and the different databases. She told us it’s always good to start broad, especially if you don’t have a topic or if you’re trying to figure out what your topic is. And then dive deeper into what you want to search for.

The students further suggested ways to strengthen future librarian-student relationships. For example, Stacy stated the library should conduct more marketing and hold workshops for departments rather than for specific classes in order to facilitate such relationships:

They [library instruction sessions] can be more garnered towards specific majors so that people can come in… worked with a librarian, were like “hey, we want to create this opportunity for our students to know, learn how to research specifically within our field.”
Similarly, Kovu emphasized collaborations between students and library staff, particularly early in academic careers:

There’s not much interaction between the library staff and the students unless they come to the library. So having something that sits the librarians down or the people who actually are involved, get those people with the students. Especially the freshman class.

Amusingly in light of first-year student Nick’s comments regarding his experience with peer instruction, Kovu incorporated peer instruction into this plan for library instruction: “the next year, you can have those freshmen, those sophomores now, lead some of the sessions. That way you keep the students involved.”

Sub-Theme 4b: Librarian-Faculty Collaborations

Like the librarian-student relationships, librarian-faculty collaborations were described in positive terms by members of both participant groups, though the librarians noted that not all the departments they worked with asked for library instruction or, as Andrea stated, some departments “don’t have much use for [her]… in terms of instruction.” However, all three faculty members I interviewed had been including library instruction in their courses for many years. They had worked with their liaison librarians almost exclusively (although the individuals in those positions varied over time due to staff changes) to provide instruction for their courses, and maintained long-term collaborations with their liaisons. Similarly, all three librarians seemed to have good collaborations with at least a few faculty members in their liaison areas, some of which had been long-lasting and evolved to become more social over time. Both Andrea and Butterfly, who have been working together to provide library instruction for Butterfly’s
courses since Andrea started at FIU two decades ago, mentioned each other at various points throughout their respective interviews, always in positive terms. Audrey told me some of her collaborations with faculty had transformed into more “friendly relationship[s],” sharing how the day after our interview, a faculty member would be “meeting me in my office and then we’re going to an Asian place for lunch.”

The collaborations did not strengthen only socially but also professionally over time. For example, Sam spoke of working with one particular professor for 16 years, Professor Terry. This long-standing collaboration had become a partnership that had helped facilitate library instruction particularly in the online environment: “Professor Terry says ‘I’ll monitor the chat,’ but we’ve been doing this for so long I know she knows when to chime in. ‘Sam, show them this! Don’t forget that.’” She has worked with Professor Terry both in person and online and referred to Professor Terry as her “test case,” explaining “I try new things with her.” Professor Terry in turn suggests new approaches for Sam’s instruction:

She’ll say, “Sam, we need to change this stuff, what you do think?” And we’ll meet, play around, kind of try different things, and she’ll say, like when we’ve done the group thing and face-to-face, she’s like “how can we do this online?” And I’m like “if you got any idea, let me know.”

Interestingly, despite the long-standing, mutually collaborative nature Sam described between Professor Terry and herself, she used Professor Terry’s title and surname throughout the interview, which appeared to suggest a professional distance remained between them. However, when I inquired with Sam about her relationship with Professor Terry following the interview, she clarified she calls Professor Terry by her
title and surname only in the instruction setting in front of students. Outside of class, she
refers to Professor Terry by her first name, Maggie. Sam further clarified her relationship
with Maggie is indeed friendly to the point of exchanging hugs as greetings, and upon
reflection suggested she may have used Maggie’s title and surname in our initial
interview because the interview seemed formal to her, not the relationship.

The faculty members, correspondingly, were effusive in their praise for librarians.
For example, Butterfly referred to her collaboration with Andrea as “she helps me teach
my students.” She stated Andrea “does a really good job,” and particularly commended
her rapport with the students, noting Andrea “connects with the group on a more personal
level.” Hayley likewise said her current liaison librarian did “very well” at the instruction
sessions he provided and that she was “very impressed,” complimenting his “time and
patience” in particular. She also mentioned she had worked with librarians at her previous
universities throughout her pre-retirement academic career.

Furthermore, Raj spoke of his collaboration with his liaison librarian, Lynn, not
only for instruction, wherein he complimented her teaching approach, but also for
collection development. He stated

Lynn’s been really good also in working with me to buy the materials. So when I
first came here, there were almost no [discipline-specific] materials, it’s like
really nothing is available, and then we just put in different requests and then
eventually we built up a really good library collection here.

His use of the pronoun “we” positioned Lynn as a collaborator. He had been working
with her since beginning his employment at the university and noted he appreciated her
organization and flexibility, sharing how the semester of our interview
the date [of the library instruction session] didn’t really work with her or
something like that and I was like “look, this is the only day I can do it,” and then
she arranged her schedule and made sure it could work. So she’s very flexible.

Moreover, Raj praised not only his specific liaison librarian, but also the FIU Libraries at
large, with comments such as “the librarians are really impressive here” and “the library’s
just amazing… you guys have so many good ideas for library stuff and… I think you
guys are doing a really good job for what you have.”

In their interviews, the librarians discussed different ways of establishing such
collaborations with faculty. Audrey, for instance, spoke of introductions to faculty
provided by university staff and administration, mentioning two associate directors who
facilitated introductions for her. She stated one associate director
does everything for me. So she tells people when they’re new to the department
that they should get in touch with me and that’s how I end up doing like a million
of them [sessions] because she heavily promotes library instruction and always
tells people to contact me, so I get referrals from her all of the time.

Another associate director “adds me to emails all the time, or forwards me something and
then… copies me on an email and says ‘I’ve copied Audrey, so now get in touch with
her.’ So, she also does a lot of that for me.” Audrey generally seemed to support a top-
down pathway to establishing librarian-faculty collaborations, additionally sharing an
anecdote about the elimination of library instruction at an academic library where she
previously worked due to the leadership at that institution not understanding its
importance.
In contrast, Sam spoke of a bottom-up pathway to establishing such collaborations. Specifically, she mentioned meeting many faculty at an annual on-campus conference at which she staffs an exhibition table each year. She explained how faculty approach her at this conference to ask questions about library resources and she uses the opportunity to note their names. Following the conference, she follows up with them by email, and when the faculty members reply, new collaborations emerge. Of note, Sam described herself as outgoing, stating she also attends other, more informal events on campus frequently: “I think that’s how I build relationships, just being… me. You know, I’m open, I’m chatty, I visit.” However, she notes faculty at these informal venues tend to be resistant to collaborating with librarians, believing their students do not need library instruction: “they give me a hard time. I don’t know if they’re non-library lovers but they give me a hard time, like ‘oh, no, my students don’t need that. They can find everything on their own.’” She states she does not argue in these cases, but rather listens and invites the faculty to library events, noting she has seen some of these faculty attend such events in the past regardless of the beliefs they previously expressed about library instruction.

Although the faculty did not discuss establishing collaborations with librarians to the same degree the librarians did, Raj mentioned one possible venue for enabling such opportunities. He spoke of his role in his unit’s Library Committee, wherein faculty chosen as representatives for the committee by their departments regularly meet with the librarian chosen as a representative for the committee. Raj had met Andrea on this committee and, moreover, although I interviewed Raj thanks to an introduction facilitated by his liaison librarian, he had previously met me at this committee as well when I...
substituted for a colleague several semesters ago and indicated during our interview that he remembered our prior meeting.

**Sub-Theme 4c: Librarian Names**

Despite the positive terms they used to describe their relationships with librarians, it became evident the students rarely recalled their librarians’ names. For example, Stacy had been taught by three different librarians, including her liaison, but only remembered the name of one (not her liaison), not even the one who had taught her just two weeks before our interview. Moreover, she forgot the name of one of the librarians who had taught her during the interview, after I mentioned it near the start of the interview when she made it clear she could not recall it. Kovu also did not remember his teaching librarian’s name, despite attending the session just a few days before our interview. Moreover, though I mentioned the name of Nick’s more recent teaching librarian (Sam) first in our interview, and thus cannot know if he would have brought it up spontaneously, he did not recall the name of the librarian (Audrey) who had taught him during a previous semester.

In contrast, Owen did remember his teaching librarian’s name and, furthermore, was the only student who had met with his teaching librarian outside the sessions, for an individual research consultation. This may suggest that students who remember their teaching librarian’s name are either the ones who attend multiple sessions with them or are the ones who (intend to) meet with them for individual appointments following the sessions, both of which only Owen did of the four student participants. It also suggests teaching librarians are perceived by students as a role (“the librarian”) rather than as individuals.
On the other hand, the faculty members all recalled the names of the librarians they worked with, not only in the present, but in the past as well. For instance, Butterfly had worked with several librarians prior to Andrea’s employment and was still able to recall their names (with varying degrees of certainty) decades later. Likewise, Hayley, who had worked with FIU librarians for most of the decade-plus years she has taught at FIU, recalled some of their names, especially the name of her previous liaison librarian (who retired a few years ago). Their recollection of the librarians’ names may indicate how closely the faculty worked with them repeatedly over time, as opposed to the students’ one-shot sessions, but may also be indicative of the more balanced and personal nature of the librarian-faculty relationship compared to the librarian-student relationship.

**Sub-Theme 4d: Image of Librarians**

Interestingly, despite their overwhelmingly positive relationships with, in most cases, multiple librarians, the faculty members seemed to have a stereotypical image of what a librarian “should” be, whether they held this belief themselves or instead attributed it to others. For example, Butterfly specifically said of the way Andrea interacted with students: “I like it [the personal rapport] so much because people sometimes may have a vision of what a librarian would be.” However, though she called Sam’s videos (in which she humorously introduces herself to online students) “very cute,” she noted she had been taken aback by Sam’s informal approach at first: “when I first saw it, I thought ‘what?! What is this?!’” She added she now likes the videos because “this gets people interested,” but her statement implies Butterfly’s image of what a librarian “should” be envisions someone who is formal, which is why Sam’s more playful approach in her videos initially surprised her. Hayley, in turn, expressed doubt the
term “librarian” was still used, suggesting she considers the term, and perhaps with it the image of librarians, somewhat outdated.

Raj, on the other hand, discussed how he held a negative view of the librarians he had worked with as a graduate student while studying abroad:

I hate to say this, but a lot of them are also failed academics, so they were never able to get an academic position or something like that, so I think some people are very bitter and they make life very difficult.

In contrast, speaking of American librarianship, he said he thought library science tends to be a more highly “developed field” in the United States and that American librarians are more “politically active” and have “a moral dimension,” highlighting the librarianship emphasis on access to all and commenting that American librarians have taken strong stands against federal governmental data collection of patrons. He made a point of distinguishing American librarians from the non-American librarians of whom he had a negative view:

I’ve just been really impressed with the American librarians. It’s a whole different approach to thinking about libraries and access and stuff like that. [Abroad] the idea is that you’re a librarian, which means that you’re guarding a treasure, the materials, so you kind of don’t want people to access it, or you create a lot of problems for people to be able to access materials. So only certain people with certain affiliations or certain connections can kind of get materials. And in the United States, I mean, especially with interlibrary loan and stuff, the idea is, “we want it to be really available to everybody.”
The students did not speak of librarians generally, though they commented on the individual librarians they had met. Among the librarians, however, Sam in particular seemed concerned about how librarians would be perceived by students. Seemingly reacting against the image of librarians as formal, outdated, and/or bitter that the faculty members alluded to, she emphasized “I hope that they [students] realize we’re fun people. And I hope that they see my enthusiasm about my profession. I honestly do.” Emphatically, she closed her interview by commenting “I do enjoy trying to maybe just have a little light bulb go off in a student’s head with what they’re finding or at least ‘oh, yeah, librarians are cool.’ [laughs] Remove the stereotype, if nothing else.” Fortunately, Sam seems to have been successful in this regard, since her student Nick remarked in his interview, unprompted: “Sam herself was fun. She wasn’t just there like ‘I have to be there to teach you guys,’ she enjoyed it.”

Sub-Theme 4e: Personal Connections to Libraries and Librarianship

Curiously, the students seemed to express more personal relationships with libraries as institutions than with librarians as people, as most of the students made comments reflecting their past, current, or hoped for personal connections to libraries. Stacy, for example, told me her mother used to take her and her brother to the library as children, where they had been allowed to check out 10 books at a time. She mentioned her love of libraries and said “I just want more people to [go to] the library,” stating she had decided to be interviewed for the present study as a show of support for the library. Owen, in turn, mentioned he had recently been hired to work in a library-related position. He said he had commented to his wife that my invitation to participate in the present
study had seemed to be fate, and inquired if he could contact me when he started his new position for advice (to which I gladly agreed).

Moreover, some of the students made affectionate comments about the library as place. For example, Stacy emphasized the importance of using the library as a physical location:

I just think getting students to use it [the library] and understand the importance of it is the bigger issue. ‘Cause kids, they’re like, “okay, go to the library,” but then they bring their MacBook and they open it up, and they start searching on there. That’s not going to the library! You’re just using your own personal library. The library is around you! Learn how to utilize that.

Like the students, all the faculty members spoke about personal connections to libraries, but unlike the students, they also spoke of personal connections to librarianship; that is, they felt ties not only to the institution but also to the profession. For example, Hayley said she thought she could be made an honorary librarian herself because she worked with the library so much. Butterfly mentioned she had started working in libraries at the age of 15, as a page at the children’s department of her local public library. At the end of the interview, she said, “I have to say to you, I always thought I would like to be a librarian.” She stated she had “librarian friends” and spoke proudly of a family member who had recently started working as a public librarian. Though the profession’s transition online seemed to have diminished her personal interest in a career as a librarian, Butterfly still seemed very fond of libraries and librarians, which may account for her strong and lengthy collaborations with librarians to provide library instruction in her courses over the years (not to mention her willingness to participate in this study).
Like Butterfly and Hayley, Raj seemed to work more closely with the FIU Libraries than the average faculty member, as indicated by his service as chair of his unit’s Library Committee. In addition, like his student Stacy, he shared a childhood anecdote regarding his early use of libraries with me that seemed to show his fondness for libraries:

We used to go to our community library, my mom used to check out books… when I was a kid at our little library… we used to go on a Friday, and we used to check out like 30 books, storybooks, and we would have a slumber party and read books.

