

EXPLORING ACADEMIC LIBRARIANS' LACK OF EXPERIENTIAL LEARNING IN
TEACHING COLLEGE FRESHMEN INFORMATION LITERACY SKILLS: AN
INTERPRETIVE PHENOMENOLOGICAL STUDY

by

Pearl Gloria Adzei-Stonnes

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

[Doctor of Philosophy]

Liberty University, Lynchburg, Virginia

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APPROVED BY:

Leldon W. Nichols, Ed.D. Committee Chair

Patricia Ferrin, Ed.D. Committee Member

Abstract

The purpose of this interpretive phenomenological study was to explore academic librarians' lack of experiential learning in teaching college freshmen information literacy skills in four-year higher education institutions across the United States. The central research question was – “what challenges do academic librarians experience in teaching information literacy skills?” – Twelve academic librarians who were involved in teaching college freshmen information literacy skills were examined on the phenomenon. Three different data collection methods used were questionnaire, letter writing and interviews. The theory that guided this study was Kolb's experiential learning. Kolb's experiential learning theory emphasized the process of learning in which knowledge is created through the transformation of experience. Thematic and modified Van Kaam methods were used for data analyses which revealed five themes, and two outliers. In addition to the study findings, limitations, implications for stakeholders, and recommendations for future research were presented.

Keywords: information literacy, experiential learning, higher education, college freshmen, academic librarians, first-year students, university, college.

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Dedication

I dedicate this dissertation to the Almighty God for the wisdom, knowledge, divine health, and provision throughout my study. I could not have made it without the grace of God that has been sufficient for me. I am truly indebted to God.

I would like to thank my loving husband Precious for his invaluable love, and support in this journey. You are my best cheerleader. You have been there throughout the challenges of life and graduate school. Your constant prayers and encouragements sped me on to persevere to completion. I thank God for having you in my life.

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List of Abbreviations

American Libraries Association (ALA)

Association of College and Research Libraries (ACRL)

Information Literacy Skills (ILS)

Major Theme (MT)

Research Question (RQ)

Central Research Question (CRQ)

CHAPTER ONE: INTRODUCTION

Overview

Information literacy competencies of college freshmen are critical to their academic success and retention (Gaha et al., 2018; Shao & Purpur, 2016). Unfortunately, due to the lack of pedagogical training of some academic librarians, they are not usually aware of the level of research competencies and writing skills college freshmen have acquired from high school (Clark & Johnstone, 2018). Therefore, the inadequate teaching skills of some academic librarians result in most college freshmen's inability to write quality research papers coupled with some faculty's reluctance to involve academic librarians in the classroom (Aslam, 2017; Carlozzi, 2018; Huddlestone et al., 2019; Long, 2019). Hence, there is the need for faculty and academic librarians to collaborate in incorporating information literacy instruction in college freshmen's classes to enhance their learning experiences (Ducas et al., 2020). Studies conducted on academic libraries' impact on student success largely represent the perceptions of administrators rather than examining the lack of experiential learning of academic librarians who are directly involved with providing services and teaching information literacy skills (Cheng & Hoffman, 2020). Chapter one provided the framework for the research study including the background, problem statement, and identified the gap in the literature. Inadequate qualitative research study had been done to examine the experiential learning of academic librarians in teaching college freshmen information literacy skills. In addition, the purpose of study, significance of study, definitions, a central research question, and three sub-research questions were utilized to understand how academic librarians develop their teaching skills as educators.

Background

The historical, social, and theoretical background of the problem were provided. The historical context explained how the problem evolved. Also, how society, community and the educational system that was affected by the problem was discussed under the social context. In addition, the theoretical framework that underpinned the research was explored.

Historical Context

The quest for an information literate society in the United States was established through the implementation of information literacy skills in educational institutions of higher learning (Barr et al., 2020; Sample, 2020). Information literacy skills as defined by American Library Association is a set of abilities that individuals possess to enable them effectively discover information in various formats, assess the information, organize, use, and communicate the information to solve their problems (ALA, 1989). College freshmen have varying information literacy skills levels (Lanning & Mallek, 2017). This necessitated higher education institutions to create ‘first year experience’ programs for college freshmen to enhance the smooth transition from high school into college life (Sung Un & Shumaker, 2015). These high-school-to-college transition programs established by higher educational institutions have called on academic librarians to incorporate course-integrated information literacy instruction to bridge the gap in information literacy needs for college freshmen (Douglas & Rabinowitz, 2016). However, the inadequate pedagogical training of some academic librarians (Detmering et al., 2019) coupled with lack of understanding and commitment by some faculty inhibit the successful teaching of information literacy (Barr et al., 2020). Many faculties do not give the opportunity for information literacy to be taught in their classrooms because they think they need to cover

enough on their syllabi (Huddleston et al., 2019). Consequently, college freshmen are expected to conduct their own research with minimal or no help (Carlozzi, 2018).

Social Context

Many college freshmen do not seem to have the necessary skills to succeed in college (Lanning & Mallek, 2017). College freshmen's searching skills indicated that students rely on the internet more than using library resources (Hinchliffe et al., 2018). College freshmen find it difficult to transition from searching the internet for information to searching their libraries' resources (Clark & Johnstone, 2018). Although the internet is unable to provide the same level of authenticity and credibility of resources found on university libraries' websites, college freshmen prefer to use the internet for their information needs (Lanning & Mallek, 2017). There is a difference between searching for information on the internet and searching for information on Google Scholar. Google Scholar was launched in November of 2004 to simplify and enhance the ease of search and access to information (Martín-Martín et al., 2018). Google Scholar indexes full-text scholarly literature across many disciplines and databases and it can be connected to university libraries to allow researchers to retrieve articles found in Google Scholar through library resources (Martín-Martín et al., 2018; Zientek et al., 2018). However, in comparing Google Scholar to libraries' scholarly databases in terms of quantity and quality of search results, libraries' scholarly databases had better searchability and provided more relevant search results than Google Scholar (Martín-Martín et al., 2017). Although, Google Scholar retrieved more search results, most of the resources were dated, unscholarly and irrelevant (Eun Oh & Colón-Aguirre, 2019).

In research on assessing first-year students' source integration skills, first-year students struggled to find scholarly materials that suit the parameters required in their assignments as well

as synthesize peer-reviewed articles into their assignments (Carlozzi, 2018). Similarly, some international students struggle to navigate through the information landscape within Western academia (Crist & Popa, 2020; Clark & Johnstone, 2018). First-year Chinese international students in higher education institutions in the United States face challenges in evaluating, synthesizing, and citing sources of information (Crist & Popa, 2020). These issues stem from the lack of teaching skills and institutional support for some academic librarians in teaching college freshmen information literacy skills (Aslam, 2017). Certainly, there is a positive correlation between information literacy skills and academic outcomes (Gaha et al., 2018; Shao & Purpur, 2016). A study conducted on searching skills of first-year students before and after teaching them information literacy skills indicated that first-year students' information literacy competence improved after going through information literacy instruction (Boger et al., 2016). Hence, academic librarians play a significant role in college freshmen's acquisition of information literacy skills which enable them to extend their learning beyond the formal classroom context (Dempsey, 2017).

Theoretical Context

Different theories have been used by researchers to examine the problem under study. Carol Dweck's (2006), theories of intelligence are based on whether one believes intelligence is fixed (entity theory) or is something that can be developed over time (growth mindset). Dweck (2006) theories of intelligence emphasize that teachers' theories of intelligence could affect instructional goals, teachers' desire to improve their teaching skills and their perceptions of students' abilities, as well as help-seeking behavior in students. The 2016 Information Literacy Framework for Higher Education mandated academic librarians to assist students to develop higher-order thinking skills. However, not all students naturally develop these higher-order

skills; some students would develop these skills over a period as they work with faculty and academic librarians. Therefore, academic librarians who believe in growth mindset, believe that critical thinking and problem-solving skills are traits that can be developed as one learns, thereby promoting lifelong learning through the development of students' information literacy skills (Folk, 2016).

Critical information literacy theory aims at change in the socio-political, economic, and corporate systems that have the power and influence over information production, dissemination, access, and consumption. Academic librarians have the charge to teach about the purposes and uses of all types of information that would empower learners to identify oppressive power structures and strive for social change. Academic librarians use search terms and Library of Congress Classification to incorporate critical theory in information literacy instruction (Tewell, 2018). On the other hand, Assessment theory is the application of measurable outcomes in information literacy instruction. A well-designed assessment is an integral part of teaching information literacy skills. Academic librarians use formative and summative assessments to determine college freshmen's academic progress and to improve teaching and learning. Administrators and accrediting agencies are interested in outcomes of students' learning and whether students are applying their skills in real-world situations (Erlinger, 2018).