In sum, the students and faculty interviewed overwhelmingly described libraries in positive, often enthusiastic terms that verged on affectionate. Several of the participants (Butterfly, Raj, and Stacy) willingly shared childhood memories of visiting or even working in libraries. Such early experiences are beyond the reach of the academic library but suggest individuals such as these who are predisposed to feel favorably towards the academic library may serve as library advocates on campus, requesting library instruction for their students in the case of faculty, or encouraging their peers to attend library instruction and use its resources in the case of students. In such a manner, they may spread both their fondness for and use of the academic library among colleagues and peers who did not have such positive early experiences with libraries themselves, and several of the participants made suggestions to this end. Kovu, for example, recommended the library use peer-led library instruction to help students learn about library resources from fellow students, which he commented could help establish student-librarian relationships. Moreover, Owen has chosen to work in a library-related
position after graduation and Hayley referred to herself as an “honorary librarian,” both thereby serving as self-appointed representatives of the library. Furthermore, all the participants except Nick shared a positive prior personal connection to libraries, which is perhaps why they chose to participate in the present study.

**Theme 5: Information Literacy**

Despite the numerous comments about the library instruction sessions and their purpose and influence, plus the participants’ relationships with librarians, libraries, and each other, there was one highly notable topic that no participant mentioned until prompted to do so: IL. This omission was notable, and surprising, because the original intent of the present study was to explore how library instruction was perceived to influence the IL of students, and yet the term and even concept were rarely discussed in the interviews. The sub-themes that emerged in this regard included the mostly negative use of and reactions to the term IL, definitions of the term, how IL instruction relates to library instruction, and critical thinking.

**Sub-Theme 5a: Use of and Reaction to Term**

Unsurprisingly, none of the students brought up the concept of IL on their own, and I did not ask this participant group to define the term, as based on previous literature (e.g., Holler Phillips, 2011) and my professional experience, it seemed to be a technical term that would have appeared unfamiliar to them. Moreover, in a phenomenological case study, interviewers strive to have participants share their experiences naturally without being influenced to respond in a certain manner. What the participants do not share is as valuable as what that they do share and, of note, none of the students used the term “information” in the context of IL. On the other hand, several of the students
described ideas related to IL in their interviews unprompted. For example, Nick and Stacy both mentioned evaluation of the sources they found for their research. All of the students made references to some kind of information seeking, yet all spoke of IL-related concepts within the context of academic work specifically, suggesting they do not perceive IL as applicable outside of the academic context. This limited view of IL relates to their lack of transferability regarding the skills they learn in library instruction, as discussed in sub-theme 2b. There appears to be a limited view of both library instruction and IL among this participant group, such that students believe both what they learned in the sessions and the general idea of IL are relevant only to specific academic research projects.

In contrast, the librarians and faculty noted IL was important for everyday life, not only for academic purposes. Andrea specified “I’m thinking of it beyond the university… beyond that, IL is about anybody who has to process information, which is everybody.” Hayley correspondingly described research as an everyday activity, stating she tells her students that research is what they do “when you go buy a car…. Research is something you take with you your whole life, it’s not something you do just for your degree.” Butterfly likewise stated of her students that she would “like them to know that there is research into almost everything that we learn about or we take for granted.” Sam focused on IL in the context of the evaluation of information posted on social media, elaborating on the necessity to identify the sources of information shared online and their reliability. Like Sam, all the faculty members spoke of “fake news,” or misinformation, in the context of IL, with Hayley specifically stating IL is important “so you don’t believe fake news.”
However, like the students, none of the librarians or faculty brought up the term IL on their own, mentioning it only following my questions specifically naming IL near the end of each interview (see Appendix C). Interestingly, all the librarians responded to my question about how they define IL with surprise or displeasure. Audrey remarked it had been a question at her job interview, implying it was a formal rather than everyday term. Andrea, in turn, sighed when I asked what IL meant to her, then said “I’m such a bad librarian.” Similarly, the typically enthusiastic Sam seemed to become sheepish when I introduced the term IL in our interview, responding in a pointedly low voice “I don’t think I teach it that well.” This reaction was in sharp contrast to her earlier animated explanation of her instruction content, which relies heavily on IL concepts. Butterfly noted of IL “it’s not a term I use that much,” whereas Hayley immediately exclaimed “oh my gosh!” The term IL thus appeared to invoke a unanimously negative reaction.

Furthermore, Andrea and Sam both brought up the Framework when discussing IL and immediately dismissed it as overcomplicated. Andrea pronounced the term “Framework” in a comically exaggerated tone, laughing and stating: “when it comes to this stuff, and, so that whole ‘Framework’ and all that is like, ‘oh my God, do we really have to make it so complicated?’” Similarly, Sam stated, “I know ACRL has that huge thing and I don’t know all those things.” On the other hand, and on a fascinating note, Audrey, who I know from our prior collaborations has both conducted research about and presented on the Framework, did not mention it at all.

These comments and reactions on behalf of both the librarians and faculty suggest the participants tend to hold a perception of IL as a theory distinct from the practice of
library instruction, forming a false dichotomy between the abstract concept of IL and the practical application of library instruction.

**Sub-Theme 5b: Definition of Term**

Despite their negative reactions to the term IL and the Framework, all the librarian and faculty participants were able to define IL and did so consistently. The librarians’ definitions included finding and evaluating information, with both Andrea and Sam also including understanding information in their definitions, and Andrea and Audrey also including using the information to make decisions in theirs. Hayley similarly stated IL consisted of “two basic things: the ability to access it [information] and the ability to utilize it,” adding “and also to be purveyors of good information.” Raj, in turn, defined IL as:

> Being able to navigate the web, to access… accurate knowledge…. Anyone can do a web search but being able to figure out how to navigate information and to separate information from knowledge, and then knowledge that is actually verifiable, that has been thought through and worked through rather than just random ideas.

Like the other participants, Butterfly noted “I think that it’s really important for people to know where what they’re hearing is coming from. If all they do is watch the news or read blogs or whatever… there’s motives behind a lot of what we hear.” However, Butterfly’s definition of IL differed slightly from those of the others. Uniquely, she included peer review in her definition, stating she hoped her students, particularly at the graduate level, would experience both the good and the bad associated with peer review while they still had faculty support. She also defined IL in terms of media literacy (though the concepts
are often spoken of in unison). Raj referred to media literacy skills in his interview too, stating: “I try to debunk [stereotypes] through giving them [students] verifiable information, and try to get them to think more critically about the media that they’re consuming” (see sub-theme 5d regarding critical thinking in the context of IL).

**Sub-Theme 5c: IL Instruction and Library Instruction**

Despite all three faculty members having used library instruction in their courses for years, only Hayley connected IL to library instruction in particular, but noted librarians were not the only providers of IL instruction, referring to instruction she provided on this concept herself. Raj similarly noted his students do not have strong IL skills at first and that though “they’re generally not taught to think through, to access knowledge… they’re starting to learn better with [his] course.” He mentioned his liaison librarian Lynn in this context, stating “Lynn also does a good job of giving them a better idea of how to access better resources.” Although his comment suggests the purpose of library instruction is teaching resource navigation rather than more overarching IL abilities, he did bring up library instruction in the context of helping students improve their IL abilities. In contrast, although Butterfly was familiar with IL and had used an assignment for her course with the intention of helping her students develop their abilities in this area, she did not seem to consider IL the purpose of library instruction.

Similarly, and somewhat surprisingly, none of the librarians appeared to believe the primary purpose of their library instruction was instruction of IL. Andrea commented that although library instruction played a role in helping students develop their IL abilities, “unfortunately, I don’t know that it’s up to librarians.” She noted higher education was a useful context in which to develop IL abilities, though:
I think a college education is very important to get you to a place that is where you can be a little more open and critically think... unfortunately it’s become a college education because those skills are no longer taught in high school like they were at my time.

Hayley seemed to express a similar sentiment about how IL appeared to be no longer taught prior to higher education, commenting “it’s so necessary… we need to teach at K-12.”

**Sub-Theme 5d: Critical Thinking**

Both Andrea and Audrey discussed critical thinking in the context of IL and stated it was something that should be taught throughout higher education, not only in library instruction. Both librarians also commented that critical thinking skills seem to be decreasing among younger students, with Andrea elaborating she had noticed a change “probably in the last five to 10 years,” such that more recently, she saw higher education students who had trouble making decisions and, as she phrased it, “adulting.” She added that “IL for real life, we don’t have a lot of that. People don’t have that. Critical thinking is so lacking in this country.” Sam similarly also brought up critical thinking, but only briefly and in the context of needing to use it herself to evaluate the news, in a self-deprecating comment: “that would go for the news, like when I’m listening to the news on the TV. I probably don’t use as much critical thinking to [critique] NPR, though, which I probably need to.”

Interestingly, the relationship between IL and critical thinking was evident among the faculty too, such that when I asked Raj how he taught IL, he replied, “well, I teach,
think, more critical thinking skills.” However, his comment suggests he perceived IL and critical thinking as distinct concepts whereas the librarians perceived them as entwined.

**Chapter Summary**

The 10 participants in the present study represented librarians, faculty, and students of all academic levels and three discipline areas: (a) STEM, (b) social sciences, and (c) arts and humanities. My interviews with the participants inquired about each participant’s experience of their library instruction session(s), guided by the research question: how does a group comprised of teaching librarians, faculty, and students experience library instruction at FIU?

Over the course of the interviews, I identified themes and sub-themes that addressed the research question as well as several other themes that arose, including: (a) the library instruction sessions, (b) the purpose of library instruction, (c) the influence of library instruction, (d) relationships with librarians and libraries, and (e) IL. Altogether, the participants provided not only a comprehensive picture of library instruction at FIU but also how librarians and libraries are perceived, and how they approach the idea of IL.

Having reviewed each theme and its sub-themes individually above, I am now able to provide a comprehensive summary of the findings that answers the research question.

The 10 participants interviewed gave an in-depth portrayal of library instruction as conducted at FIU. Library instruction at this university is provided nearly ubiquitously in the format of one-shot instruction, usually in person instead of online. The sessions last anywhere between 20 minutes to two and a half hours, but 75 minutes is the most common session length. Generally, the sessions for graduate students are longer than
those for undergraduate students. The sessions are frequently scheduled by faculty members for individual courses, taught by the faculty member’s liaison librarian (who may or may not be their students’ liaison librarian), but extracurricular sessions are also provided for some programs. The sessions provided for courses are commonly mandatory but those provided as extracurricular opportunities tend to be optional.

The library instruction sessions are held in several locations at FIU, from the courses’ usual classrooms to library classrooms to library conference rooms to online, but participants tend to prefer sessions be held in the technology-enabled library classrooms. In-person library instruction is generally preferred to online library instruction because online instruction is perceived to limit live multidirectional communication that enables student feedback through body language and other nonverbal means.

The library instruction sessions focus on helping students learn how to navigate library resources, especially the library catalog and databases. The session format may be at any point in the lecture-based to interactive continuum. Regardless of the precise format, the students view the librarians or, in some cases, peers discussing and, in most cases, demonstrating these library resources. The students are often able to follow along on computers of their own, usually using topics of their choice to explore the resources individually or in small groups. The databases demonstrated vary by both academic discipline and level, with interdisciplinary databases demonstrated to lower-division undergraduate students and discipline-specific databases demonstrated to upper-division undergraduate students and graduate students. Search techniques, such as use of Boolean operators and evaluation of search results, are also taught during the sessions, as well as citation and citation managers, to varying degrees. However, the research cycle and other
broader research topics, such as peer review, are taught to a lesser degree than specific research skills because of what librarians perceive to be the limited time available in the sessions.

Most of the students who attend library instruction have a research assignment to complete after the session; librarians strongly prefer they do so. Prior to library instruction, Google Scholar appears to be the primary resource used by students for conducting research. Some librarians, like Andrea and Sam, teach it in their instruction sessions, positioning Google Scholar as a complement to library databases. However, it appears that although lower-division undergraduate students may continue using Google Scholar as a complement after library instruction, upper-division undergraduate students and graduate students switch to using library databases exclusively instead, believing databases will save them more time in their research compared to Google Scholar.

Although the librarians would prefer to have more time with the students than permitted by the one-shot format, the students state the one-shot session is sufficient and faculty seem to agree, as this was the only type of library instruction they requested for their courses. The students wanted to spend less time in library instruction, with the undergraduate students in particular believing their 75-minute-long sessions were too long. However, all three participant groups believe library instruction sessions should be mandatory, otherwise students (exceptions like Owen aside) are not likely to attend them.

There currently appears to be no formal assessment of library instruction at FIU by either librarians or faculty. Within the sessions, librarians seem to rely on informal verbal and nonverbal cues to gauge whether their students are learning. After the sessions, they often receive informal feedback from faculty, which is universally positive.
Like the librarians, faculty rely on their perceptions of their students’ learning, specifically in the context of research assignments the students complete after attending the sessions, although they may also use rubrics for these assignments that incorporate skills the students are meant to have acquired thanks to library instruction. Nonetheless, the only librarian who had seen such assignments, Sam, did not find them helpful. Despite the positive feedback they tended to receive, the librarians overall seemed unsure of the usefulness of their instruction and of how much students retained after the sessions. Students and faculty, however, were highly positive regarding library instruction and believed library instruction helped students in both cognitive and affective areas. Specifically, students generally believed library instruction helped them become more efficient researchers whereas faculty generally believed it helped them become more effective researchers.

Every participant group thought library instruction was essential enough to make it a requirement in higher education, but they all had different perceptions of its purpose. Faculty appeared to believe the purpose of library instruction is primarily for students to use the library and its resources, with a focus on finding peer-reviewed articles. Meanwhile, students believed the purpose of library instruction is primarily to help them save time and be more efficient when working on research papers. Librarians, however, did not agree on the primary purpose of library instruction, although all believed skill transferability is important. Sam’s perceived primary purpose appears to be more in line with those of the faculty, as she wants students to learn librarians are approachable and available to help them. Audrey goes beyond a primarily affective purpose, not only wanting her students to become more comfortable with the research process, but also
wanting them to learn how to formulate questions to ask librarians and navigate library resources. On the other hand, Andrea did not think affective outcomes were important, instead wanting her students primarily to acquire research skills at the session and then be able to apply those skills in different contexts. The Framework includes both knowledge practices (cognitive) and dispositions (affective) but, critically, not one participant in any participant group believed the primary purpose of library instruction is to help students improve in their IL abilities. Moreover, the FIU Libraries have not yet adopted the Framework as a guiding document for library instruction. On the contrary, the negative reactions the librarians I interviewed had when it was mentioned suggest the Framework is seen as something cumbersome and unpleasant.