Backward design theory provides framework for academic librarians to make their classroom activities hands-on. Backward design consists of three design stages: Instructor identifies the learning goals and works backward to formulate the assessment that would determine students have achieved the desired learning, then the instructor develops appropriate learning activities that are hands-on to ensure the learning goals are achieved. Backward design theory provides a good structure for motivational theory. Motivational theory is game-based

learning activities that utilizes backward design theory to design games to enhance teaching and learning (Chesley & Anantachai, 2019).

Consequently, the theory that supports this research study is Kolb's experiential learning (Kolb, 1984). This is problem-based learning, competency-based education, or professional education for adult learners (Kolb & Kolb, 2017). Kolb's experiential learning theory emphasizes the process of learning in which knowledge is created through the transformation of experience (Morris, 2020). Kolb's experiential learning theory and the 2016 Information Literacy Framework of Association of College and Research Libraries (ACRL) underscore the need for the individual to be at the center of the knowledge creation and acquisition process. The ACRL Framework hinges on six frames which are authority is constructed and contextual, information creation as process, information has value, research as inquiry, scholarship as conversation and searching as exploration (ACRL Framework, 2016). Essentially, the ACRL 2016 Framework provides core concepts and ideas and serves as a guide for educational institutions to infuse information literacy in their curricula development. The ACRL 2016 Framework intimates that when students are aware about how to use information in their learning, it enhances their information use in their world of work making them become lifelong learners (Barr et al., 2020).

Problem Statement

The problem is that most academic librarians do not have the necessary experiential learning to teach information literacy skills (Detmering et al., 2019). Teaching college freshmen information literacy is ineffective because of lack of adequate pedagogical training in library schools (Lowe et al., 2020), the stress that comes with additional professional responsibilities, and lack of institutional support (Detmering et al., 2019). In addition is the unwillingness of

some faculty to involve academic librarians in the classroom (Huddleston et al., 2019). Some faculties think librarians are more of administrators than educators so they should concern themselves in running the library than teaching because they (librarians) do not have doctoral degree to qualify them as teachers (Long, 2019). Due to the lack of teaching skills of some academic librarians, most college freshmen have not acquired the necessary skills to search for information in libraries' databases (Carlozzi, 2018). They struggle to write quality research papers (Aslam, 2017). They believe the internet is a sufficient search tool and that, freely available internet resources are sufficient for academic work (Hinchliffe et al., 2018). Therefore, most college freshmen search for information in libraries' database like they search the internet for information because they do not have the required skills to find the needed information from libraries' database to write their research papers, making their academic papers lack substance (Aslam, 2017; Lanning & Mallek, 2017). Evidently, this is a real challenge.

Studies conducted on academic libraries' impact on student success largely represent the perceptions of administrators rather than examining the training and skills preparation of academic librarians who are directly involved with providing services and teaching information literacy skills (Cheng & Hoffman, 2020). Also, this phenomenon had not been widely studied, hence this interpretive phenomenological study explored the lack of training and skills of academic librarians in teaching college freshmen information literacy skills with the expectation that; faculty, higher education administrators and other stakeholders can fully understand what support structures academic librarians would need to engage in teaching and learning more meaningfully.

Purpose Statement

The purpose of this phenomenological study is to explore the lack of academic librarians' experiential learning in teaching college freshmen information literacy skills in the United States. At this stage in the research, information literacy skills is generally defined as an overarching set of integrated abilities in which students critically seek, evaluate, organize, and use information in various contexts utilizing a range of search tools and information formats to create new knowledge, and participate ethically in communities of learning (The ACRL Framework, 2015). The theory that guided this study is Kolb's experiential learning (Kolb, 1984). This is problem-based learning, competency-based education, or professional education for adult learners (Kolb & Kolb, 2017). Kolb's experiential learning theory is significant in the development of teaching competencies for academic librarians because it emphasizes on the promotion of cognitive, affective, and behavioral learning through the integration of theoretical and practical elements of learning to transform the individual (Kolb, 1984). Thus, individuals can apply what they have learned in their world of work to enhance their performance in a more effective and efficient manner.

Significance of the Study

Many researchers have conducted quantitative and qualitative research studies in information literacy skills over the years. Studies indicate there is high correlation between information literacy skills and GPA or academic success (Boger et al., 2016; Gaha et al., 2018; Shao & Purpur, 2016). Unfortunately, there is a gap in the literature on qualitative study to examine the lack of academic librarians' experiential learning in teaching information literacy skills to support the information literacy needs of college freshmen.

Empirical

This research will narrow the gap in the literature by providing findings from well-developed qualitative phenomenological interpretive study that describes the essence of the lack of academic librarians' experiential learning. It will add to the body of knowledge and facilitate the interpretation of other research studies as well as assist other researchers to gain a broader perspective of the topic being studied and lay the foundation for future studies. In addition, this research will resolve any discrepancies that arose in previous studies by answering questions that cannot be studied quantitatively (Liamputtong & Ezzy, 2005).

Theoretical

The theoretical underpinnings of this research will enable the researcher to fully ascertain the practical application of the theory based on the method and technique that will be used in the research. Hence, establishing how the theory has been applied in the context of the lack of academic librarians' experiential learning in teaching college freshmen information literacy skills. In addition, it will enable the researcher to further explore other theories that have been applied in similar research and provide practical and important recommendations and suggestions for future studies (Liamputtong & Ezzy, 2005).

Practical

There is the need to investigate more into this topic because the practical significance of any results from this study is the benefit to the following stakeholders: Library schools will give adequate pedagogical training to academic librarians to enhance their teaching skills (Detmering et al., 2019). Academic librarians will get institutional support from both faculty and higher education administrators to enhance their teaching of college freshmen information literacy skills (Erlinger, 2018). College freshmen will be equipped to develop the required skills to write good

academic papers (Shao & Purpur, 2016); Faculty will be more willing to integrate information literacy instruction in their classrooms for students' understanding and critical thinking and not just impartation of information (Karimi et al., 2015); Higher education administrators may perhaps churn out holistic students who are information literates and equipped for the world of work.

Research Questions

The objective of this study was to investigate one central research question and three subsidiary research questions on the phenomena being studied.

Central Research Question

What challenges do academic librarians experience in teaching information literacy skills?

Research indicated that there is a difference in professional preparation of first and second career instruction librarians because, instruction librarians who have second career in another field feel more confident to teach than those who do not have another career (Hess, 2020). This is largely due to lack of adequate pedagogical training in library schools to develop their teaching skills (Detmering et al., 2019), and the absence of institutional support from both faculty and higher education administrators in teaching college freshmen information literacy skills (Erlinger, 2018). Nevertheless, academic librarians need support systems or programs to assist in enhancing their training, and instructional practices (Hess, 2020), to give high quality instruction to advance the information literacy skills of college freshmen since research and writing skills are important elements in higher education and; students are expected to acquire these skills to enable them to succeed in their educational pursuits (Hoffman et al., 2017).

Sub-Question One

1. What readiness and personal preparations do academic librarians have in teaching information literacy skills?

Sub-Question Two

2. How have academic librarians maximized their potentials in teaching college freshmen information literacy skills?

Sub-Question Three

3. What professional development and support do academic librarians require from their institutions to teach information literacy skills?

Definitions

1. *Information literacy* – A set of abilities that individuals possess to enable them effectively discover information in various formats, assess the information, organize, use and communicate the information to solve their problems (ALA, 1989)
2. *Experiential learning theory* – The view that the individual is at the center of the knowledge creation and acquisition process. Experiential learning is based on the idea that an individual's experiences of life, work, and education is central in their learning and understanding of new knowledge (Kolb & Kolb, 2009).
3. *ACRL (2016) Framework for information literacy skills* – A framework designed for academic libraries to use as a guide in designing their information literacy instruction. The Framework contains core concepts and ideas in developing curricula, research, and scholarship (ACRL 2016 Framework).

Summary

As academic librarians in 4-year higher education engage in teaching information literacy skills to college freshmen, it is relevant to evaluate the experiential learning of academic librarians: how they develop their teaching skills as educators and how their training impact their teaching. Examining the experiential learning of academic librarians who teach college freshmen information literacy skills will enable higher education administrators and the library profession to support instructional librarians more broadly with the needed resources and skills to enhance their teaching. In this chapter, the researcher gave an overview of the research topic and introduced the research questions. The researcher gave the background of the study by enumerating the history of information literacy for college freshmen, and the theoretical framework underpinning the research. In addition, the researcher discussed the research problem, the purpose of study, significance of study, and definitions.

CHAPTER TWO: LITERATURE REVIEW

Overview

A systematic review of the literature was conducted to explore the lack of academic librarians' experiential learning in teaching college freshmen information literacy skills. Information literacy skills play a significant role in college freshmen's academic outcomes (Godbey, 2018). A study conducted on academic librarian-faculty collaboration on essay writing of college freshmen indicated that there was a significant change in college freshmen's bibliographic and citation skills but not how to analyze sources and develop argument (Carlozzi, 2018). Hence, the need for academic librarians to develop pedagogical skills necessary to teach information literacy skills to college freshmen so they become holistic in information literate society (Fosnacht, 2020). This chapter will present a review of the current literature related to the topic of study. In the first section, Kolb's experiential learning theory relevant to teaching information literacy skills will be discussed. In addition, the ACRL Theoretical Framework for Higher Education will be examined, followed by a synthesis of recent literature regarding history of information literacy in higher education, significance of information literacy in higher education, and responsibilities of a college librarian. In the end, a gap in the literature will be identified to indicate a viable need for the current study.

Theoretical Framework

The theory that guided this research study is Kolb's experiential learning (Kolb, 1984). Kolb's experiential learning theory emphasizes the process of learning in which knowledge is created through the transformation of experience (Morris, 2020). Experiential learning theory combines all aspects of learning such as experience, cognition, perception, and behavior in the learning process (Kolb, 1984). Experiential learning is based on the concept that people's

experiences and ideas interact to create new knowledge. Therefore, an individual's experiences of life, work, and education is central in the learning and understanding of new knowledge (Kolb & Kolb, 2009). Kolb (1984) believes that the individual is at the center of the knowledge creation and acquisition process. As a result, experiential learning allows students to gain first-hand experiences that enhance their understanding of concepts which can be translated in real world situations (Kolb & Kolb, 2017).

Kolb (1984) is of the view that students need four kinds of abilities to be efficient. That means learning takes place in a four-stage cycle. These are: concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb & Kolb, 2005). The concrete experience is the application of the experiential component to academic curricula where students practically apply course content to solve real world challenges (Kolb & Kolb, 2009). Teaching must be student-centered to enable students discover new experiences to solve problems (Kolb & Kolb, 2017). Therefore, real world activities must be integrated in the classroom to equip learners acquire higher levels of knowledge through creativity and collaboration (Brau, 2020).

Experiential learning allows for higher order thinking and fosters softer skills such as social competence (Morris, 2020). Reflective observation is to identify that problems are contextual. Hence, solutions to real world situations are context in nature. Reflective observation requires that students should be able to apply their learning in different contexts effectively (Kolb, 1984). Students should know what worked or did not work, and how they can account for the success or failure of the experience (Kolb & Kolb, 2009).

Abstract conceptualization learning stage enables students to draw insights and implications perhaps through theories into why their experiences went the way it did, while

students test their new ideas in relevant environment in active experimentation stage (Kolb & Kolb, 2005). Therefore, experiential learning theory is learner-centered. Learning is viewed as the active construction of knowledge and not passive acquisition. Thus, the process of learning from experience is prevalent in every aspect of life (Kolb & Kolb, 2017).

The 2016 ACRL Theoretical Framework for Higher Education

In relation to the experiential learning theory, the ACRL 2016 Information Literacy Framework advocates that the development of human cognition takes place through engagement in activities not only with others but also with objects and technology – these engagements are mediated by sociocultural tools such as language, materials, signs, and symbols that create human forms of higher-level thinking (John-Steiner & Mahn, 1996). The ACRL 2016 Information Literacy Framework is anchored on six concepts that are: Authority is Constructed and Contextual, Information Creation as a Process, Information has Value, Research as Inquiry, Scholarship as Conversation, and Searching as Strategic Exploration (The ACRL Framework, 2016).

The ACRL 2016 Framework employs the idea of meta-literacy which presents information literacy as an overarching set of abilities in which students are consumers and creators of information who can participate successfully in collaborative space. Meta-literacy promotes critical thinking and collaboration in the digital space and demands behavioral, affective, cognitive, and metacognitive engagement with the information ecosystem. Therefore, the framework encourages librarians, faculty, and academic institutions to collaborate on pedagogical research and involve their students in the research and to design their curricula, courses, and assignments to include information literacy instruction in their students' success initiatives (The ACRL Framework, 2016).

Related Literature

The related literature for this study is presented under three thematic headings. Each theme depicts an important component that would examine the topic under study. The themes to be examined are: History of Information Literacy in Higher Education, Significance of Information Literacy in Higher Education and Responsibilities of a College Librarian.

History of Information Literacy in Higher Education

The genesis of information literacy has been attributed to Zurkowski (1974) who came up with the term in 1974 to describe individuals' information use skills in their work environment (Landøy et al., 2020; Zurkowski, 1974). The term information literacy became embraced by scholars and professionals of library and information science community, and it was formalized and adopted to be used in higher education where the meaning has been expanded to include information use in normal daily life as well as in academic and research contexts (Sample, 2020). Friedman et al. (2019) traced the history of the institutionalization of information literacy skills in freshmen, or first-year students' courses in American higher education institutions. It is worth noting that the University of South Carolina was among the first higher education institutions to create special programs for students to make the transition from secondary education environment to college or university through the establishment of its 'University 101' course in the early 1970s as a response to divisions on campus that generated into riots in 1970 (Sung Un & Shumaker, 2015).

"First-year experience" program became successful by early 1980s and had whipped interest in other institutions in the country which led to the first national meeting of 175 educators on the "first-year seminar" concept (Freer, 2016; Sung Un & Shumaker, 2015). The

University of South Carolina proceeded to establish a resource center for such programs and conducted a series of surveys to establish their spread and development (Friedman et al., 2019).

A survey conducted by University of South Carolina in 2012–2013 revealed that, 804 two- and four-year institutions offer some form of first year seminar to freshmen, thereby teaching information literacy to freshmen (National Resource Center, 2013; Sung Un & Shumaker, 2015). As recent as 2017, *Library Journal* in collaboration with *Credo Reference* took a survey on first-year experience programs in academic libraries and got response from over 500 colleges and universities who have implemented some form of the program in their institutions (Angell, 2018; Murphy & Button, 2019). Nevertheless, first-year experience librarian position began in the 1990s and Bowling Green State University was the first to develop a first-year experience librarian position in 1998 (Angell, 2018).

Unfortunately, the question of how to define information literacy has been discussed in the library and information science field for a long time (Yevelson-Shorsher & Bronstein, 2018). Eventually, information literacy was defined in the 1989 ALA Presidential Committee on Information Literacy Final Report as being attributes that the individual needs to exhibit; ‘To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and effectively use the needed information’ (American Library Association, 1989). In the same vein, national attention was drawn to the contributions libraries and information services made to a literate, productive and democratic society in 1991 at the Second White House Conference on Libraries and Information Services (WHCLIS) where WHCLIS called on the U.S government to institute a National Coalition for Information Literacy which included schools, libraries, labor and industry, government, parents and the general public

to develop a strategic plan for the general establishment of skills required for information literacy (Sample, 2020).

In 1993, Carol Kuhlthau developed an information literacy competency model that could be applied to any learner who wanted to become information literate (Flierl et al., 2021). The model provided a conceptual framework in which the teaching of information literacy could be developed and assessed. The model indicated the roles the cognitive, affective, and behavioral play in acquiring information literacy competencies (Pinto et al., 2019). Kuhlthau (2003) examined the affective states of students as they engage in a research process in her Information Search Process Model (Kuhlthau, 2003). The Information Search Process Model is a six-stage model of the human information search process which includes: task initiation, topic selection, exploration, focus formulation, information collection, and search closure. These six stages are associated to human feelings, thoughts, actions, and strategies (Flierl et al., 2021).

In the year 2000, the Association of Colleges and Research Libraries (ACRL) developed the ACRL 2000 Information Literacy Competency Standards for Higher Education to be used in teaching information literacy skills in higher education. ACRL viewed information literacy as a set of skills needed by college students for academic and professional success. The American Association of Higher Education and the Council of Independent Colleges approved the ACRL 2000 Standards and academic librarians have been using these standards as guidelines in teaching information literacy skills (ACRL, 2000). Llewellyn (2019) intimated that ACRL 2016 Theoretical Framework for Information Literacy Skills was an improvement on the 2000 Standards and both documents are used complementarily since the 1989 ALA Presidential Committee Report emphasized the importance of information literacy to lifelong learning and the capabilities of people to navigate their information needs in a rapidly changing society (Godbey,

2018). The ACRL 2016 Theoretical Framework conceptualizes information literacy as knowledge-based learning and discovery that allow students to consistently apply the skills they have learned in one context to another making learners informed citizens in a continuous manner (Flierl et al., 2021; Pinto et al., 2021).

The Advent of Google

With the development of information technology, information literacy continues to evolve (Pinto et al., 2021). By the mid-1980s information literacy requirements began to change due to the advancement in technology (Boger, et al., 2016). As an improvement on Kuhlthau's (2003) information literacy competency model, the ACRL issued a normative document which incorporated the impact of technologies in academic libraries and in the teaching of information literacy skills (Pinto et al., 2019). The proliferation of information has enabled students to discover information in their own terms (Hinchliffe et al., 2018). Research on search behavior of first-year students revealed that students still prefer to use the internet to search for information than library's databases (Boger, et al., 2016). Freshmen feel competent in their skills related to Information and Computer Technology (ICT) than their information retrieval skills in the library (Hinchliffe et al., 2018). Students find information retrieval and assessment quite easy when they use search engines but find how to start research inquiries that define precise topic and scope daunting (Glowacka et al., 2020).