None of the librarians named IL as the primary purpose of library instruction. They reacted to the question about how they define IL with surprise or displeasure, such that the term IL appeared to invoke negative reactions unanimously. However, their definitions of the term were similar, with all of them mentioning IL includes finding and evaluating information. Like the librarians, none of the faculty members mentioned IL on their own, referring to it only when I specifically asked about the concept in all three instances. They tended to conflate IL and media literacy, and the idea of “fake news,” or misinformation, came up in all their interviews. Moreover, despite all three faculty members having used library instruction in their courses for years, only Hayley seemed to be confident in her perception of IL and tied it to library instruction in particular. As for the students, none used either the phrase IL or the term “information” in the context of IL.
Nevertheless, despite their negative or nonexistent reactions to IL, the students and faculty interviewed overwhelmingly described libraries (and in some cases librarianship) positively, even passionately. A few of the participants (Butterfly, Raj, and Stacy) voluntarily shared anecdotes of visiting or even working in libraries when they were younger. Moreover, the participants spoke only positively about their teaching librarians. However, regardless of their universally positive comments about their teaching librarians, the non-librarian participants tended to think of teaching librarians as technicians rather than on the same professional level as faculty. Academic librarians at FIU are indeed faculty, not staff, but instead of being perceived as instructors of IL, most of the participants in this study, including the librarians themselves, appeared to perceive teaching librarians primarily as guardians of and guides to library resources. This was evident not from direct comments about librarians, which were consistently complimentary, but instead in the way the instruction content focused on showing students library-specific resources and how to navigate them; what students and faculty perceived the primary purpose of library instruction to be; how students forgot their librarians’ names; and how faculty members spoke of librarians as purchasing and providing access to library materials, and “helping” them with instruction.

Furthermore, the participants on the whole seemed to have expectations of what a(n American) librarian “should” be: a formal, welcoming, yet anonymous individual overall. This image of the anonymous “librarian” was evident from the way the students tended to forget their teaching librarian’s name even just days after the sessions, and also from some of the comments faculty made incidentally. For example, Hayley is undeniably a devoted, long-term user and strong supporter of library instruction, yet it did
not seem to matter to her which librarian provided library instruction for her courses. Teaching librarians appeared to be uniformly positive yet interchangeable, as suggested by her comment that it would be better if the library provided more instructors to conduct the sessions. This comment seems to suggest it does not matter which specific individual provides library instruction, whether the course’s liaison librarian or someone else; “the librarian,” any librarian, seems to suffice. Raj similarly made several references to librarians collectively (“you guys”), although it must be noted both faculty members also spoke highly of their liaison librarians specifically at other points in the interview.

The library instruction program at FIU is based on a liaison system wherein each teaching librarian specializes in specific disciplines to provide advanced, discipline-specific instruction. Although all teaching librarians share foundational knowledge, and the general content of their instruction is not dissimilar, as described above, the idea underlying this system is that each individual librarian’s disciplinary expertise ensures they are not interchangeable. Indeed, some academic libraries require teaching librarians to hold an additional advanced degree in the discipline(s) for which they teach, and most teaching librarians at FIU have at least some academic experience with the disciplines with which they liaise. It is not clear from the interviews whether faculty were aware of this.

Moreover, an imbalanced relationship between librarian and non-librarian faculty was implied by the use of teaching librarians as substitute instructors, or what Sam referred to as “babysitters.” Both librarian and faculty participants made references to library instruction being used as a manner of keeping students occupied when the non-librarian faculty member teaching the course was not able, or did not wish, to be present...
at a class session. Such use of “babysitting” frustrated the librarians, who all expressed a preference for the students who attended their sessions to have an assignment related to the content they would teach rather than attending simply for the sake of attending. None of the librarians, however, mentioned they had spoken to faculty who used library instruction for this purpose about the issue, regardless of their frustrations. Nonetheless, it appears faculty may be aware such use of library instruction is not favored by librarians, as shown by Butterfly’s and Hayley’s comments that they try to attend all sessions or, in Butterfly’s case, send a representative to attend in her stead; by Raj’s apparent embarrassment or guilt that he had not attended a session in approximately two years; and by the unnamed faculty member’s gift card to Sam, which she perceived as an apology on his behalf for using library instruction in this manner.

Thus, it appears that across the participant groups, there was a holistic perception that libraries, librarians, and library instruction, though unanimously thought of in positive terms, were not perceived quite in the same academic light as the rest of the university, even by its biggest supporters. Instead, libraries, librarians, and library instruction seem to have a technical and transactional tinge, perhaps best captured by Hayley’s comment that students’ fees pay for the library so they might as well use it. Given that FIU is an R1 university, such a perception appears especially foreboding where the library’s role in IL instruction is concerned.

In sum, based on the present study, the phenomenon of library instruction at FIU may be concisely defined at its most basic level as a single in-person session approximately 75 minutes in duration. The session is conducted by a librarian to help students navigate library resources.
In the next chapter, I will discuss how the findings of the present study relate to previous research in this area. Moreover, I will propose several practical applications of the findings to library instruction at FIU and suggest some potential directions for future research. I will also discuss the implications of the findings of the present study, with a focus on the institutional tensions identified. Finally, I will provide an overarching conclusion of the present study, situating it within the field of research on library instruction.
CHAPTER V

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

In Chapter V, I discuss how the findings of the present study relate to previous research by contextualizing the results to the literature review presented in Chapter II. I also propose several practical applications of the findings to library instruction at FIU, suggest some potential directions for future research, and discuss the empirical and theoretical implications of the present study, including an overview of the institutional tensions identified via the interviews. Lastly, I provide an overarching conclusion of the present study, situating it within the field of research on library instruction.

Connecting the Present Study to Previous Literature

The present study filled a need in the research area of library instruction and IL by conducting individual interviews with higher education teaching librarians, faculty, and students all within the same investigation of the research question: how does a group comprised of teaching librarians, faculty, and students experience library instruction at FIU? Each participant group included representatives from various academic levels/ranks and three discipline areas: (a) STEM, (b) social sciences, and (c) arts and humanities. Moreover, I conducted a qualitative analysis of the qualitative data collected rather than transforming them into quantitative data as previous studies have done. I conducted the study through a constructivist paradigm and used a phenomenological case study approach that is in accordance with the Framework, unlike prior research that used a postpositivist stance more conducive to the previous Standards. To my knowledge, the present study is the first study to use such procedures and data analysis methods, conducted through the lens of the Framework’s constructivist worldview.
The present study had many similarities with the findings of previous studies in this research area, as well as some unique findings. In the following section, I connect the present study’s findings to those of previous research in the field, highlighting novel results.

**The Library Instruction Sessions**

The participants in this study provided a comprehensive view of how library instruction is conducted at FIU from three perspectives, those of the librarians who conduct the sessions, the faculty who request them, and the students who attend them. These sessions were all one-shot sessions, supporting Keller’s (2016) finding that the one-shot format is the most common library instruction format. Additionally, the students stated the one-shot session was sufficient, though some of them suggested optional follow-up sessions. The faculty appeared to agree with the students, as one-shot library instruction was the only type of library instruction they requested for their courses, although the librarians in the present study would have preferred to spend more time with students. However, one-shot instruction may have been the only type of instruction with which the faculty were familiar. Their use of such instruction may therefore reflect not a preference for this format but rather a lack of awareness that alternatives are available.

Such findings echo those of previous research in the field, yet there were also some unique findings in the present study. For example, Aytac (2016) and Monroe-Gulick and Petr (2012) likewise found students tend to think two library instruction sessions are sufficient. On the other hand, Aytac (2016), Carroll et al. (2016), and Cope and Sanabria (2014) report the faculty in their studies, in contrast to those of the present study, tended to believe providing only one IL instruction session for students was
insufficient and recommended up to three sessions instead (Aytac, 2016). However, the faculty in Aytac’s (2016) study referred to ESL students, and those in Carroll et al.’s (2016) study specified health sciences students. Because no students in the present study were ESL or health sciences students, this discrepancy may be due to the different student populations included in those studies. The faculty in Cope and Sanabria’s (2014) study referred to IL interventions of any type, not only library instruction, and to lower-division undergraduate students in particular. Thus, they spoke of both different intervention types and different student populations than the faculty in the present study, all of who taught upper-division undergraduate students and graduate students.

One librarian in the present study, Andrea, alluded to a credit-bearing library instruction course at FIU, but the university no longer supports this format because of a lack of student interest, or as she stated, “nobody ever registered for it because it was an elective and people don’t do that kind of thing if it’s a choice.” Andrea’s statement resonates with Keller’s (2016) finding that only 13% of library instruction is provided in the format of credit-bearing courses. Fister and Eland (2008) concur with Andrea’s experience, stating that when provided as electives, credit-bearing IL courses may have low enrollment, thus the one-shot format appears as an attractive alternative, allowing librarians to teach “as many students as possible in a variety of contexts” (p. 95). Jardine et al. (2018) and Kuruppu and Gruber (2006) likewise report students tend to avoid taking credit-bearing IL courses and attending multiple library instruction sessions. The present study similarly found participants in all three groups believed library instruction sessions should be mandatory, otherwise students are not likely to attend them. Likewise, Roselle (2009) found library workshop attendance might be low unless faculty require
attendance or provide an incentive. All three faculty who I interviewed for this study made library instruction sessions mandatory in their courses, with one faculty member (Butterfly) additionally providing points in her course as an incentive for attendance, yet noted some students still failed to attend.

Regarding the session content and delivery format, in a review of 41 prior interview-based research studies on IL and library instruction in higher education (discussed in Chapter II), I found three general trends among the three participants groups I interviewed: librarians, faculty, and students in previous studies had shared preferences for in-person compared to online library instruction; the use of hands-on activities during library instruction; and the provision of supporting materials to complement library instruction. The present study provides additional support for all three of these trends in the literature.

The majority of the library instruction sessions provided at FIU were conducted in person rather than online. In the present study, none of the students mentioned wanting online library instruction, even when asked what they would change about library instruction at FIU if they could. The librarians and faculty specifically stated they preferred to have the sessions provided in person, including those participants who had successful previous experiences with online (library or otherwise) instruction, such as Andrea, Sam, and Butterfly, or who chose online and hybrid formats exclusively for their own courses, such as Raj. Buck and Steffy (2013), Kuruppu and Gruber (2006), Latham and Gross (2013), and Lebbin (2005) similarly have all found preferences for in-person compared to online library instruction among librarians, faculty, and students, despite the proliferation of online instruction in higher education more broadly.
The participants in this study also expressed a preference for hands-on activities during the library instruction sessions, such as conducting practice searches. This finding echoes those of Buck and Steffy (2013), Chen and Van Ullen (2011), Latham and Gross (2013), Lebbin (2005), Manuel et al. (2005), Quinn and Leligdon (2014), Roselle (2009), and Small et al. (2004), all of who found librarians, faculty, and students preferred hands-on activities during library instruction. Of note, however, Willson (2012) found it was the use of scaffolding (i.e., individual librarian feedback) during searching practice in instruction sessions, not the independent searching practice itself, that students found beneficial, a distinction the students in the present study did not make. Raj, however, did mention his teaching librarian’s use of scaffolding during the sessions. Detlor, Booker, Serenko, and Julien (2012) note that active IL sessions, such as the ones the students in the present study tended to attend, lead to decreased research anxiety, increased IL self-efficacy, a better view of librarians and library resources, and less time and effort required during information seeking, whereas passive sessions do not provide those benefits. The present study supports these findings. For example, some students, such as Nick, described the passive sessions they attended as unengaging, but commented that the active sessions reduced their stress levels, saved them time during researching, and increased their likelihood of using library databases following library instruction.

Furthermore, participants in all three groups discussed either using or wanting to use supporting materials that complemented library instruction in some way, such as Sam’s leaflets with instructions for her students on how to use the resources she taught, the research guide Stacy mentioned using that her teaching librarians had created for her fellowship program, and a bookmark-like handout Raj said he would like his students to
receive following library instruction. Buck and Steffy (2013), Latham and Gross (2013), and Manuel et al. (2005) likewise found participants in all three groups favored the use of supporting materials with library instruction in their own studies.

Unlike the present study, prior research in this area has tended to examine each participant group (students, faculty, and librarians) individually, as discussed in Chapter II. Thus, in the following section I will divide the results of the present study into the individual participant groups, to examine how they relate to prior studies in the research area. Overall, the present study supported the findings of prior research focusing on each of the three participant groups, though with some slight discrepancies, as detailed below.

**Students.** Prior research (Chen, 2015; Colon-Aguirre & Fleming-May, 2012; D’Couto & Rosenhan, 2015; Lebbin, 2005; Rempel, 2010; Tewell, 2014; Webster & Rielly, 2003) has found that following library instruction, students report increased knowledge and use of as well as comfort with library resources and services, to the extent that they view library resources favorably compared to online resources such as Google following instruction. The results of this study support these previous findings. All the student participants in this study reported using library resources following library instruction, whether as a complement to (as in Nick’s case) or instead of (as in Stacy’s and Kovu’s cases) their prior use of Google Scholar. Three of the four student participants in this study (Nick, Stacy, and Kovu) reported using Google Scholar as their primary research resource prior to attending library instruction. This finding supports the findings of Cothran (2011), who reported most of the students in her study used Google Scholar for their research, over half of who used this resource at least several times a month. Hammill and Sorondo (2017) found attendance in a library instruction session
was associated with a greater likelihood of using library resources for research compared to general (non-library) resources such as Google Scholar, and this was the case in the present study as well.

All of the student participants in this study reported using the databases they had learned about at their sessions through librarian (or librarian-guided peer) instruction, which echoes the findings of Spahr (2015) and Tewell (2014). Furthermore, the early-career student (Nick) conducting research for a class assignment chose to use databases because of their familiarity whereas the late-career students (Stacy, Owen, and Kovu) conducting research for long-term individual projects instead chose to use databases because of their relevance to their research fields. These findings are consistent with those of Bowles-Terry (2012), who found lower-division and upper-division undergraduate students prefer library instruction for different purposes. Lower-division students prefer library instruction as an orientation to the library and its resources, like the introductory database and Discovery search Nick used. Upper-division students prefer instruction on research resources specific to their disciplines, like Stacy’s, Owen’s, and Kovu’s use of discipline-specific databases.