Freshmen find it difficult to transition from searching on the internet to searching in library's databases (Aslam, 2017; Lanning & Mallek, 2017). Although the internet's credibility level is not the same as that of the library's databases, students use it (Clark & Johnstone, 2018). They confuse their knowledge with internet navigation to having information literacy skills (Glowacka et al., 2020). First-year students believe that the internet is a sufficient search tool and

that freely available internet resources are sufficient for academic work (Hinchliffe et al., 2018). A study conducted in 25 U.S. universities indicated that students rely on internet rankings more than their own evaluation of search results (Glowacka et al., 2020). First-year students' over reliance on searching the internet for information have impeded students' understanding of the organization of information in the library and meaningfully engaging with scholarly resources for research (Clark & Johnstone, 2018). To be able to create new knowledge, as intimated by Dewey (1938) along with Piaget (1954), Bruner (1968), and Vygotsky (1978), students must interact critically with information by analyzing, synthesizing, evaluating, conceptualizing, and applying the information in different situations to develop critical thinking and problem-solving skills.

However, the emergence of technology has provided opportunities for academic libraries to use innovative ways to engage their learning communities in teaching, learning and research (Llewellyn, 2019). Academic libraries are mandated to take advantage of students' extensive use of mobile technologies to adapt information literacy instruction that would reflect the new reality in the classroom to develop the information and digital literacy of students (Pinto et al., 2021). Since the inception of social media, academic libraries have been exploring to find their place in the social media landscape (Julien et al., 2018). Pew Research Center data on young adults' use of social media reported 9 out of 10 young adults use social media (Elkins et al., 2020). The wide usage and importance of social media have enabled academic libraries to take advantage of these tools to reach out to their students (Harrison et al., 2017). Academic libraries use various social media platforms such as MySpace and Twitter to offer research and reference services to first-year students (Julien et al., 2018). Technology allows academic librarians to engage students with varying learning styles and levels of accessibility to discover knowledge on their own which

they can share with their colleagues (Dow et al., 2021). It is in this vein that, the Association of College, and Research Libraries Theoretical Framework for Information Literacy in Higher Education (2016) unequivocally states that information literacy classroom should be collaborative spaces for students to be consumers and creators of their own information to acquire understanding and critical thinking skills. Yet, the question is to what extent are academic librarians who teach freshmen information literacy skills have the needed training and skills to develop students' competencies in information searching, processing, evaluation, dissemination, and communication (Glowacka et al., 2020; Goodsett & Schmillen, 2022).

Authenticity, Validity and Reliability of Information

The influx of information in this time and age has enhanced access to information (Fosnacht, 2020). Students have so much information in any form or shape whether in format, reliability, or means of production (Quijano, 2019). The increased popularity of 'alternative fact' and 'fake news' in everyday discourse proves how much of information students consume are in bad taste (Goodsett & Schmillen, 2022). Therefore, being able to have the knowledge of how to search for, use and properly evaluate information is a critical skill in the 21st century (Fosnacht, 2020). Hinchliffe et al. (2018) found that college freshmen prefer to search for information on the internet to write their assignment or research papers. A study conducted on generational analysis of library use indicated that millennials (between 1980 to mid-1990s) prefer to research online than visit the physical building of libraries (Jameson et al., 2019).

Students lack the ability to search, retrieve and evaluate the needed information from library sources available to them although they have the technological knowhow (Yevelson-Shorsher & Bronstein, 2018). Being familiar with the use of the internet does not automatically translate into acquiring information literacy skills. Most first-year students still struggle with

college-level research (Lanning & Mallek, 2017). A survey conducted on the information searching habits of first-year nursing students noted a preference for searching for information on the web rather than in library's database due to students' inability to understand electronic database, difficulty in understanding research articles, lack of time, and research skills (Russell et al., 2018). In related research, more than 50% of first-year students interviewed could not establish the systematic approach that is used to determine the credibility of a website (Clark & Johnstone, 2018).

For freshmen to develop their information competencies, there is the need for academic libraries/librarians to create information literacy programs that would assist freshmen to use information effectively (Quijano, 2019). Academic librarians need to explore interactive tools that can be integrated in the college freshmen information literacy classroom to allow for a more sustained interaction with content (Russell et al., 2018). Kolb (1984) asserts that learners gain first-hand experience when they are placed at the center of the knowledge creation and acquisition process. Therefore, college freshmen should be engaged in active, hands-on, and relevant meta-literacy activities to enhance their information literacy skills (Napier et al., 2018). Studies indicate a positive relationship between digital literacy and students' skill development (Russell et al., 2018). Hence, in the wake of the changing needs of their users, academic libraries are evolving to meet the demands of the 21st century college freshmen (Sandy et al., 2020). The development of digital academic libraries and scholarly communications have positioned academic libraries to use innovative service models to meet the information needs of students, increase access to libraries' resources, and develop students' capacity in digital literacy (Senseney et al., 2019).

Significance of Information Literacy in Higher Education

Students' graduation and retention rates have become critical issues in higher education. More than 40% of students who seek undergraduate degrees drop out of school within six years (Croxton & Moore, 2020). Thus, the significance of information literacy in higher educational institutions cannot be over emphasized. Information literacy supports the teaching and learning missions of higher education institutions (Flierl et al., 2021). Information literacy empowers and strengthens the formative processes of students (Pinto et al., 2021). Studies have shown a positive relationship between freshmen's retention rates and information literacy skills which made universities integrate information literacy in students' learning outcomes (Lowe et al., 2020). Likewise, students who are information literate do well in co-curricular and extracurricular activities than those who are not (Croxton & Moore, 2020). Association of College and Research Libraries' recent AiA report indicated a positive relationship between students' retention and information literacy instruction (Oliveira, 2017). A study undertaken by Greater Western Library Alliance (2017) indicated that freshmen whose courses included information literacy instruction had higher retention rates than those who did not receive information literacy instruction. In a related study on library usage patterns and academic achievement, students who accessed electronic resources and borrowed books achieved higher grades (Croxton & Moore, 2020).

Institutions that set higher standards for academic work compel students to use the library effectively to meet academic expectations (Yevelson-Shorsher & Bronstein, 2018). Mayer et al. (2020) found a correlation between the value of library resources and services to student retention rates and academic success. A similar study by North-West Arkansas Community College found that 83.7 per cent of students enrolled in an English composition who

attended information literacy sessions returned, compared to 62.5 per cent who did not attend all the sessions (Oliveira, 2017). Even though employers value critical thinking skills, they also expect potential employees to be information literate (Lowe et al., 2020). Being information literate increases one's chances of getting employed (Flierl et al., 2021).

Information Literacy and Academic Outcomes

Information literacy is a construct that is more than computer and library literacy. It is a knowledge-building and creativity infused learning that engages the individual to develop their critical thinking and problem-solving skills (Sample, 2020). Likewise, Kolb (1984) is of the view that learners should have the opportunity to get involved in the learning process to gain first-hand experience. In the same way, Piaget (1954), Vygotsky (1978), Dewey (1938) and Bruner (1968) define learning as individuals engaging in their own environment. These theorists emphasize inquiry-based learning that makes students active learners as they construct their own learning and develop critical thinking skills and build new knowledge on what they already know.

Information literacy skills levels of first-year students differ due to the learning methods they are involved in (Glowacka et al., 2020). Professors who engage students in the education process with individual assignments that involve research and having information literacy competencies perform higher than students who are not engaged (Croxtton & Moore, 2020). Shao and Purpur (2016) found a significant relationship between information literacy scores and students' writing and final course scores. Information literacy scores were positively related to students' final course scores. A study conducted by Greater Western Library Alliance (2017) indicated that freshmen whose courses include information literacy instruction had higher GPA than those who do not have information literacy instruction included in their courses (Greater

Western Library Alliance). Gaha et al. (2018) affirmed a positive relationship between information literacy instruction and freshmen's GPA. Similarly, a study conducted by Napier et al. (2018) on first-year students' writing skills found that there is a significant change in freshmen's organization of research paper (integration and coherence) after taking information literacy skills course. Likewise, a study on 42,624 students across 12 universities indicated that students whose courses included information literacy instruction in their first year had higher GPA in their first year than students who did not have information literacy instruction in their first year (Croxtton & Moore, 2020). In addition, first-year students in an introductory English class who attended information literacy session performed better on an annotated bibliography than students who do not attend information literacy session (Lowe et al., 2020).

A related study of 42,000 first-year students from 1,700 courses in 12 research universities revealed that students who received information literacy instruction had on average higher GPA, retention rate, and course credits completed per year than those who did not (Witherspoon & Taber, 2021). Also, a study on first time freshmen who were enrolled in a class that received one-shot library instruction indicated no correlation between students who attended one-shot library instruction and retention but there was a correlation between students who attended library instruction and higher GPA (Rowe et al., 2021). Therefore, higher education institutions have called on academic librarians to incorporate course-integrated information literacy instruction to bridge the gap in information literacy needs for college freshmen through the establishment of 'first year experience' programs (Douglas & Rabinowitz, 2016; Sung Un & Shumaker, 2015).

On the other hand, there was no significant difference in freshmen's information literacy skills, writing and final course scores, despite the number of one-shot library instruction sessions

students attended (Rowe et al., 2021). Hence, no significant impact was made on students' information literacy skills by the number of one-shot library instruction sessions they attended (Shao & Purpur, 2016). However, it is worthy to note that the research was limited to a particular institution (Appalachian State University) so the results cannot be generalized because this may not be a representation of freshmen in other universities. Robertshaw and Asher (2019) indicate that there may be a small effect of library use and students' outcomes because libraries are microcosm in a macrocosm. If other departments in an educational institution are functioning effectively, they may invariably work together with academic libraries to ensure the success of students. This reiterates Tinto's (2006) viewpoint that student success cannot be attributed to one factor, but rather a holistic environment which involves all departments or aspects of campus life that support teaching and learning. However, the ACRL Core Competencies for information literacy stipulates, academic librarians should use active learning and teaching strategies to enable college freshmen to develop transferable information literacy skills that would impact freshmen's experiences throughout life (Napier et al., 2018). This raises the issue of whether academic librarians have the pedagogical training and skills to teach college freshmen information literacy skills.

Higher Education Administration Support for Information Literacy

In the labor market, the knowledge, skills, and attitudes associated to the understanding and use of information is very essential (Glowacka et al., 2020). The teaching of information literacy skills in higher education provides the opportunity for students to acquire the necessary skills that would make them employable when they leave college (Goodsett & Schmillen, 2022). On the other hand, lack of information literacy skills impedes some students' academic performance while others struggle with information literacy long after they left school

(Lowe et al., 2020). Academic libraries community adopted information literacy concept as a necessity to develop the U.S. work force (Flierl et al., 2021). A report released in 2010 by ACRL that was contained in *The value of academic libraries: A comprehensive research review* placed demand on academic libraries to assess the practice and contributions they make towards student success in their institutions (Folk, 2019). Library instruction has evolved from the teaching of library skills based bibliographic instruction to a more global research focused information literacy instruction which integrates technologies. Hence, the need for the implementation of a more robust assessment techniques that would prove its impact (Erlinger, 2018). Sadly, there is lack of administrative support in the teaching of information literacy in some institutions (Detmering et al., 2019). Some of the deans do not think information literacy instruction has much value (Julien et al., 2018).

The outcome of a survey taken on academic librarians' views on administrative support to information literacy instruction indicated that some higher education administration give little support to academic librarians to teach information literacy (Lowe et al., 2020). Academic librarians bemoaned that there had not been any support for assessment to evaluate students' skills which would allow them to identify students' information literacy competencies when they entered college or propose changes to the information literacy curriculum if need be (Julien et al., 2018). There is no proper assessment of students' information literacy skills (Lowe et al., 2020). Information literacy is not systematically assessed in some institutions (Fosnacht, 2020). There is limited time, resources, and appropriate assessment tools for proper assessments (Detmering et al., 2019). Assessment instruments that are used have not been validated (Julien et al., 2018). Librarians are usually only encouraged and not obligated to conduct assessment. Therefore, they do not give it the needed attention (Detmering et al., 2019). Assessment usually

focuses on testing knowledge of specific skills, or the sample size that are used for assessment is too small to represent an institution (Fosnacht, 2020).

In addition, assessment instruments used mostly measure affective domains of students but do not measure skill and behavior (Lowe et al., 2020). Affective domain measures do not reflect on the whole learning outcomes and practices (Erlinger, 2018). Instruments that are used to measure students' abilities to use information in various contexts usually rely on self-reported data resulting in students over-reporting their abilities (Flierl et al., 2021). Studies conducted on assessment of students' information literacy skills indicated that some institutions use surveys that students self-report their knowledge and familiarity with various information literacy concepts and skills (Godbey, 2018). Similarly, a systematic review of 22 information literacy measurement instruments which included IL-HUMASS, Project SAILS, IL Self-Efficacy scale (ILSE), B-TILED, and IL Test (ILT) only rely on students' self-report data (Flierl et al., 2021).

From the 1990s, accrediting agencies of higher education institutions use students' knowledge and skills in information literacy as academic success indicators (Erlinger, 2018). Information literacy instruction assessment would not benefit librarians only, but it would provide feedback to students, professors and prove the gains made on programs to administrators and stakeholders (Lowe et al., 2020). Assessment allows learners to trace their improvement or see where they need further development (Douglas, 2020). Professors can see the effectiveness or otherwise of their teaching methods and if there is the need for improvement. (Russell et al., 2018). Administrators and parents use students' assessment to determine the performance of an institution (Yevelson-Shorsher & Bronstein, 2018). It is worth mentioning that some college administrations have implemented campus wide student learning outcomes to promote retention and student success (Detmering et al., 2019). For instance, Indiana University promotes campus

wide student learning outcomes (SLOs) in which the Principles of Undergraduate Learning (PULs) which was fully supported by the Association of American Colleges and Universities (AAC&U) was adopted in 1997. In 2018, the PULs was revised to embrace a more holistic framework of student learning outcomes that include co-curricular outcomes. These Profiles of Learning for Undergraduate Success as they were called included four quadrants: communicator, problem solver, innovator, and community contributor. They encapsulated the ACRL Framework for Information Literacy for Higher Education thereby, allowing for integration of information literacy in the curriculum (Lowe et al., 2020).

While some higher education administration adopt campus wide information literacy instruction, they do not fully understand information literacy instruction (Detmering et al., 2019). This is because a performance-based information literacy instruction model which is a credit bearing course needs to be implemented across disciplines that provide metrics to reveal the quantitative value of information literacy (Julien et al., 2018). Harland et al. (2019) indicated that academic libraries must engage fully and consistently with stakeholders through practices, processes, and actions to satisfy the needs and accomplish the mission of the library. Academic libraries must involve students, faculty, general staff, university administration as well as donors to libraries' activities to influence their attitudes towards the library (LeMire et al., 2021). A qualitative study conducted with 6 librarians revealed that conducting information literacy assessment is ineffective because of lack of adequate pedagogical training in library schools (Detmering et al., 2019), the stress that comes with additional professional responsibilities (Hess, 2020), and inadequate institutional support (Long, 2019). In addition, librarians do not have authority and influence on campus which makes it difficult to organize assessment at both the library and campus levels. Therefore, they engage in informal assessment and do not

demonstrate libraries' contribution to student success at the institutional level, making them lack the necessary impact to attract administrative support (Lowe et al., 2020). Consequently, Coates et al., (2018) intimated that assessment of information literacy instruction would assist in examining learning outcomes and promote the efficacy of academic librarians' teaching thereby, allowing them to design appropriate information literacy instruction, advocate for instructional time, ask for administrative support or other resources to help information literacy thrive in target areas (Douglas, 2020).

The Impact of Academic Libraries in Higher Education

Academic libraries play important roles in student success and persistence (Brown & Malenfant, 2017). A study conducted in University of North Colorado on the impact of libraries of library use indicated that there is a significant correlation between checking out items, logging on to a computer and participating in instruction to students' persistence (Mayer et al., 2020). Also, academic libraries provide internship opportunities to students (Batts et al., 2020). Student interns gain leadership skills as they provide services to their peers and aid in strengthening their information literacy skills as well as increasing their awareness about library resources and services (Everett & Bischoff, 2021). A study conducted indicated that 80% of library student interns said they had become familiar with using library resources, services, and spaces for their studies (Westbrock & Cox, 2020). Studies revealed that students who work in the library graduated with higher average GPAs than their fellow graduates (Gaha et al., 2018).

Academic libraries provide safe and welcoming spaces for community of scholars by giving extended study hours to accommodate the needs of all students than other support services (Dow et al., 2021; Mayer et al., 2020). Studies have shown there is a positive relationship between student success indicators such as GPA, retention, and graduation to students' use of

library spaces (Anderson & Vega Garcia, 2020). Students' use of library resources, including print books, electronic resources and media accounts for higher GPAs, better retention, and higher graduation rates (Rowe et al., 2021).

Some universities have established student success initiative to increase enrolment (Mayer et al., 2020). Therefore, higher spending on academic libraries indicates higher student success outcomes (Rowe et al., 2021). A study on how library services contribute to student success at University of Central Florida revealed a positive correlation between students who used one or more library services and higher end of semester GPAs (Beile et al., 2020). Likewise, a comparison of students' use of electronic resources to GPA and retention at Nevada State College indicated a positive relationship between the use of library resources and student success. University of Minnesota and Indiana University collaborated and conducted a similar study by comparing data on the use of their libraries' service points and electronic resources with their students' GPA stipulated a positive correlation between library use and student success (Rowe et al., 2021). James Madison University, University of Wyoming, Murray State University and Curtin University in their separate studies found a positive correlation between a variety of library services such as: research consultation, instruction, workstation use, and use of print or online resources and student persistence, GPA, and academic engagement (Mayer et al., 2020). Also, students who completed research assignments using library resources had higher GPA, retention, and graduation rates than those who did not.