Most of the students (Nick, Stacy, and Owen) stated library instruction had made them feel more comfortable with the research process (using terms such as decreased stress and increased enjoyment), including information seeking, which suggests improvements in their IL self-efficacy and supports the findings of Blummer et al. (2012) and Rempel (2010). The students in the present study described their research process prior to library instruction as annoying, time-consuming, and stressful, echoing the findings of Denison and Montgomery (2012), who concluded “most college students find
the process of information searching and retrieval to be difficult and frustrating” (p. 387). Such negative experiences while researching lead students to sacrifice resource quality to expedite the process, just as Nick mentioned doing in the present study prior to his most recent library instruction session.

Rempel (2010) found that practice and repetition conducting research over time in particular lead to increased comfort with the library research process among students. Similarly, the student participants in this study who spoke of feeling more comfortable with the library research process (Nick, Stacy, and Owen) all stated they had been using the databases they had learned about at their sessions on their own following the sessions, which demonstrates they were practicing what they had learned over time.

Small et al. (2004) found that immediately after attending library instruction, students tend to state the most important skill they learned at the session was how to search different resources, professing a belief they would use this skill for academic purposes. Although the time elapsed between the students’ last library instruction session and our interviews ranged from days to weeks, most of the students in the present study likewise named navigating databases the most important skill they had learned during their sessions. They further stated they intended to use those databases, or had already done so, following instruction. Significantly, the students articulated that what they learned at the sessions was limited to academic purposes, such as writing research papers, rather than also being applicable in their personal lives. This finding likewise echoes those of Small et al. (2004) as well as of Holler Phillips (2011), who found students who attend library instruction believed the session taught them academic research skills but saw no broader application of those skills. Similarly, Riehle and Hensley (2017) found
students state they learn to search for and find information at library instruction, but rarely mention learning about scholarly communication at these sessions; this was also the case in the present study.

As stated above, most of the students (Nick, Stacy, and Kovu) in the present study reported liking the ability to engage in hands-on activities during the session that allowed them to practice using the skills and resources covered in their sessions, which resonates with the findings of previous research on library instruction (Chen & Van Ullen, 2011; Latham & Gross, 2013; Lebbin, 2005; Quinn & Lelidgon, 2014; Small et al., 2004). In addition, students such as Stacy and Kovu liked having their own computers to use at the session for research practice, and such use of hands-on activities motivated students like Nick, who had tuned out during an earlier lecture-style library instruction session, as Small et al. (2004) similarly found. Owen, in contrast, had taken notes during his sessions rather than using a computer to practice research skills, but still demonstrated good use of the resources taught at the session later on his own, supporting the findings of Spackman (2007).

All of the students in the present study stated they sought peer, teacher, and faculty, but not librarian, recommendations for research prior to attending library instruction. This finding echoes that of D’Couto and Rosenhan (2015), who reported students who seek research help tend to approach their faculty and peers before approaching librarians. Although only one student (Owen) in the present study reported attending a research consultation following library instruction, he had chosen to meet with his teaching librarian specifically. Owen’s reported practice of meeting with his teaching librarian supports the findings of Vinyard et al. (2017), who found library
instruction encourages students to request research help from librarians, and those students who choose to meet with a librarian after attending library instruction tend to meet specifically with the same librarian who taught their session, as Owen did.

Previous research (Lebbin, 2005; Mayer, 2015) has found students believe library instruction during the first year of college is helpful, and several students in the present study (Owen and Kovu) suggested requiring library instruction for first-year undergraduate and graduate students. Interestingly, however, prior studies (Gross & Latham, 2009; Latham & Gross, 2008) have found first-year students may not desire formal IL instruction since they feel confident in their information-seeking abilities. Likewise, in the present study, first-year undergraduate Nick commented he did not believe he needed additional library instruction because the first session had helped him learn all he thought he needed to know.

On the other hand, the graduate students in the present study appeared to differ somewhat from those included in previous research on library instruction. For example, although Monroe-Gulick and Petr (2012) found incoming graduate students tended to believe the library instruction they received as undergraduate students was helpful, that did not seem to be the case for Kovu, who indifferently described his undergraduate session as show-and-tell, comparing it unfavorably to the session he had recently received as a graduate student. Of note, his first session seems to have been passive whereas his most recent session had been active, which may explain the discrepancy. This finding is supported by Detlor et al. (2012), who found that only active IL sessions yielded positive student outcomes. Moreover, though Kuruppu and Gruber (2006) found the graduate students in their study were hesitant to attend multiple IL sessions and
preferred single sessions instead, Owen had attended a session of his own volition nearly every semester he had been enrolled in his current Master’s program. Nonetheless, like the students in Kuruppu and Gruber’s (2006) study, both Kovu and Owen believed only a single session should be required for students, with additional instruction provided optionally, regardless of their own attendance patterns.

In sum, the students in the present study resembled those of previous research in the area of library instruction in most regards. Library instruction helped them increase their knowledge and use of, as well as comfort with, library resources and services, as found by Chen (2015); Colon-Aguirre and Fleming-May (2012); D’Couto and Rosenhan (2015); Lebbin (2005); Rempel (2010); Tewell (2014); and Webster and Rielly (2003). They tended to use Google Scholar as their primary research resource prior to attending library instruction, but were more likely to use library resources after library instruction, echoing the findings of Cothran (2011) and Hammill and Sorondo (2017). Specifically, the students tended to use the databases they had learned about in their sessions, as Spahr (2015) and Tewell (2014) found. Moreover, the students liked engaging in hands-on activities during library instruction, as previously found by Chen and Van Ullen (2011); Latham and Gross (2013); Lebbin (2005); Quinn and Leiligdon (2014); and Small et al. (2004). However, the graduate students who participated in the present study tended to differ somewhat from those of previous studies, in that one (Kovu) had not found his undergraduate library instruction to be helpful, in contrast to the findings of Monroe-Gulick and Petr (2012), and another (Owen) voluntarily chose to attend multiple library instruction sessions, in contrast to the findings of Kuruppu and Gruber (2006).
As with the students, the findings from the faculty participants in the present study echoed those of previous research in the area focusing on faculty, and moreover did so with no notable differences, as discussed below.

**Faculty.** Previous research has found faculty tend to believe their students’ IL skills are poor, reporting students have difficulties using the library and its resources (Neumann, 2016) and need to be more discerning when selecting resources (Saunders, 2012). They also believe students are overconfident in their research skills, which may lead them to think they do not need IL instruction (Carroll et al., 2016; Douglas & Rabinowitz, 2016). The findings of the present study support previous research on faculty perceptions of students’ research skills. Butterfly, for instance, believed her students were overconfident, stating “people think they know it all, but every time I go, and I’ve been going for 25 or 30 years, I learn new stuff! So how can they say they know everything?” Hayley spoke of her students having difficulty using appropriate sources, and all faculty interviewed stated their students had difficulties navigating the library resources. Butterfly moreover had the misperception (as reported by Andrea) that her graduate students already knew how to use the library, and therefore did not schedule library instruction for her graduate students, which echoes Thaxton’s (2002) finding that some faculty believe graduate students already have the necessary research skills. However, Kuruppu and Gruber (2006) found the faculty in their study believed graduate students still needed to develop their research skills through instruction, like Hayley and Raj, which suggests there is no general agreement among faculty regarding library instruction for graduate students, either in the present study or in the larger field.
Prior studies (Edwards & Black, 2012; Manuel et al., 2005) have found faculty who collaborate with librarians believe the quality of their students’ coursework is higher, as all faculty in the present study likewise believed. Moreover, the faculty in the present study thought their students were better able to complete research-based assignments such as papers following library instruction, which echoes the findings of Manuel et al. (2005) and Webster and Rielly (2003). In addition, Hayley stated library instruction helped her students become more comfortable researchers, as Heathcock (2015) found among the faculty she interviewed. Overall, all faculty in the present study were happy with their collaborations with librarians, as previously reported by various prior studies (Douglas & Rabinowitz, 2016; Edwards & Black, 2012; Edwards et al., 2010; Heathcock, 2015).

Thus, the faculty in the present study resembled those of previous research on this participant group in the library instruction field. They believed their students’ IL abilities were poor (Neumann, 2016) yet that the students were overconfident (Carroll et al., 2016; Douglas & Rabinowitz, 2016). Although all faculty supported the provision of library instruction for undergraduate students, they differed regarding its importance for graduate students, echoing the conflicting findings of Kuruppu and Gruber (2006) and Thaxton (2002). However, all faculty believed their collaborations with librarians helped improve the quality of their students’ research assignments, as Edwards and Black (2012), Manuel et al. (2005), and Webster and Rielly (2003) found.

Lastly, the findings from the librarian participant group of the present study frequently echoed those of previous studies in this research area focusing on librarians, though with a few important differences. I discuss these findings and differences below.
**Librarians.** Previous studies (Krause, 2010; Small et al., 2004) have found librarians prefer to structure their sessions in the format of demonstration followed by student practice rather than exclusively lecturing, and that was frequently the case in the present study. Although some librarians (Andrea and Agatha, the latter as reported by Owen) at FIU do prefer to teach in a lecture format, most of the students reported attending sessions that had a demonstration-then-practice structure instead. In addition, Sam referred to a lecture format as “a dog-and-pony show” and even Andrea, who did prefer a lecture format, suggested her preference for this format was due to time constraints, since she mentioned she encouraged individual practice at the end of sessions when time permitted. Previous studies (Miller & Minkin, 2016; Small et al., 2004; Tewell, 2010; Walter, 2008) indicate librarians often report a lack of time as an obstacle to their instruction, with the one-shot format being particularly limiting, as Andrea stated.

Prior research (Krause, 2010) has found librarians emphasize the affective impact of library instruction, as they want students to feel excited, enthusiastic, and empowered about research after instruction, as both Audrey and Sam stated. They also tend to believe their own enthusiasm affects student performance (Small et al., 2004), as Sam mentioned in the present study. In contrast, Andrea did not regard the affective outcomes of library instruction as being particularly important.

Furthermore, previous research (Krause, 2010; Miller & Minkin, 2016) has found librarians tend to assess their instruction informally through avenues such as student engagement and faculty feedback. This was the case in the present study, wherein the librarians reported relying on informal verbal and nonverbal student cues during their sessions and on informal feedback from faculty after the sessions to gauge the
effectiveness of their instruction. The librarians in the present study did not conduct any formal assessment of their instruction, as prior studies (Adler, 2003; Miller & Minkin, 2016) have found is commonly the case in the field as a whole.

Overall, then, the librarians in the present study generally resembled those studied in previous research in this area. Although some librarians preferred to give lecture-style library instruction, most preferred a demonstration-then-practice format, as found by Krause (2010) and Small et al. (2004). Librarians who did prefer a lecture-style session attributed the preference for this format to the limited time of the session, echoing the findings of Miller and Minkin (2016), Small et al. (2004), Tewell (2018), and Walter (2008), who reported the librarians in their studies cited time as an obstacle to their instruction. The librarians in the present study also mostly considered affective, not only cognitive, goals as important in library instruction, as Krause (2010) found. Moreover, all the librarians in the present study used informal rather than formal assessment of their instruction, as Adler (2003), Krause (2010), and Miller and Minkin (2016) reported.

**Summary**

In sum, the results of the present study strongly echo those of previous research on library instruction, despite the unique study design, which lends support to this study’s findings. The students, faculty, and librarians in the present study had similar perspectives in some regards, yet diverged in others. The significance of this convergence with previous research, yet divergence among the participant groups in this study, is that it suggests the individual participant groups tend to agree within their groups, regardless of their discipline, level, or location, such that students, etc., across various studies report similar results. However, the priorities and preferences of the different participant groups
may be at odds. For example, the students’ overconfidence in their IL abilities may lead them to believe one library instruction session at most is sufficient, as in the present study and that of Kuruppu and Gruber (2006), which conflicts with faculty’s belief that students’ IL abilities are low and their overconfidence is unwarranted, as in the present study and Carroll et al. (2016), Douglas and Rabinowitz (2016), and Neumann (2016). In the next section, I will discuss how these diverging perspectives between the participant groups matter particularly when discussing the why of providing library instruction, connecting the results of the present study to previous research on this topic.

**Perceived Purpose of Library Instruction**

There is a general assumption in the field of LIS that library instruction is beneficial to students. Indeed, it underlies this study. The empirical evidence for the accuracy of that assumption, however, is mixed, especially where the one-shot format is concerned (Spievak & Hayes-Bohanan, 2013). The participants in the present study appeared to hold this assumption nonetheless, as all the participant groups believed library instruction was so important is should be required in higher education. Yet each participant group valued library instruction for a different perceived purpose.

Previous research has found librarians consider the most important IL instruction topics to be identification of popular versus scholarly publications, scholarly communication (including open access), and data literacy (Miller & Minkin, 2016). However, this was not the case in the present study, in which the librarians indicated these topics were rarely taught in typical library instruction sessions at the university. As Andrea suggested, the limited time available in the one-shot format may not permit discussion of these topics as a credit-bearing IL course would. On the other hand, Manuel
et al. (2005) discuss how librarians value library instruction for both affective and
cognitive reasons, which the librarians in the present study discussed to varying degrees.
Sam’s perceived primary purpose of library instruction was affective, namely for her
students to learn librarians are approachable and available to help them, although she also
mentioned cognitive goals to a lesser degree. In contrast, Andrea prioritized cognitive
outcomes exclusively, wanting her students primarily to acquire research skills at the
session and then be able to apply those skills in different contexts. Audrey named both
affective and cognitive goals, wanting her students to become more comfortable with the
research process as well as learn to formulate questions to ask librarians and navigate
library resources.

Moreover, Buck and Steffy (2013) found the librarians in their study valued
transferability of the skills they taught in library instruction. Although the librarians in the
present study did not agree on the primary purpose of library instruction, as noted above,
they all believed skill transferability was important, supporting Buck and Steffy’s (2013)
findings. Interestingly, Adams et al. (2016) additionally found librarians valued library
instruction for the purpose of collaborating with faculty to teach students IL. None of the
librarians in the present study explicitly identified faculty collaboration as a primary
purpose of library instruction, but frequently discussed collaborating with faculty. It is
possible the librarians in the present study assumed collaborating with faculty was an
assumption underlying the provision of library instruction and therefore did not explicitly
mention it as a purpose of their instruction.