Consequently, there is a positive correlation between students who completed research assignments that required the use of library resources (Rowe et al., 2021). It is worth bearing in mind that despite there is a correlation between library services and higher GPA and retention, some research studies do not indicate a correlation between library usage, students' persistence,

and higher GPA. Therefore, there is the need for a good measuring or assessment method to determine the value of libraries in higher education (Mayer et al., 2020).

In the 1980s, there was the emergence of data reporting practices which was known as “time of compliance” that required higher education institutions to prove to accrediting agencies and funding bodies they were attaining outcomes (Flierl et al., 2021). Higher education institutions are expected to reach or surpass their benchmarks to secure funding and status. Therefore, there is a renewed focus on student success and its associated metrics (Beile et al., 2020). Higher education administrators increasingly need data that prove academic libraries are making an impact towards student success to justify return in their investment (Rowe et al., 2021). Academic libraries need to engage with stakeholders and align their programs to the mission and vision of their institutions to demonstrate the library’s value to stakeholders (Beile et al., 2020; Harland et al., 2019). Libraries are expected to link library use to institutional outcomes such as student success and retention (Cheng & Hoffman, 2020). Libraries’ instruction programs should be dynamic to meet the ever-changing goals and needs of institutions’ curriculum changes, strategic planning, and accreditation reviews (Jackson et al., 2021).

Administrators use academic assessment for accountability and advocacy (Rowe et al., 2021). The 2017 ACRL report on *Academic library impact: Improving practice and essential areas to research* mandated academic libraries to quantify library usage to student success (Anderson & Vega Garcia, 2020). Hence, academic librarians are challenged to demonstrate their efficiency in teaching information literacy skills to support student success (Beile et al., 2020). A survey that was taken on the opinions of provosts of colleges and universities about the impact of academic libraries indicated that provosts prefer correlational data that relates to

retention and student success than user satisfaction data that is not tied to outcomes (Murray & Ireland, 2018). Consequently, academic librarians should not only improve library's resources and services, but they should also focus on developing the needed training and skills to enhance their capabilities of teaching information literacy skills to promote students' retention and success, since qualitative evidence of academic libraries is insignificant unless it is used in conjunction with quantified evidence (Brown & Malenfant, 2017; Cheng & Hoffman, 2020).

Responsibilities of a College Librarian

College librarians play a central role in the teaching and learning process of an institution (Clark & Johnstone, 2018). Librarians engage students in different ways in both face-to-face and online environment (Faulk & Crist, 2020). Librarians provide reference services to meet students' research and information needs (Everett & Bischoff, 2021). Personalized reference services encourage students to consult librarians for help rather than their peers or course instructors (Jameson et al., 2019). Librarians provide online reference and information literacy instruction through asynchronous video tutorials, web research consultations such as: email, online chat service, and live webinars which are recorded for later viewing (Faulk & Crist, 2020). In addition, they provide reference services through telephone and scheduled individual and small group research consultations (Jameson et al., 2019). College librarians collaborate with faculties in their research endeavors (Oberlies et al., 2021). They provide metadata and storage for faculties' research datasets as well as disseminate the information using libraries' repositories as publishing tool (Harland et al., 2019). College librarians develop effective information literacy resources and searching strategies that are tailored to the scope of course of study (Glowacka et al., 2020). They teach transferable skills such as critical thinking and information evaluation that students can use beyond the classroom (Julien et al., 2018). College/liaison librarians offer

research and reference support for academic departments by offering scaffolding information literacy programs so faculty can focus on content to enhance teaching and learning (Arch & Gilman, 2019; Clark & Johnstone, 2018). College librarians engage in patron-driven or demand-driven collection development for print books and E-resources to meet their institutions' educational missions (Tyler, et al., 2019). They partner with professors to develop collections for various academic departments and seek ideas from reviewers of academic books (Levenson & Hess, 2020). Liaison librarians update professors about new books and databases that are available in their subject areas (Yevelson-Shorsher & Bronstein, 2018).

Many first-year students find the library to be difficult to navigate, intimidating and scary (LeMire et al., 2021). College librarians help students to become accustomed to the library's organization of information and navigate the information resources that some students find intimidating (Carvalho e Rodrigues & Mandrekar, 2020). Therefore, college librarians increase their libraries' presence by integrating library use in first-year students' orientations and summer bridge programs to assist students who feel overwhelmed by the number of print and electronic resources available in libraries (Clark & Johnstone, 2018). Academic librarians create library guides as outreach learning resources for both students and their parents to become familiar with the resources in the library (Arch & Gilman, 2019).

Librarian-Student Relationship

Academic librarians make significant impact on students' learning (Rowe et al., 2021). Academic librarians establish rapport with first-year students through providing a one-on-one information instruction to those who have challenges in finding resources for their assignments. Thereby, create a friendly and welcoming environment for students to succeed (Arch & Gilman, 2019). Academic librarians use social media such as: email, libchat, Facebook, and Twitter to

provide reference services to first-year students virtually and to answer potential questions students may have pertaining to their academics (Okolo & Eserada, 2019). College librarians mentor and advise first-year students on how to navigate through their college years, fill forms such as FAFSA, register for classes and find resources for their assignments (Price, 2018). First-year students often find it difficult to understand how the college system works, and where to find help (Gardijan, 2021). College librarians are often available to provide this information (Arch & Gilman, 2019). Jameson et al. (2019) are of the view that students who have mandatory meetings with librarians can approach librarians for assistance. Thereby, reducing their anxiety levels.

Despite the various ways college librarians offer help to first-year students, some students do not approach librarians when they need help finding resources for their assignments, they prefer to go to their professors or friends to receive research help than to seek help from a librarian (Clark & Johnstone, 2018). This is because some students are unfamiliar with the support librarians provide (Meals, 2022). They assume librarians are only responsible for organizing library shelves. Other students are sometimes not aware of the resources and services in the library or librarians provide (Yevelson-Shorsher & Bronstein, 2018).

An outcome of a survey taken of college librarians who teach first-year students information literacy skills indicated that librarians admitted some students get bored when they meet them in more than one class because students think information literacy curriculum contains the same content and finds it repetitive (Julien et al., 2018). Students do not know that each information literacy instruction session is tailored to a course or research assignment (Fosnacht, 2020). In addition, there is no proper assessment of freshmen's information literacy competency levels when they enter college (Erlinger, 2018). Universities do not perform

systemic assessment of first-year students' information literacy competencies to ascertain what competencies students had when they entered the university and what competencies they had acquired over the years (Detmering et al., 2019). Assessment would enable liaison librarians to tailor their teaching to suit the level of their students (Lowe et al., 2020).

Faculty-Librarian Collaboration

Information literacy has shifted away from task or skill-based conceptualization to one that develops students' threshold concepts, dispositions, and knowledge which allows for critical, analytical, and reflective modes of thinking that is transformative for the purpose of lifelong learning (Folk, 2019). Therefore, there has been a growing need for faculty-librarian collaboration in developing information literacy instruction for freshmen to establish these modes of thinking within specific academic contexts that would enhance their academic outcomes (Russell et al., 2018). Pre-K-12 education incorporated both the Common Core State Standards and the American Association of School Librarians Standards for the 21st Century Learner into their curricula to develop students' information literacy skills (Godbey, 2018).

Despite these efforts, most high school students who enter college as freshmen often do not have information literacy skills or the ability to conduct research in the library (Fosnacht, 2020). There is a gap in academic expectations of some freshmen who transition from high school to college. Most freshmen are unable to apply and communicate information meaningfully as expected of a college-level student (Napier et al., 2018). This is because some K-12 teachers are not familiar with the concept of information literacy therefore, do not teach their students. Those who do teach their students do it inconsistently (Godbey, 2018). Likewise, some school librarians are not prepared in information literacy pedagogy even though they understand information literacy concepts. Lanning and Mallek (2017) indicated that many

freshmen lack the necessary skills to succeed in college. Research revealed that out of a total of 220 college freshmen respondents, 11% of the students do not have the skills in evaluating information (Quijano, 2019). A similar study stipulated that, most first-year engineering student respondents whose information literacy competencies examined revealed a lack of quantity, quality, and synthesis in their research (Perez & Hottinger, 2020). Likewise, in another research; there was a significant difference in the information literacy of freshmen who took part in information literacy instruction and those who do not (Lanning & Mallek, 2017). Due to these significant differences in freshmen's information literacy skills, some higher education institutions have established high school to college transition programs to enhance collaboration between faculty and librarians to bridge the gap in information literacy needs for college freshmen (Farmer, 2021) because information literacy skills are inherently foundational at the college level since it informs students about the expectations of college-level writing (Napier et al., 2018).