The faculty in this study indicated the primary purpose of library instruction is to
teach their students to use the library and its resources, especially to find peer-reviewed
articles. This finding partly agrees with that of Manuel et al. (2005), who report the faculty in their study appeared to value library instruction for affective reasons only, such as increasing student confidence in their research abilities and their comfort with library resources. Although the faculty in this study articulated such perceived purposes of library instruction, they also pointed to specific cognitive skills they wanted their students to acquire through library instruction, such as locating peer-reviewed articles. The faculty in the present study, however, discussed such skills in the context of instrumental short-term research needs, specifically for research-based course assignments, as Manuel et al. (2005) found was also the case for the faculty in their study.

Moreover, Adams et al. (2016) note the librarians in their study prioritized gaining IL skills, yet faculty were instead concerned with preparing their students as future professionals. Although not referring to the library instruction context specifically, it is noteworthy that the faculty in the present study made similar comments, in which all of them referred to their students’ professional futures, feeding the institutional narrative of workforce development. For example, Butterfly explained she designed her course assignments to mimic the conditions her students would encounter in the workforce, stating of her use of group work in particular: “I think it’s important to teach your students not only to present but to work in groups and some of the things they’ll have to do at work eventually.” Raj stated he prioritized writing skills in his courses because “reading and writing are kind of essential to even getting a good job.” Moreover, Hayley succinctly mentioned she “helps them [students] to be better professionals.” Although the librarians in the present study made relatively few comments about their students in the workforce, some mentioned it, with Sam in particular stating she shows the students in a
law course she teaches how to find information they can use in a professional context, namely their law firms. There thus seems to be a disjuncture, both among the participants in the present study and in the research field at large, between faculty and librarians in their goals regarding preparing students as professionals, with faculty placing greater emphasis on this goal than librarians.

In contrast, the students in the present study seemed to believe the primary purpose of library instruction was limited to the immediate academic environment, especially to help them save time and be more efficient when working on research papers. This belief may reflect that of their faculty, given the latter group’s emphasis on finding research to be used for class assignments following library instruction, a concrete purpose rather than the more abstract goals, such as skill transferability, the librarians identified. Notably, the faculty’s priorities may guide the librarian’s instruction content regardless of the librarians’ own priorities, accounting for the results found, as suggested by comments made by both Audrey and Butterfly revealing some of the content taught at the sessions was specifically by faculty request.

Interestingly, Small et al. (2004) report that observations of instruction in the early 2000s revealed the most frequently taught ACRL standard was “the information-literate student accesses needed information effectively and efficiently.” Given that FIU has not yet adopted the more recent and conceptually-driven Framework, this practical standard, limited in scope relative to the more overarching Framework, may still be guiding library instruction at the university, as reflected by the students’ and faculty’s primary perceived purposes of library instruction, and the way the librarians conduct the
sessions. Indeed, effectiveness and efficiency while finding information were the outcomes of library instruction prioritized most by faculty and students.

Regardless of their perceived purpose of library instruction, the faculty in the present study were happy with the way library instruction was being provided, supporting the findings of previous research that has likewise found faculty who collaborate with librarians for library instruction in their courses tend to be happy with the collaborations (Douglas & Rabinowitz, 2016; Edwards & Black, 2012; Edwards et al., 2010; Heathcock, 2015). The librarians in the present study, however, did not seem as happy with the current circumstances, citing a lack of time to teach all they wanted and other factors, echoing the findings of previous research in this area (Miller & Minkin, 2016; Small et al., 2004; Tewell, 2010; Walter, 2008). This discrepancy between faculty and librarians’ views of the current state of library instruction, despite their satisfaction with their collaborations, has interesting implications regarding the sustainability of present conditions. Librarians currently seem to defer to faculty preferences, as Audrey and Butterfly implied, and as Raj suggested when he spoke of his recent request for the day of his session, which caused his teaching librarian to rearrange her schedule to be able to comply with his request. These anecdotes shared in the present study echo the findings of Jardine et al. (2018), who found librarians are accustomed to being flexible when providing library instruction.

As long as faculty are happy with the library instruction provided, conditions may not change. However, if faculty satisfaction comes at the cost of librarian satisfaction, continuing the current state of library instruction may come at the cost of librarian morale, which may in turn worsen the quality of library instruction. Such a deterioration
may result in a change in the current state of library instruction regardless of whether the change is intended or not. It remains to be seen whether a change would be negative, such as a breaking of faculty-librarian collaborations as faculty become dissatisfied with the library instruction provided for their courses, or positive, such as a re-conceptualization of library instruction that satisfies both faculty and librarians fully.

**Perception of Libraries and Librarians**

Much previous research (D’Couto & Rosenhan, 2015; Manuel et al., 2005; Tewell, 2018; Walter, 2008) has found the faculty-librarian relationship tends to be imbalanced from the librarian, but not necessarily faculty, perspective. For example, Walter (2008) found the librarians in his study believed neither faculty nor students fully understood what they could contribute. Tewell (2018) likewise reported the librarians in his study believed faculty did not think highly of them, producing an imbalance in their relationship that he referred to as an “asymmetrical power distribution between librarians and teaching faculty,” attributing this imbalance partly to “librarians’ status as instructional ‘support’” (p. 22). These findings were echoed in the present study, as evident in the instances mentioned of librarians being used as “babysitters” (in Sam’s words), or substitutes rather than as experts in their own right, and even in the well-intentioned faculty’s use of terms with assistant connotations when referring to librarians, such as “she helps me teach my students” (in Butterfly’s words). This perception may account for why the librarians in the present study did not seem as positive about the current state of library instruction at the university as the participants in the other two groups did, such that they were viewed in terms of providing a service rather than as educators. This perception may also partially account for the transactional nature of
library instruction seen among students and faculty, which would in turn impact student and faculty perception of, and reception to, library instruction.

Moreover, prior studies (Adler, 2003; Small et al., 2004) have found most librarians who teach collaborate with faculty, as was the case in the present study, but that those who do not engage in such collaborations tend to state the lack of collaboration results from a lack of faculty interest. This disinterest was made evident in the present study not among the faculty interviewed, who were avid users of library instruction, but rather through comments made by the librarians about the faculty they encountered in other contexts at the university, such as Sam’s mention that some faculty “give me a hard time” and tell her “‘oh, no, my students don’t need that [library instruction]. You know, they can find everything on their own.’”

The librarian participants’ comments in the present study suggest the way in which the faculty-librarian relationships are initiated may affect the ease of establishing the collaborative relationships. When a third party, particularly one in a position of power such as an administrator, initiates the librarian-faculty relationship in a top-down manner, as in Audrey’s case, it is possible, though not certain, the collaboration may emerge more easily. When the librarian initiates the relationship herself in a bottom-up manner, as in Sam’s case, the librarian may face resistance from faculty, although the reaction will of course depend on the faculty member. Indeed, Walter (2008) found that librarians point to administrative support in particular as being important for ensuring library instruction. The present study echoed these previous findings, as when Audrey noted the necessity of administrative support for library instruction and discussed how university administration established collaborations with faculty on her behalf. Nonetheless, regardless of the
pathways to the collaboration, librarian-faculty partnerships appear to be highly positive in the long run and promote library instruction.

Prior research (D’Couto & Rosenhan, 2015; Manuel et al., 2005) has found faculty for the most part think well of the library and librarians, which was obvious in the present study. Furthermore, despite librarians’ reported perceptions that faculty do not think highly of their abilities, prior studies have found that faculty who collaborate with librarians for library instruction generally believe the librarians are effective instructors and view them as experts (Douglas & Rabinowitz, 2016; Edwards & Black, 2012; Manuel et al., 2005; Saunders, 2012). Yevelson-Shorsher and Bronstein (2018) found that, although the librarians in their study believed faculty members did not see librarians as colleagues and resisted adding IL instruction to their courses, once these relationships were established, they were generally received well by both the librarians and the faculty. In the present study, all the librarians spoke well of the faculty they worked with and the faculty had only positive comments about the librarians in turn, often mentioning their instruction approach favorably and speaking of the library in terms so positive as to be tinged with fondness. There is currently strong research support indicating faculty who collaborate with librarians to provide library instruction in their courses tend to be happy with the collaborations (Douglas & Rabinowitz, 2016; Edwards & Black, 2012; Edwards et al., 2010; Heathcock, 2015). This was also the case in the present study, wherein all the faculty I interviewed had long-standing collaborations with the librarians who taught for their courses and intended to continue working with the librarians in the future or, as Hayley stated, “I will continue to do it until the day I leave.” Such findings suggest that although establishing faculty-librarian collaborations may be difficult, once they are in
place, they are well-received by both parties and may even help circumvent the faculty-librarian power imbalance and increase faculty respect towards librarians, as Sam alluded. Moreover, if students view strong and balanced faculty-librarian collaborations, their own perspectives of librarians may improve accordingly.

Regarding students’ perceptions of librarians, previous research (Latham & Gross, 2013) has found students prefer library instructors who appear to care about their students and are enthusiastic about their instruction content, and that they like receiving individual feedback from their instructors. That was the case in the present study, as affirmed, for instance, by Nick’s comment that he appreciated Sam’s enthusiasm and apparent interest in teaching, and by Kovu’s appreciation for how his teaching librarian actively engaged with students.

Although the faculty and students in the present study spoke positively of the librarians, the librarians did not believe students and faculty regarded them academic equals with faculty, as indicated by the use of transactional terms in comments about the library and the perceived interchangeability and anonymity of librarians. For example, this transactional connotation was evident in Hayley’s comment to her students that their fees pay for the library so they might as well use it, and in Sam’s receiving a gift card from a faculty member in exchange for meeting with his students. Moreover, the students tended to forget the names of individual librarians, speaking instead of “the librarian” generically. Previous research (Galbraith, Garrison, & Hales, 2016) has found this is generally the case for academic librarians, even those with faculty status, such as the librarians at FIU. For example, Galbraith et al. (2016) state “both faculty and nonfaculty librarians believe that faculty status improves relationships with teaching faculty,
although it can’t balance that relationship evenly” (p. 592). This perception contrasts with the responsibilities of academic librarians who “are on par with teaching faculty members in regard to scholarship and service” (Coker, vanDuinkerken, & Bales, 2010, p. 417).

Moreover, the students in the present study differed in how they perceived their teaching librarian’s role in instruction. Nick, for example, used the word “teach” to describe Sam’s role in his session, but in contrast, Kovu referred to his teaching librarian as “the guy that we worked with” rather than as an instructor. The literature on this point is likewise mixed. For example, Fagan (2003) found that few students in her study, approximately only one-fifth, made references to librarians engaging in teaching or training responsibilities. However, more recently, Polger and Okamo (2010) found most of the students in their study did consider librarians to be teachers, which they suggest may “be due in part to the possible increase in librarians teaching users information literacy skills” (p. 7) since the Fagan (2003) study. The present study’s findings may reflect that student perception of librarians as instructors is still evolving. Moreover, student perception of librarians does not begin at college. Many students’ early life experiences with libraries and librarians, such as Stacy’s, lead to assumptions about libraries and librarians that in turn shape their image of both library instruction and librarians as instructors.

Of note, Polger and Okamo (2010) also found the descriptors students used most often for librarians were “helper” followed by “guide,” showing that even students who do perceive librarians as instructors do not see teaching as their primary role. Students describe library faculty most often with terms that connote a support (“helper”) or technical (“guide”) capacity rather than as academic faculty. This perception remained
unchanged from the prior study, in which Fagan (2003) concluded nearly a decade earlier that “students know librarians are there to help them but often consider librarians’ knowledge as limited to familiarity with the physical library” (p. 139). Almost two decades after that study, the present study suggests little seems to have changed. Students may increasingly be aware that librarians teach, but they still do not realize instruction is a primary responsibility of librarians and continue to view librarians primarily as helpers and guides. Librarians may perpetuate that perception through the language used in libraries. For example, the word “support” is frequently used by libraries, as in the phrases “research support” and “instruction support,” which positions librarians who research and teach as assistants in these capacities from the outset. Moreover, the department at FIU that employs most of the teaching librarians, Information and Research Services, lacks the terms instruction or education in its name but does include the term service, thereby positioning its teaching librarians as providers of a service rather than as instructors or educators.

Perhaps such terminology is an outdated remnant of previous library conditions and should change to better reflect the present environment and the true current role of librarians and library instruction. For example, both Butterfly and Owen shared how they have interacted with libraries and librarians over decades in their interviews, and noted how such interactions have changed in recent years. Butterfly mentioned that when she first started working as a faculty member, in the pre-Internet era, librarians would conduct research for faculty instead of instructing and consulting as we do now:

Back in those days, when I first came here, if you wanted to look up literature on the subject you were studying, Lisa or some librarian could do the search for you.
They’d give you pages and pages of printout and you’d find the articles, then you’d look them up. It’s so different now.

Owen similarly explained how as an undergraduate student, using the library had been a very different experience: “in my Bachelor’s degree… you had to go to the library and… you had to look through little cards, then go find the book…. I hated doing that. Now I love it! It’s a completely different story.” He specified “technology makes research now much more efficient and productive.” Based on these participants’ histories with libraries, it is evident that with the evolution of technology, the experience of using libraries has changed drastically, shifting the onus of doing research onto the library user and in turn transitioning the librarian’s role to more of a teacher than of a provider or gatekeeper. However, as the interviews conducted for the present study suggest, although technology and the role of librarians have irrevocably changed over the decades, perhaps the older perceptions have not yet changed along with them, keeping librarians in a support capacity in faculty’s and students’ minds.

In addition, regarding libraries as institutions, people generally tend to have feelings of goodwill towards their libraries (Horrigan, 2016), as was the case in the present study. For instance, a recent Pew Research Center report that explored how Americans perceive libraries found “public attitudes are largely positive about the library’s role in communities…. People think that libraries are a major contributor to their communities in providing a safe place to spend time, creating educational opportunities for people of all ages, and sparking creativity among young people” (Horrigan, 2016, p. 6). The student and faculty participants in the present study shared numerous positive anecdotes about their personal experiences with public libraries, going back to childhood.
Several participants additionally had personal connections to librarianship as a profession, whether having considered the profession as a potential career for themselves (as in Butterfly’s case), seeking a similar career in the future (as in Owen’s case), or considering themselves an “honorary librarian” (as in Hayley’s case). These participants were strongly engaged with the academic library, using its resources and services and wanting their peers (both other students and faculty) to use them as well.

Moreover, there was a special focus on the library as place (i.e., “going to the library”) in the present study, as evidenced by several of the faculty and student participants’ suggestion that students should physically visit the library, and in the overall preference for in-person over online library instruction. These insights support recent research findings (Baker et al., 2018; de Jager, 2015; Kim, 2016) indicating the academic library’s physical location is still valued greatly despite the increasing online transition of both our general world and the higher education environment.

**Information Literacy and Library Instruction**

None of the librarians in the present study directly stated that developing students’ IL was the primary purpose of their instruction. Moreover, all of them reacted negatively to the use of the term IL and/or the Framework, as did Bombaro (2016), who pronounced the Framework difficult, and Reed (2015), who called it time-consuming and full of jargon, as Andrea and Sam similarly did. These reactions contrast with those reported by Badke (2016), Keller (2016), and Yevelson-Shorsher and Bronstein (2018), who instead praised the Framework as a way to ensure librarians are seen on the same level as non-librarian faculty and partners in education rather than assistants. Indeed, none of the librarians in the present study mentioned the Framework as a guiding document for their
instruction, despite its inclusion of both knowledge practices (cognitive) and dispositions (affective), which would accommodate all their perceived purposes.

Despite their negative reactions to the Framework and the term IL, all the librarians in the present study defined IL similarly as finding and evaluating information. Two of the three librarians also included understanding information (Andrea and Sam) and using information to make decisions (Andrea and Audrey) in their definitions. Additionally, all the librarians stated IL was essential in everyday, not just academic, life. Furthermore, two of the librarians (Andrea and Audrey) discussed critical thinking in the context of IL, stating it should be taught throughout higher education, not only in library instruction. In this manner, they resembled the faculty in Saunders’s (2012) study, who considered IL instruction a “shared responsibility” (p. 231) throughout the university.

Both librarians also remarked students’ critical thinking skills seem to have decreased over the years. In a review of critical thinking in the context of library instruction from 1986 to 2006, Ellis and Whatley (2008) found the concept increased in popularity in the 1990s, with concerns about how technology would affect critical thinking skills present even then. However, a recent meta-analysis (Huber & Kuncel, 2016) that examined 71 studies about college students’ critical thinking skills published from the 1960s to the 2010s concluded the students’ “gains in critical thinking appear to have deteriorated over time despite increased interest in fostering critical thinking skills” (p. 456), which supports the observations of the librarians in the present study. Nonetheless, students do tend to improve in their critical thinking abilities over the course of their college careers according to the overall conclusions derived by Huber and Kuncel (2016) based on the variety of studies they examined.
The faculty in the present study, like the librarians, considered critical thinking an essential skill for their students, but they did not consider critical thinking a component of library instruction, resembling faculty in previous studies (Neumann, 2016; Perry, 2017). Previous research (Manuel et al., 2005; Thaxton, 2002) has found faculty tend to believe students need to develop critical thinking skills but may not schedule library instruction for the purpose of helping their students improve these skills, as they do not see a connection between IL and critical thinking. Manuel et al. (2005) found faculty tend to believe critical thinking skills are taught over the course of higher education as a whole rather than through library instruction specifically. Similarly, in the present study, all three faculty members interviewed mentioned they taught IL skills as they perceived them, including research skills and media literacy skills, not necessarily what librarians would consider IL or even critical thinking themselves, although Hayley and Raj both mentioned library instruction in the context of IL. This echoes previous research, which has found differences in how faculty want their students to acquire IL skills, with some faculty wanting librarians to provide IL instruction to their students and others preferring to provide such instruction themselves (Perry, 2017). However, faculty generally prefer to collaborate with librarians on IL instruction for their students (Carroll et al., 2016; Edwards & Black, 2012; Edwards et al., 2010), as was the case for the faculty in the present study, all of who worked with a librarian to do so.

Moreover, all of the faculty in the present study had heard of the term IL and were able to define it to at least some extent, in contrast to the findings of Veach (2009), who reported most faculty had not heard of the term prior to taking a course on IL. Other studies (Cope & Sanabria, 2014; Manuel et al., 2005; Veach, 2009) have found that
although few faculty use the term IL, they are nonetheless aware of what the concept represents and tend to view it similarly to librarians, as was the case in the present study. The faculty’s definitions did not differ depending on their disciplinary backgrounds in the present study, which supports the findings of Cope and Sanabria (2014). Indeed, the findings of the present study regarding faculty’s view of IL and the purpose of library instruction parallel those of Bury (2016), who found faculty stated their students needed to know how to search for, access, and evaluate information, as well as develop their critical thinking skills.

In contrast, none of the students in the present study brought up the concept of IL on their own. They also did not use the term “information” in this context, echoing the findings of Holler Phillips (2011), who reported that students struggled to define IL even when the simpler term “research skills” was used. However, the students in the present study did allude to aspects of IL, without using the term or referring to the concept directly, such as when Nick and Stacy referred to evaluating information for their assignments.

Interestingly, the findings of the present study suggest a recent evolution in how IL is viewed. Older research (Thaxton, 2002) found faculty conflated computer literacy and IL. In the present study, however, none of the faculty mentioned computer literacy. Instead, they tended to conflate media literacy and IL, specifically when referring to the necessity of evaluating sources of information. The librarians in the present study did so as well, especially in the context of everyday information seeking. Such combined use of media literacy and IL has been occurring in the LIS field in recent years, notably in the 2011 International Federation of Library Associations and Institutions (IFLA) Media and
Information Literacy Recommendations (IFLA, 2011) to the United Nations Educational, Scientific and Cultural Organization (UNESCO). This change in the conceptualization of IL is probably due to the increasing ubiquity of technology in students’ lives, such that strong computer literacy among today’s students is now understood to be widespread. Moreover, the recent awareness of the idea of “fake news,” or unreliable and/or erroneous information, a phrase used by many of the participants both in the librarian and faculty participant groups of the present study, has increased general attention to media literacy, which may account for the present study’s findings compared to older research in this area. In addition, the rebranding of K-12 school libraries as “media centers” in recent years may also contribute to a perception that IL, the traditional domain of libraries, is synonymous with media literacy.

**Implications**

**Practical Applications at FIU**

The present study suggests several potential applications to inform and optimally enhance library instruction at FIU. First, it seems that an instructional coordinator, whether in an official or unofficial capacity, would help establish a unified vision of instruction among teaching librarians at FIU. The FIU Libraries have lacked an instructional coordinator for several years because of staff shortages. According to the ACRL (2017), such a coordinator “leads, develops, and maintains a library and/or institution’s information literacy program” (para. 12). Perhaps the effects of this position’s long-term absence are being reflected in the lack of agreement among the teaching librarians of the present study as to why they teach, and in the apparent disconnect between their instruction and IL.
The ACRL’s Guidelines for Instruction Programs in Academic Libraries state, “the library should have a written mission statement for its instructional program that articulates its purpose for the instruction program in the context of the educational mission of the institution and the needs of the learning community” (ACRL, 2011, para. 3). This is the first guideline on the list and thus seemingly the most important, yet locally we do not appear to have an answer. After reviewing her archived departmental documents, Andrea reported the Information and Research Services Department that houses most of the teaching librarians last created a mission statement in 2003. It is not currently being used and I, having joined the department in 2013, had no knowledge of its existence until I asked about it while writing this dissertation. Moreover, Oakleaf (2011) states that “to teach and assess student learning, librarians should begin with a list of outcomes that describe what they want students to learn and then target them in their instruction and assessment efforts” (p. 77). The department currently has not identified learning outcomes as a group, however. Re-establishing the instructional coordinator position could thus give the librarians of the library instruction program a unified vision of the purpose of their instruction, despite their different pedagogical approaches, which would result in a cohesive departmental purpose for all the teaching librarians.

Perhaps even more importantly, establishing someone in this position to guide the culture of curriculum and pedagogy in the department could create a dialogic space for teaching librarians to reflect on the goals and ethics that drive their instruction, linking it to the overall curricular mission of the university and the broader world. However, given that the curricular and instructional approaches of the three librarians interviewed were so different, an instructional coordinator should take care not to be prescriptive and limit the
individual librarians’ teaching styles and academic freedom while working to establish such a unified vision. Rather the coordinator should consider the different priorities and approaches currently in place and examine their commonalities and differences, as the present study did, in light of the needs of the faculty and student communities.

Second, the findings of the present study indicate the librarians interviewed are unsure of the effectiveness of their instruction and would welcome the opportunity to examine the short- and long-term impacts of the sessions they provide on their students’ lives. It would thus behoove the library instruction program at FIU to establish methods of holistically assessing the effectiveness of its instruction. As discussed in Chapter II, there is currently no free, valid, and reliable tool used to measure students’ IL abilities. However, the FIU Libraries have used paid assessments in the past to gauge the state of IL instruction at certain times, though not regularly and not for many years. For example, the FIU Libraries last participated in Project SAILS, a national standardized assessment of college students’ IL skills, during the 2004-2005 academic year, along with 68 other colleges and universities. The FIU library instruction program may thus find it beneficial, particularly while working towards a unified vision, to formally assess its impact on students, despite the potential cost of such assessment. The findings of such an assessment would give the teaching librarians a better idea of how they are contributing to their students’ education. Furthermore, if conducted formatively, not only summatively, assessment could impact instruction on an immediate basis and thus not be limited to an unforeseeable future.

Given the university’s emphasis on data that demonstrate student academic success (FIU, 2018b), the results of such assessment could demonstrate the impact of
library instruction on student achievement and highlight the contributions of the library and librarians to the university in a form (i.e., data) that is highly valued administratively, and obtain additional institutional support for library instruction. Thinking more longitudinally, such assessment could also help guide curricular changes and perhaps lead to the reinstatement of credit-bearing IL courses, of which Andrea spoke highly. A data-based rationale for these courses could more firmly integrate them into the university-wide curriculum as an essential part of the students’ education to better help them develop their IL abilities and critical thinking.

Regarding librarian-faculty collaborations, the faculty members of the present study had established long-term, highly positive relationships with their teaching librarians, regardless of the particular individual currently in that role, which hints at how to initiate future collaborative relationships. The results of the present study reveal faculty who incorporate library instruction into their courses tend to be repeat users who provide library instruction in their courses as long as they remain in their positions, as Butterfly, Hayley, and Raj do. Establishing such librarian-faculty collaborations as early as possible in the faculty member’s career is thus in the teaching librarian’s best interest, and in the university’s best interest as well. Working with newly hired faculty to establish such collaborations as soon as possible after they start at the university, as during new faculty orientations, may be the best manner of obtaining new opportunities to provide library instruction. Audrey’s comments further suggest that obtaining administrative support from departments, such as emails from administrators advising new faculty to meet with their liaison librarians immediately upon joining the department, may be
effective in initiating librarian-faculty collaborations early in the faculty’s academic career as well.

Regarding librarian-faculty collaborations from the perspectives of faculty and librarians, however, two different views were evident. First, faculty are happy with the collaborations but do not know the full extent of what librarians could potentially contribute. Second, librarians are not as happy with the collaborations because they know they could be contributing more and believe their expertise is not fully used and perhaps unappreciated. Reconciling this disconnect would necessitate additional awareness among faculty of the full range of what librarians could contribute, and an institutional recognition of librarians as faculty and LIS as an academic discipline in its own right. This awareness and recognition may be developed through greater marketing by librarians on what they can provide. Based on the findings of the present study, it appears additional self-promotion on behalf of the FIU Libraries, particularly its teaching librarians, could increase both the quality and quantity of librarian-faculty as well as librarian-student relationships. Although the librarians may believe they are doing a good job in promoting both the library and themselves, it was evident from several comments in the interviews, particularly by the students, that non-librarians did not share this belief. For instance, Stacy stated “I would host those research workshops more consistently and I would advertise it too because people don’t know about [them], if you don’t advertise, people don’t come to them.” It is obvious from this statement that the librarians’ advertisements for their research workshops had not reached her.

Related to this disconnect is the fact that librarians tend to be professionally humble, striving to be seen as welcoming and helpful to library users to combat problems
that have previously plagued the field such as library anxiety and the stereotype of the
grumpy, shushing librarian, although such problems may not be as prevalent in the
present as they were in the past (Borchard, Wimberley, Eng-Ziskin, & Fidgeon, 2018).
To this end, Sam stated she hopes her instruction will “remove the stereotype, if nothing
else.” The result of such professional humility is that library users may not be aware
librarians are not simply guides to and guardians of the library and its resources, as was
generally the case in the present study, but also experts in their own right, particularly in
the academic setting, and scholars with research responsibilities just like non-librarian
faculty (G. Dominguez, personal communication, April 13, 2019). Such professional
modesty is an issue endemic to librarianship. For example, Coker et al. (2010) state
too often, we librarians are at fault for being overly self-effacing in our work. We
will insist that we do not teach despite regularly holding dozens of instruction
sessions. We are modest in publicizing our research. To gain recognition as full
citizens in academia, we need to take control. (p. 418)
To combat this problem and increase non-librarian faculty and student awareness
of the full extent of librarians’ roles, the librarians at FIU could market their expertise
more frequently through several avenues. For example, they could publicize their
scholarly works, as Coker et al. (2010) suggest. Currently, librarians at FIU are active in
university-wide committees and the Faculty Senate, which permit opportunities to engage
with faculty from a variety of units around the university. They could also participate
more often in research-focused events on campus such as colloquia. Moreover, they
could host additional specialized workshops on publication aimed at researchers on topics
such as open access, choosing publication venues, tracking publication citations, and
more. The Graduate Studies/Scholarly Communication Librarian at FIU currently provides such workshops but not all teaching librarians participate or teach in this capacity. Several research-focused projects have been set in motion at the FIU Libraries in recent academic years, including an annual research symposium; a digital collection (Athenaeum) of scholarly works by the faculty and staff of the FIU Libraries; and a data support portal for researchers, but their acceptance even with the Libraries has been halting and progress has consequently been slow for reasons unclear to the organizers of these projects (myself among them).

In addition, to address the imbalance in how librarians are perceived, a much simpler and immediately applicable measure may be taken too: asking students to call their teaching librarians by title and surname (e.g., Professor Smith), just as they refer to their faculty, and having non-librarian faculty facilitate such a form of address. Addressing librarians in this manner might help students view their teaching librarians as instructors and researchers in their own right, and increase the awareness that librarians, too, are faculty with academic expertise (S. Brenenson, personal communication, March 28, 2019). It may also increase recollection of the librarians’ names, in contrast to the anonymous, interchangeable references to librarians heard in the present study.