Unfortunately, some faculty are unwilling to involve academic librarians in the classroom (Long, 2019). Librarians depend on faculty for class time, buy-in and respect (Detmering et al., 2019). Some faculties view themselves as having the primary role of teaching information literacy skills, other faculties do not consider librarians as having the skills or availability to teaching information literacy skills (Huddleston et al., 2019). Again, other faculties are of the opinion that librarians' role is different from that of faculty and that librarians could not be considered as educators (Napier et al., 2018). Some faculties think librarians are more of administrators than educators so they should concern themselves in running the library than teaching because they do not have a doctoral degree to qualify them as teachers (Long, 2019). A similar research study conducted indicated that some faculties cite lack of time as a set-back to

integrate information literacy in their courses because they do not have enough time to cover their syllabi let alone give the opportunity to academic librarians to teach information literacy skills to students (Douglas & Rabinowitz, 2016; Napier et al., 2018). In addition, some faculties do not think there is a need to teach information literacy as a stand-alone course therefore, the time to allocate for teaching information literacy would depend on how much time they can spare due to their lack of understanding of information literacy (Yevelson-Shorsher & Bronstein, 2018). Nevertheless, successful librarian-faculty relationship in teaching is essential than student learning as a measure of success (Detmering et al., 2019).

Notwithstanding some faculty's uncompromising attitude towards the teaching of information literacy skills in their classrooms, collaboration between faculties and librarians is a necessity because, information literacy is a crucial skill in all academic disciplines as well as in the working world (Erlinger, 2018). Librarians and classroom faculty are expected to collaborate to design and incorporate course-specific assignments and develop active, hands-on, and relevant instructional activities to meet students at the point of need (Detmering et al., 2019; Napier et al., 2018). A study conducted on both faculty-led information literacy instruction and librarian-led information literacy instruction revealed that both faculty and librarians have inaccurate presumptions about the content of information literacy instruction and the skill level of students respectively (Napier et al., 2018). Therefore, collaboration between faculty and librarians would improve teaching and learning (Godbey, 2018).

Librarians provide training and resources to facilitate faculty-led information literacy instructions (Napier et al., 2018). While librarian-led workshops bring librarians and faculty together to design assignments (Oberlies et al., 2021) and develop learning outcomes and techniques that should be included in the information literacy instruction sessions (Napier et al.,

2018). For instance, Boger et al. (2016) conducted a study on department of nursing and teacher education freshmen's information use found that nursing students use scholarly sources and resources in their assignment than their education counterparts. This was because the nursing faculty had adopted a more academic approach to teaching by using evidence-based practice. Nursing students were given assignments that required using peer-reviewed articles. There was collaboration between librarians and faculty to help students with the needed skills to search for information. On the other hand, teacher education students had no such requirements for assignments and library instruction was not fully incorporated in their curricula. Therefore, there were differences in information literacy skills of freshmen in teacher education and nursing students because both departments did not have the same understanding of using scholarly sources and resources (Boger et al., 2016). However, Napier et al. (2018) advocate that collaboration between faculty and librarian is limited in scope. Hence, the need for trilateral collaboration among faculty, librarian and writing center administrators to help students transition from locating and evaluating information to effectively integrate and synthesize information into their writing (Epstein & Draxler, 2020; Napier et al., 2018).

Embedded Librarianship

Technological advancement in the 21st century has impacted the teaching of information literacy skills in higher education (Llewellyn, 2019). Libraries have developed from teaching library skills-based bibliographic instruction to a more global information and research focused approach which involves the integration of technologies and highly sophisticated teaching and learning approaches (Erlinger, 2018). Higher education graduates are expected to acquire a wide range of skills including information literacy skills that can be transferable in different contexts and the role of academic librarian is significant in the knowledge and skills

development (Llewellyn, 2019). Therefore, academic librarians need to have the experiential learning in teaching and technology to meet the demands of the times.

Quijano (2019) found that freshmen have difficulties in searching and retrieving information. In a research study on evaluating information, many freshmen had difficulties in determining the quality of resources to be accessed (Yevelson-Shorsher & Bronstein, 2018). They did not have the advanced skills to evaluate complex texts and select relevant resources (Hinchliffe et al., 2018). In terms of using information, some college freshmen have average literacy (LeMire et al., 2021). It was evident that freshmen were familiar with the concept of plagiarism, copyright laws and citations of sources such as books, journals, and other publications. But, freshmen lacked the skills in citing electronic resources such as websites, eBooks, and journals (Quijano, 2019). Also, some students did not have the skills in citing magazines, journals, chapter of books and publications with two or more authors (Llewellyn, 2019). It is in this vein that academic librarians are expected to collaborate with faculty and provide embedded service by integrating information literacy instruction in the curriculum (Godbey, 2018).

Some academic libraries implement a personal librarian model where librarians build relationships with freshmen cohorts (Llewellyn, 2019). Like a personal librarian model, Hoffman et al. (2017) suggest a service model in which academic librarians who are knowledgeable in pedagogy and the research process collaborate with faculty in the curricula and assignment design. This service model is academic discipline specificity where academic librarians teach specific information literacy competencies as required by specific discipline (Nicole et al., 2021; Perry, 2017). Academic librarians become more engaged with faculty in developing learning outcomes and active learning techniques which opens a more fruitful

discussion on aiding students with poor grades who may need individualized help (Napier et al., 2018). Information literacy instruction is tailored to the needs of various academic courses and the set of competencies students are expected to acquire after graduation (Glowacka et al., 2020). Perry (2017) found that academic librarians in Indiana University Libraries collaborate with biology professors to align information literacy with course learning outcomes.

In addition, Russell et al. (2018) found that embedding information literacy within college freshmen course curricula and delivered online is an effective learning experience for college freshmen. Some academic libraries create blended learning that would provide freshmen with different ways and platforms to access content and resources for learning as well as promote diversity and inclusion (Llewellyn, 2019). Librarians provide online information literacy instruction through asynchronous video tutorials, web research consultations, and live library webinars which are recorded for students to view later (Faulk & Crist, 2020). For instance, the Open University in the United Kingdom has set up digital content for information literacy instruction to embed in the online curricula which would help develop online students' information literacy skills (Llewellyn, 2019).

A study conducted on the use of flipped classroom pedagogy in teaching information literacy online to health science first-year students discovered that online delivery of information literacy instruction offers greater opportunity for college freshmen's information literacy skills development (Russell et al., 2018). However, there is a difference between mandatory course-embedded information literacy instruction in the curriculum and optional information literacy programs. Institutions have established credit-bearing information literacy instruction as a requirement for all freshmen. For example, Louisiana State University has established a credit course as a requirement for all freshmen (Stadler & Rojas, 2019). On the

other hand, a qualitative study conducted on teaching librarians in CUNY about the efficacy of their teaching methods revealed that even though librarians believe in for-credit information literacy classes as most effective, it was not implemented in their university due to lack of time committed to information literacy instruction. Hence, the one-shot sessions are being engaged in although it is not regarded as effective (Oberlies et al., 2021). The one-shot instruction is inadequate to help students acquire the necessary skills such as: plagiarism, evaluating sources and citing sources for academic writing (Napier et al., 2018). Mandatory embedded information literacy improves students' GPA than optional information literacy instruction (Witherspoon & Taber, 2021). Therefore, Napier et al. (2018) noted that collaborative curricula development and teaching between faculty and librarians facilitate faculty-led information literacy instruction in freshmen's classroom to enhance freshmen's information literacy skills.

Faculty-Librarian Consultation

Librarians and faculty collaboration is essential in teaching freshmen information literacy skills (Stadler & Rojas, 2019). This is because faculties play key roles in the success of establishing information literacy instruction in their classrooms (Long, 2019). Unfortunately, most faculty-librarian collaborations are indeed faculty-librarian consultations. Hence, the difficulty that comes with teaching information literacy skills (Robertshaw & Asher, 2019). Perry (2017) found that academic librarians fashioned their information literacy instruction to what they perceive faculty may need for their classes without proper collaboration with faculty on the needs of their students. This makes faculty feel they have the skills better than librarians to teach the important skills their students would need in information literacy to succeed (Huddleston et al., 2019). Hoffman et al. (2017) intimated that information literacy goes beyond academic librarians suggesting resources for faculty or introducing students to libraries'

resources in which case students have not developed their information literacy competencies, faculty have not met any pedagogical goals such as aiding freshmen to integrate and synthesize information in their assignments, and the academic librarian has not interacted with freshmen on how to locate, evaluate, and use information meaningfully (Napier et al., 2018). A study of Huddleston et al. (2019), discovered that more than half of the 100 faculty members surveyed revealed that they do not consider librarians as capable of teaching information literacy skills. Nevertheless, the ACRL Core Competencies for information literacy recognizes that teaching of information literacy is a shared responsibility of academic librarians and faculty to develop pedagogical strategies that would build freshmen's information literacy competencies to develop as life-long learners (Napier et al., 2018). Therefore, academic librarians need to develop their competencies in technology and teaching to stay relevant in the academy.