However, many librarians readily acknowledge students often tell them things they do not say to the faculty who teach their courses, such as admitting they do not understand an assignment or are at a loss as to how to begin a project. The usually informal librarian-student relationship, particularly within the one-on-one research consultation setting, appears to help students feel liberated to make such admissions. Anecdotally, on more than one occasion my students have told me they make
appointments to see me not for research help, but to feel better about their research assignments, comparing our consultations to counseling. Although such interactions may appear informal, they are nonetheless pedagogical relationships as are more traditional interactions, and teaching is still occurring in this context. However, such trust in this more informal context may result because librarians have no power over course grades, as suggested by Raj pointing out in his interview that most of his student communications center on grades. On the other hand, this trust may also be due to many students perceiving librarians as less intimidating than non-librarian faculty because of their use of first names rather than titles and surnames, and our profession-wide emphasis on appearing welcoming. Although appearing welcoming and having one’s expertise acknowledged are not mutually exclusive, these two perceptions will require a balance, especially during a transitional period.

Thus, librarians should individually decide how to prioritize this balance and consider the potential loss of student trust that may come at the expense of the gain of respect as faculty equals. In particular, although contributing to a sense of professionalism, a more formal form of address may introduce a distance within the librarian-student relationship that some teaching librarians may wish to avoid. For example, Sam spoke of wanting her students to see her as fun and approachable; use of her title and surname rather than simply first name appears to be at odds with this desire. She mentioned she referred to a faculty member she collaborated with extensively as “Professor Terry,” not “Maggie,” in front of their students, yet the faculty member referred to Sam by her first name, which may contribute to an unequal standing in the eyes of the students while at the same time making Sam appear more approachable in
comparison to the faculty member. On the other hand, Andrea, who prioritized cognitive over affective outcomes of her instruction, would appear to be a good candidate for adopting this measure, as the formality introduced by this form of address might increase students’ perception of her academic expertise. All professors, regardless of discipline, negotiate such terms in their relationships with their students on the basis of various individual factors, and librarians should be no exception and not have to feel obligated by professional or departmental norms to default to a first-name basis with students.

Lastly, the faculty and student comments in the present study suggest that a “library ambassador” program might be welcomed at the university. Such a program could capitalize on strong supporters of the library who frequently utilize its resources and services, including library instruction, as several of the participants in the present study suggested. Indeed, many of the remarks the participants made imply they would welcome such an honorific, such as Hayley’s referral to herself as an “honorary librarian.” Kovu suggested a peer instruction program wherein students would teach other students about the library. A student like Stacy would seem to be an ideal candidate for such a program given her enthusiasm about the library and her adamant remarks that other students should use it more often. A “library ambassador” program could partner with faculty and students who come to the institution with a pre-existing love of libraries as a result of earlier experiences, exemplified by Raj’s and Stacy’s childhood memories of being taken to public libraries by their mothers. These ambassadors could introduce awareness of and affection for the library among faculty and students who do not have such pre-existing knowledge of and fondness for the library. Library ambassadors could be trained on the full extent of the library’s resources and services by librarians in a train-
the-trainer approach to share this information with their colleagues and peers. Some of
the participants in the present study were already taking such a role upon themselves as
seen, for example, by Raj’s mention that he is the chair of his unit’s Library Committee.
A more formal program in place to this end could ensure the accuracy and currency of the
information shared by strong library supporters, and could serve as an additional manner
of promoting the library and library instruction.

Furthermore, such a program could help add to the library’s role in social capital
at the university, strengthening ties between the library and the larger university
community (Schlak, 2015). Schlak (2015, 2016) suggests liaison librarianship in
particular, namely the system already in place at FIU, may be ideally suited to emphasize
the academic library’s essentialness within its institution, noting that librarian-faculty
relationships require ample time and effort to succeed but success can beget
success and connection can beget connection. They also require a personal
investment from both librarian and faculty that empowers librarians with the
agency to extend their networks and solidify their place therein. The yield is
substantial—these relationships situate the librarian in a meaningful position on
campus vis-à-vis the faculty and endow them with the social capital to perform
their work effectively. (Schlak, 2016, p. 419)

Using the liaison librarian system to more precisely target certain users in liaison areas
predisposed to use (and love) the library by inviting them to participate in a train-the-
trainer library ambassador program, thereby becoming liaisons to the liaisons, could
increase both the number and strength of librarian-library user relationships, notably
without requiring the librarians to establish those relationships directly themselves while
organically privileging broad community involvement. Moreover, a message on the importance of the library might be perceived as being more powerful when coming from a known peer rather than from a paid library representative such as a librarian.

**Empirical Implications**

The design of the present study may be applied to any qualitative research using interviews as the primary form of data collection, whether or not the phenomenon under investigation is IL and/or library instruction. The procedure I followed is outlined in Table 3. In sum, data collection consisted of conducting semi-structured interviews and generating transcripts. Data analysis consisted of primary descriptive coding (Saldaña, 2009; Wolcott, 1994) followed by secondary axial coding (Saldaña, 2009; Strauss & Corbin, 1998). Analytic memos were created at the individual and group levels, then cross-analyzed for convergence and divergence, to generate themes and sub-themes. The process described may be used by researchers to explore any phenomenon of their choice.

The advantages of this empirical design include obtaining data from the participants’ own words. Instead of providing participants with options, as surveys often do, interviews, although guided by questions set by researchers, allow participants to describe the topic of study as they wish, using the words they wish, and devoting the time they wish. The study is driven by the participants’ preferences, allowing for the exploration of unexpected avenues. For example, in the present study, I did not expect the idea of saving time to be such a high priority for students (or any participant group). However, this idea emerged in every student interview, being their primary perceived purpose of library instruction. Had I created a survey to investigate the phenomenon of library instruction for the present study, I would not have included saving time as a
question due to my own unawareness that the idea would be so important to students. Indeed, none of my interview questions for any participant group inquired about saving time during research. However, the open-ended nature of the interviews allowed the idea to emerge when I spoke with the students, ultimately becoming a sub-theme in the present study.

Moreover, the interviews allowed me to become acquainted with the participants on a personal level. For example, one participant invited me to sit in at a class following our interview so that I would see an example of an exercise the participant mentioned when we spoke. The invitation was possible because I spoke with the participant on a personal level during the interview. Use of an anonymous survey instead, for instance, would likely not have led to such an invitation.

I was also able to gauge the participants’ emotional reactions by using interviews, which would not have been possible to the same extent using a written data collection format such as a survey. For example, the negative reactions I witnessed when I mentioned the Framework were spontaneous and intense. Had the participants responded to a question about the Framework in writing, as in a survey, it is likely their answers would have appeared more measured, occluding the true extent to which they disliked the Framework. The emotional connotation of the responses is only one example of the context facilitated by using interviews for data collection, as in the present study.

Lastly, I would like to note I conducted this study using nothing more than a voice recorder and Microsoft Word technology-wise, both of which are easily available to the typical graduate student. Having conducted quantitative research for most of my academic career, I found the materials and software required for the qualitative data
collection and analysis of the present study to be refreshingly simple. Although there is specialized software for qualitative data analysis (e.g., ATLAS.ti, NVivo, etc.), I did not need to use it for the present study. In contrast to quantitative research, no specialized software (e.g., Qualtrics, SPSS, etc.) was necessary and thus no learning curve for specialized software was necessary to complete the present study.

On the other hand, the disadvantages of this empirical design include the length of time required to conduct the study as well as difficulty with recruitment. Although the interviews of the present study were relatively brief, lasting approximately half an hour on average, generating the transcripts and reviewing them for accuracy required many hours per interview. I have conducted both quantitative and qualitative research in the past, and in my experience, both the data collection and analysis components in qualitative research require much more time than in quantitative research. Whereas, for example, a quantitative analysis of variance (ANOVA) may be conducted in mere minutes, qualitative descriptive and axial coding require numerous hours, if not days or even weeks, to complete. Moreover, I have found it to be more challenging to recruit participants for qualitative versus quantitative studies. In my experience, potential participants are more likely to agree to completing anonymous surveys, which usually last minutes, than to sitting for interviews that will require speaking with researchers face-to-face (or by phone), and that may take several hours and multiple visits to complete. The difficulty with recruitment leads not only to generally smaller samples in qualitative compared to quantitative studies, but also to a greater length of time required for the study as a whole due to delays in obtaining the full sample, even in light of the smaller sample size.
However, I believe the advantages of the study design outweigh its disadvantages. The qualitative design of the present study permitted me to study the phenomenon of library instruction in depth to a degree that a quantitative design would have not. I would encourage researchers with a quantitative background, as mine predominantly is, to conduct a qualitative study as I did for the present study, either as a standalone study or as the qualitative phase of a mixed methods study. I believe a qualitative component will allow for a more profound investigation of the research topic, and will contextualize the topic of study to a greater extent, than quantitative research alone.

**Theoretical Implications**

The present study has several theoretical implications for the field of library instruction. First, it suggests which aspects of library instruction the various stakeholders (librarians, faculty, and students) value and prioritize, as discussed in Chapter IV. In addition, the findings contribute to our understanding of how IL is perceived in higher education, within both the academic and everyday contexts, and the corresponding perceived dichotomy thereof. Moreover, the findings provide a picture of how the Framework is being (not) used to guide IL instruction at a university, in contrast to its intended use by the principal professional organization in academic librarianship, the ACRL. Rather than supporting the field’s current theoretical framework, the present study suggests there is at this time a disconnect in the field of library instruction between theory and practice.

**Potential Directions for Future Research**

In addition to the applications and implications discussed above, the findings of the present study suggest several potential directions for future research. First, regarding
assessment, the findings from this qualitative study could be used as the first phase in a mixed methods study. Using the instrument development model (Creswell & Plano-Clark, 2011), in which a quantitative data collection phase follows a qualitative data collection phase to create a quantitative instrument based on the qualitative results, a survey could be created based on the interview findings of the present study. The survey could be used large-scale with the thousands of students who attend library instruction at FIU every year to assess what those individuals involved in library instruction themselves believe to be essential. An in-house tool could be psychometrically tested for reliability and validity, and could then be used to assess the effectiveness of library instruction at the university to answer the librarians’ lingering questions regarding the effectiveness of their instruction.

For example, Kurbanoglu, Akkoyunlu, and Umay (2006) developed the Information Literacy Self-Efficacy Scale (ILSES), a free, highly reliable assessment of IL self-efficacy that is “well established in the literature” (Ross et al., 2016, p. 4) and has been used in a variety of contexts. There is currently no equivalent of the ILSES measuring IL abilities rather than IL self-efficacy, but an instrument development study could be conducted to create one. The interview findings of the present study suggest several constructs that may be explored in a preliminary version of this assessment, similar to Kurbanoglu et al.’s (2006) initial use of seven IL self-efficacy categories at the first phase of their development of the ILSES. The constructs may be based on the themes and sub-themes of the present study (e.g., use of research resources, requests for help, affective attitudes towards research, etc.). The present study could thus lead to a later, quantitative phase examining IL abilities that uses the interview findings to
establish exploratory concepts that may be measured using a survey scalable for large numbers of students.

Alternatively, or in addition to such a sequential mixed methods study, a concurrent mixed methods study could be undertaken that combines individual interviews (qualitative) with surveys (quantitative) using a convergent design (Creswell & Plano-Clark, 2011). In mixed methods studies with a convergent design, both types of data are collected concurrently, each with an equal emphasis. Qualitative and quantitative analyses are conducted separately, but the researcher’s interpretations of the data are ultimately merged. Such merging allows for each strand of the study to complement and corroborate the other strand and, moreover, permits a greater understanding of the topic (Creswell & Plano-Clark, 2011). For example, an existing quantitative assessment of students’ IL abilities, such as the SAILS mentioned in Chapter II (Project SAILS, 2016), and of their IL self-efficacy, such as the ILSES (Kurbanoglu et al., 2006), could be given to a large sample of students at FIU. The assessments would provide quantitative data on the students’ IL abilities and IL self-efficacy that would complement the interview findings. The qualitative data would in turn contextualize the quantitative findings and provide insight on the students’ IL and their perspectives on library instruction beyond what is possible to obtain using quantitative assessments alone.

In addition, given that the three participant groups had greatly different perspectives on several topics (e.g., the purpose of library instruction), it would be interesting to examine each of the three groups in depth. A future study could recruit a greater number of participants from each group to gain a wider variety of perspectives within the groups. Moreover, it would be interesting to conduct multiple interviews with
the same participants instead of single interviews as the present study did. Such use of multiple interviews would permit examination of how the participants’ perspectives evolve over time. For instance, a second interview with Nick, the first-year undergraduate student, at a later date could reveal how his view of library instruction and IL changes as he gains additional academic experience. Follow-up interviews could perhaps also suggest how the students’ IL abilities and IL self-efficacy evolve with additional experience and maturation.

Furthermore, given the findings of the present study, it would be interesting to explore how librarians perceive themselves in the role of instructor and how that perception influences how their students see them in turn. For instance, Sam stated she enjoyed teaching and proclaimed library instruction her favorite task as a librarian. Her student, Nick, in turn mentioned her enthusiasm during instruction, stating, “Sam herself was fun. She wasn’t just there, like, I have to be there to teach you guys, she enjoyed it.” Although previous research (Julien & Pecoskie, 2009; Walter, 2008; Wheeler & McKinney, 2015) has explored librarians’ self-perceptions of their instructional roles, research on how their students perceive them is limited. Future studies could address this gap by interviewing both librarians and the students they teach, and exploring how librarian instructional self-perception, and perhaps their own self-efficacy, relates to the students’ perceptions of their librarian as an instructor.

It would also be interesting to explore the librarian-faculty dynamic more in depth by purposefully recruiting collaborative dyads. In the present study, Butterfly had worked with both Andrea and Sam, especially the former librarian, but I did not interview any of the librarians who had worked with Hayley or Raj. Given that Andrea’s and Butterfly’s
descriptions of Andrea’s instruction complemented each other and, moreover, each participant provided information the other participant did not, interviewing librarian-faculty dyads might provide additional insight into the collaborations and the library instruction sessions. The participants could be interviewed individually and then together to explore the dynamic further.

Moreover, when I envisioned the present study, I sought to explore how the Framework was being applied at an institution from the librarian, faculty, and student perspectives. As it turned out, the interviews with these participants revealed the Framework was not being applied at the institution. Faculty and students (unsurprisingly) had no knowledge of the Framework’s existence, and librarians (again unsurprisingly) viewed it negatively. Thus, the preliminary question of the present study remains to be explored in future research. As library instruction at this university continues to evolve and the teaching program perhaps engages in introspection to establish a unified vision of instruction, future research could examine which guiding principles are useful to and valued by teaching librarians, if not the Framework, and how they shape IL instruction from the librarian, faculty, and student perspectives. Such a project may be completed at the research site or any other institution with a library instruction program.

**Limitations**

The present study has several limitations. Most notably, the sample size of 10 participants was small, particularly compared to the approximately 7,000 students who attend library instruction at FIU every academic year, which itself is a small number compared to the 52,640 students enrolled at the university as of the 2018-2019 academic year. Despite the small sample size, a variety of participants were interviewed from a
diverse range of academic disciplines, levels, and ranks. Nevertheless, all the participants were from the same university, so the results of the present study are not generalizable. However, it must be noted the purpose of a qualitative study such as this one is not to generalize findings, but to obtain detailed descriptions of individuals’ experiences, and to that end, the present study succeeded. Van Manen (1990) states

phenomenology does not allow for empirical generalizations, the production of law-like statements, or the establishment of functional relationships. The only generalization allowed by phenomenology is this: Never generalize! [...] The tendency to generalize may prevent us from developing understandings that remain focused on the uniqueness of human experience. (p. 22)

Nonetheless, the procedures used in the present study may be applied at any institution to gain a detailed picture of library instruction at any university from the perspectives of the librarians who conduct it, the faculty who schedule it, and the students who attend it, as the present study did. Readers may also recognize their own experiences with library instruction in those shared by the participants of the present study, a kind of generalizability (J. Burns, personal communication, August 30, 2019). Furthermore, the results of the present study, even with a small sample, support the findings of previous studies in the field, showing that the present study is in line with other research conducted in the area of library instruction.

Overall Summary

The present study was a phenomenological case study exploring how a group comprised of teaching librarians, faculty, and students experienced library instruction at the research site, FIU. It uniquely addressed a gap in the literature on library instruction
and IL by investigating the three participant groups simultaneously in the same context, utilizing data that was both collected and analyzed using qualitative, interview-based methods. The 10 participants, including three librarians, three faculty members, two undergraduate students, and two graduate students, represented a variety of academic levels and ranks from three discipline areas: (a) STEM, (b) social sciences, and (c) arts and humanities. These diverse participants provided a detailed picture of library instruction at the university from a variety of perspectives.

The shared experiences of the participants, at times converging, at times diverging, yielded insightful data organized into several themes, including their experiences of the library instruction sessions, the perceived purpose of library instruction, the influence of library instruction, faculty and students’ relationships with librarians and libraries, and IL. The results have implications for the provision of library instruction in higher education, including both practical applications and the ramifications of institutional tensions resulting from the diverging perspectives of the various participant groups.

Overall, the present study sought to explore how one university is approaching current divisions in the field of library instruction between philosophy and practice, postpositivism and constructivism, the old Standards and the new Framework, and the past and the future of the field. By providing a picture of library instruction from the perspective of the librarians who teach the sessions, the faculty who schedule them, and the students who attend them, the present study strived to show how library instruction helps higher education students gain the IL expertise they need to succeed in their academic careers, personal and civic lives, and beyond.
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Appendix A

The Framework for Information Literacy for Higher Education with Definitions, Knowledge Practices, and Dispositions (ACRL, 2016)

1. Authority Is Constructed and Contextual

Information resources reflect their creators’ expertise and credibility, and are evaluated based on the information need and the context in which the information will be used. Authority is constructed in that various communities may recognize different types of authority. It is contextual in that the information need may help to determine the level of authority required.

Knowledge Practices

Learners who are developing their information literate abilities

- define different types of authority, such as subject expertise (e.g., scholarship), societal position (e.g., public office or title), or special experience (e.g., participating in a historic event);
- use research tools and indicators of authority to determine the credibility of sources, understanding the elements that might temper this credibility;
- understand that many disciplines have acknowledged authorities in the sense of well-known scholars and publications that are widely considered “standard,” and yet, even in those situations, some scholars would challenge the authority of those sources;
- recognize that authoritative content may be packaged formally or informally and may include sources of all media types;
- acknowledge they are developing their own authoritative voices in a particular area and recognize the responsibilities this entails, including seeking accuracy and reliability, respecting intellectual property, and participating in communities of practice;
- understand the increasingly social nature of the information ecosystem where authorities actively connect with one another and sources develop over time.

Dispositions

Learners who are developing their information literate abilities

- develop and maintain an open mind when encountering varied and sometimes conflicting perspectives;
- motivate themselves to find authoritative sources, recognizing that authority may be conferred or manifested in unexpected ways;
- develop awareness of the importance of assessing content with a skeptical stance and with a self-awareness of their own biases and worldview;
• question traditional notions of granting authority and recognize the value of
diverse ideas and worldviews;
• are conscious that maintaining these attitudes and actions requires frequent self-
evaluation.

2. Information Creation as a Process

Information in any format is produced to convey a message and is shared via a selected
delivery method. The iterative processes of researching, creating, revising, and
disseminating information vary, and the resulting product reflects these differences.

Knowledge Practices

Learners who are developing their information literate abilities

• articulate the capabilities and constraints of information developed through
  various creation processes;
• assess the fit between an information product’s creation process and a particular
  information need;
• articulate the traditional and emerging processes of information creation and
dissemination in a particular discipline;
• recognize that information may be perceived differently based on the format in
  which it is packaged;
• recognize the implications of information formats that contain static or dynamic
  information;
• monitor the value that is placed upon different types of information products in
  varying contexts;
• transfer knowledge of capabilities and constraints to new types of information
  products;
• develop, in their own creation processes, an understanding that their choices
  impact the purposes for which the information product will be used and the
  message it conveys.

Dispositions

Learners who are developing their information literate abilities

• are inclined to seek out characteristics of information products that indicate the
  underlying creation process;
• value the process of matching an information need with an appropriate product;
• accept that the creation of information may begin initially through communicating
  in a range of formats or modes;
• accept the ambiguity surrounding the potential value of information creation
  expressed in emerging formats or modes;
• resist the tendency to equate format with the underlying creation process;
• understand that different methods of information dissemination with different purposes are available for their use.

3. Information Has Value

Information possesses several dimensions of value, including as a commodity, as a means of education, as a means to influence, and as a means of negotiating and understanding the world. Legal and socioeconomic interests influence information production and dissemination.

Knowledge Practices

Learners who are developing their information literate abilities

• give credit to the original ideas of others through proper attribution and citation;
• understand that intellectual property is a legal and social construct that varies by culture;
• articulate the purpose and distinguishing characteristics of copyright, fair use, open access, and the public domain;
• understand how and why some individuals or groups of individuals may be underrepresented or systematically marginalized within the systems that produce and disseminate information;
• recognize issues of access or lack of access to information sources;
• decide where and how their information is published;
• understand how the commodification of their personal information and online interactions affects the information they receive and the information they produce or disseminate online;
• make informed choices regarding their online actions in full awareness of issues related to privacy and the commodification of personal information.

Dispositions

Learners who are developing their information literate abilities

• respect the original ideas of others;
• value the skills, time, and effort needed to produce knowledge;
• see themselves as contributors to the information marketplace rather than only consumers of it;
• are inclined to examine their own information privilege.

4. Research as Inquiry

Research is iterative and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry in any field.

Knowledge Practices

Learners who are developing their information literate abilities
• formulate questions for research based on information gaps or on reexamination of existing, possibly conflicting, information;
• determine an appropriate scope of investigation;
• deal with complex research by breaking complex questions into simple ones, limiting the scope of investigations;
• use various research methods, based on need, circumstance, and type of inquiry;
• monitor gathered information and assess for gaps or weaknesses;
• organize information in meaningful ways;
• synthesize ideas gathered from multiple sources;
• draw reasonable conclusions based on the analysis and interpretation of information.

Dispositions

Learners who are developing their information literate abilities

• consider research as open-ended exploration and engagement with information;
• appreciate that a question may appear to be simple but still disruptive and important to research;
• value intellectual curiosity in developing questions and learning new investigative methods;
• maintain an open mind and a critical stance;
• value persistence, adaptability, and flexibility and recognize that ambiguity can benefit the research process;
• seek multiple perspectives during information gathering and assessment;
• seek appropriate help when needed;
• follow ethical and legal guidelines in gathering and using information;
• demonstrate intellectual humility (i.e., recognize their own intellectual or experiential limitations).

5. Scholarship as Conversation

Communities of scholars, researchers, or professionals engage in sustained discourse with new insights and discoveries occurring over time as a result of varied perspectives and interpretations.

Knowledge Practices

Learners who are developing their information literate abilities

• cite the contributing work of others in their own information production;
• contribute to scholarly conversation at an appropriate level, such as local online community, guided discussion, undergraduate research journal, conference presentation/poster session;
• identify barriers to entering scholarly conversation via various venues;
• critically evaluate contributions made by others in participatory information environments;
• identify the contribution that particular articles, books, and other scholarly pieces make to disciplinary knowledge;
• summarize the changes in scholarly perspective over time on a particular topic within a specific discipline;
• recognize that a given scholarly work may not represent the only or even the majority perspective on the issue.

Dispositions

Learners who are developing their information literate abilities

• recognize they are often entering into an ongoing scholarly conversation and not a finished conversation;
• seek out conversations taking place in their research area;
• see themselves as contributors to scholarship rather than only consumers of it;
• recognize that scholarly conversations take place in various venues;
• suspend judgment on the value of a particular piece of scholarship until the larger context for the scholarly conversation is better understood;
• understand the responsibility that comes with entering the conversation through participatory channels;
• value user-generated content and evaluate contributions made by others;
• recognize that systems privilege authorities and that not having a fluency in the language and process of a discipline disempowers their ability to participate and engage.

6. Searching as Strategic Exploration

Searching for information is often nonlinear and iterative, requiring the evaluation of a range of information sources and the mental flexibility to pursue alternate avenues as new understanding develops.

Knowledge Practices

Learners who are developing their information literate abilities

• determine the initial scope of the task required to meet their information needs;
• identify interested parties, such as scholars, organizations, governments, and industries, who might produce information about a topic and then determine how to access that information;
• utilize divergent (e.g., brainstorming) and convergent (e.g., selecting the best source) thinking when searching;
• match information needs and search strategies to appropriate search tools;
• design and refine needs and search strategies as necessary, based on search results;
• understand how information systems (i.e., collections of recorded information) are organized in order to access relevant information;
• use different types of searching language (e.g., controlled vocabulary, keywords, natural language) appropriately;
• manage searching processes and results effectively.

**Dispositions**

Learners who are developing their information literate abilities

• exhibit mental flexibility and creativity;
• understand that first attempts at searching do not always produce adequate results;
• realize that information sources vary greatly in content and format and have varying relevance and value, depending on the needs and nature of the search;
• seek guidance from experts, such as librarians, researchers, and professionals;
• recognize the value of browsing and other serendipitous methods of information gathering;
• persist in the face of search challenges, and know when they have enough information to complete the information task.
Appendix B

Search Terms Used for the Literature Review

**Information Literacy or Library/Bibliographic Instruction:** “information litera*” OR “library instruction” OR “bibliographic instruction”

**Higher Education:** “higher education” OR college* OR universit* OR “academic library” OR “academic libraries”

**Students, Faculty, and/or Librarians:** student* OR pupil* OR faculty OR professor* OR librarian*

**Interview:** interview* OR phenomenolog* OR phenomenograph*
Appendix C

Interview Protocols for Librarians, Faculty, and Students

Librarians:

- Tell me about your role at the library.
  - How long have you been a librarian?
  - How long have you been teaching library instruction sessions?
- What types of students do you teach?
  - What are their majors/disciplines?
  - What are their academic levels?
- Describe a typical library instruction session.
  - How long is the session?
  - What do you teach during a library instruction session?
  - What kind of activities do you use during a session?
  - What kind of resources do you use during a session?
    - Which online resources do you use?
- What do you hope your students learn from attending a library instruction session?
- How do you assess whether/what your students learned during the session?
- What does information literacy mean to you?
- What is your approach to teaching information literacy?
- Is there anything you would like to add?
Faculty

- Tell me about your role at the university.
  - How long have you been a faculty member?
  - Which courses do you teach?
  - How long have you been teaching these courses?

- What types of students do you teach?
  - What are their majors/disciplines?
  - What are their academic levels?

- Describe a time when you worked with a librarian to provide a library instruction session for your course.
  - For which course(s) was the session provided?
  - How long was the session?
  - Where was the session held?
  - What did the librarian teach during the library instruction session?
  - What did you think of how the library instruction session was conducted?
  - What did you like most about the library instruction session?
  - What did you like least about the library instruction session?
  - Would you request a library instruction session again in the future?
  - What would you like the next library instruction session for the course to include (differently)?

- What do you hope your students learned from attending the library instruction session?

- How did the session help your students?
• How do you assess whether/what your students learned during the session?
  o What changes do you notice in how your students conduct research before compared to after they attended the session?
• What does information literacy mean to you?
• What is your approach to teaching information literacy?
• Is there anything you would like to add?

Students:
• Tell me about yourself.
  o What is your major?
  o What is your academic level?
• Think of a recent research paper you wrote. How did you do the research for the assignment?
• Think about a time when you attended a library instruction session/library workshop/research workshop. What was the session like?
  o When did you attend the session?
  o Was this your first time at a session/workshop?
  o (If have attended more than one, ask to concentrate on the most recent one.)
  o What kind of activities did you do during the session?
  o What kind of materials did you use during the session?
  o Which online resources (websites, databases, etc.) did you use?
• What did you learn during the session?
• What did you like most about the library instruction session?
• What did you like least about the library instruction session?

• How has the session helped you?
  o How have you used what you learned at the session?

• How did you search for information before the session?

• How do you search for information now, after attending the session?
  o What are the biggest changes in how you conduct research now compared to before you attended the session?

• Is there anything you would like to add?

**General follow-up questions and probes:**

• Tell me more about that.
• Could you walk me through that?
• How did that come about?
• How did that work?
• Could you explain what you mean by that?
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