Summary

Academic librarians play significant roles in the classroom by providing resources to support teaching and learning and information literacy instruction for academic skills development (Napier et al., 2018). Unfortunately, there has been little collaboration between faculty and librarians in teaching college freshmen information literacy skills (Douglas & Rabinowitz, 2016; Hinchliffe et al., 2018; Long, 2019; Robertshaw & Asher, 2019). Nevertheless, studies indicate that there is correlation between information literacy skills and academic outcomes (Boger et al., 2016; Shao & Purpur, 2016). However, it is difficult to determine the impact of information literacy on students' success due to academic librarians' lack of training and skills in teaching information literacy skills.

Researchers have examined the validity and practical applicability of experiential learning theory, and the vital role it plays in developing the teaching and learning of information

literacy skills in college freshmen (Kolb, 2017). Likewise, the Association of College and Research Libraries Theoretical Framework for Information Literacy in Higher Education (2016) stipulates that information literacy instruction should emphasize teaching college freshmen to acquire understanding and critical thinking skills and not just impartation of information in higher education.

The advent of information technology has transformed the information world (Angell, 2018). But questions are often raised about the authenticity, validity, and reliability of the information (Hinchliffe et al., 2018). Lanning and Mallek (2017) found that many freshmen do not seem to have the necessary skills to succeed in college. Hence, there is a dearth in the literature pertaining to examining the pedagogical training and skills of academic librarians in teaching college freshmen information literacy skills. This is a recommendation proposed by Hess (2020) that future research could examine in-depth the responsibilities of instructional librarians and how to support them at different career phases. Based on that, this interpretive phenomenological study would explore academic librarians' lack of experiential learning in teaching college freshmen information literacy skills. By so doing, faculty and higher education administrators can more fully understand what support structures academic librarians would need to enable them to support teaching and learning meaningfully.

CHAPTER THREE: METHODS

Overview

The purpose of study was to explore academic librarians' lack of experiential learning in teaching college freshmen information literacy skills. Chapter Three focused on the methods and structure that were implemented during the study. The chapter also outlined the procedures used to explore academic librarians' lack of experiential learning in teaching college freshmen information literacy skills. Again, in this chapter, the research design was described, and the research questions were provided as well as the setting and the participants that were involved in the study. The chapter give a detailed description of the data collection method and how the data was examined and analyzed in addition to the role of the researcher in the study. Since the goal of the study was to examine academic librarians' lack of experiential learning in teaching college freshmen information literacy skills, an interpretative phenomenological design was utilized. Also, how to ensure the trustworthiness of the study and the ethical considerations of the research was thoroughly discussed and the summary of the chapter was provided.

Interpretative phenomenological study is a systematic approach to investigate and conclude a deeper understanding of the description, interpretation and explanation of the meaningfulness and essence of participants' lived experiences (Kruth, 2015; Merriam & Tisdell, 2016; Murray & Holmes, 2014; Sebnem, 2011). In addition, phenomenological study is considered an appropriate approach to study intense human experiences and a wide range of educational phenomena (Merriam & Tisdell, 2016; Sebnem, 2011).

Research Design

This research is a qualitative study that employed interpretive phenomenology research design because the researcher wants to investigate the academic librarians' lack of experiential

learning in teaching college freshmen information literacy skills. Interpretive phenomenology study is a human science inquiry that accounts for human experiences which are subjective reflective acts of human beings (Moustakas, 1994). There is a part of human lived experiences that cannot be expressed through words which remains in the consciousness. This makes lived experience subjective because it can only be expressed through personal introspection, feelings, or descriptions (Dörfler & Stierand, 2020). Interpretative phenomenology examines personal lived experiences and provides an in-depth account of participants' lived experiences of a phenomena (Creswell & Poth, 2018; Eatough & Smith, 2017).

Interpretive phenomenology acknowledges that the lived world is ambiguous and open to more than one interpretation (van Manen, 2017). Hence, interpretive phenomenology aims to understand how individuals make sense of their experiences within a specific context (Creswell & Creswell, 2018; Rajasinghe, 2020). This study investigated the subjective experiences of academic librarians teaching college freshmen information literacy skills. The phenomenon was explored from the participants' (academic librarians) point of views and the meanings they ascribe to their experiences (Creswell, 2007).

Research Questions

The research questions consist of one central research question and three subsidiary research questions on the phenomena under study.

Central Research Question

What challenges do academic librarians experience in teaching information literacy skills?

Sub-Question One

What readiness and personal preparations do academic librarians have in teaching information literacy skills?

Sub-Question Two

How have academic librarians maximized their potentials in teaching college freshmen information literacy skills?

Sub-Question Three

What professional development and support do academic librarians require from their institutions to teach information literacy skills?

Setting and Participants

The selection of participants was based on three criteria: First, academic librarians who teach college freshmen information literacy in higher education institutions in the United States. Also, the participants were willing to engage in individual structured and unstructured interviews, answer questionnaires and engage in letter writing. In addition, the participants were either male or female.

Setting

The setting was four-year higher education institutions across the United States. Zoom Video-Conferencing platform was used to conduct individual interviews because it was convenient and cost-effective since it saved time in traveling (Archibald et al., 2019).

Participants

I used purposive sampling to select 12 academic librarians for the study (Patton, 2002). I selected academic librarians that teach freshmen information literacy skills in four-year colleges and universities or higher education institutions across the United States. The demographic data

of participants that was collected were gender, age, educational level and experience. The number of participants that were selected was based on the limitation of phenomenological study. It is worthy to note that phenomenological studies use limited number of participants (Merriam & Tisdell, 2016).

Researcher Positionality

I chose this topic because as an academic librarian, I have witnessed the underutilization of library resources and lack of research skills among college freshmen. I have also observed some faculty's apathy towards the teaching of information literacy in their classes. Therefore, I would like to explore and understand the effectiveness of academic librarians in teaching college freshmen information literacy skills vis á vis the academic librarians' lack of experiential learning in teaching college freshmen which has resulted in both students and faculty's disinterests in effectively utilizing information literacy instruction.

Interpretive Framework

This study was guided by constructivist epistemological paradigm. This is the belief that human beings have their own understanding of the world (Creswell & Poth, 2018). The researcher analyzed data objectively and did not allow her worldview to influence her judgment. The researcher was concerned about how the participants (academic librarians) interpret their experiences and report the meaning they ascribe to their lived experiences.

Philosophical Assumptions

Qualitative research is rooted in philosophical assumptions that underpin it (Bleiker, et al., 2019). Philosophical assumptions are meanings created by human beings as they engage with the phenomenon they are interpreting. This is because an individual's belief systems are usually influenced by factors such as past experiences, socio-cultural environments, and values (Bradt et

al., 2013). These deeply ingrained belief systems shape the type of research to be studied, questions to ask and the kind of data to collect (Denzin & Lincoln, 2011).

Ontological Assumption

Ontological assumption seeks to find truth and understanding of the phenomenon under study. Ontologists acknowledge that truth is subjective and contextual, and it is psychologically processed in the mind through memories, beliefs, and experiences that individuals encounter (Bleiker, et al., 2019). Therefore, interpretative phenomenology researchers are expected to be aware of their biases, and assumptions when conducting research, and declare how their assumptions and biases shape their research inquires (Eatough & Smith, 2017). As an academic librarian, the researcher recognizes her own biases toward the teaching of information literacy skills to college freshmen. Therefore, the researcher employed bracketing during the data collection and analysis process because truth is a reality, but it is always interpreted and influenced by people's belief systems, perceptions, memories, and attitudes (Bleiker, et al., 2019).

Epistemological Assumption

This study is guided by constructivist epistemological paradigm. This is a subjective meaning that human beings ascribe to their experiences (Creswell & Poth, 2018). Epistemologists acknowledge that participants play active role in the construction of their realities through their belief systems, experiences, and perceptions of the phenomenon under study. Hence, qualitative researchers are expected to interpret the meaning of the phenomenon within the context of the participants interpretations of their experiences of the phenomenon under study. The researcher is interested in how the participants (academic librarians) would interpret their experiences (Bleiker, et al., 2019).

Axiological Assumption

Axiological assumption seeks to understand the value of the research study. It focuses on the nature of the value of the research study, whether ethics or aesthetics. Ethics questions personal values and morals while aesthetics examines beauty. The aim of the research study is to understand the worldviews of the participants through interviews and report the meaning they ascribe to their lived experiences. As the researcher, I will use bracketing to ensure that my experiences as academic librarian who have taught information literacy skills do not influence the research process and the overall data collection, interpretation, and analysis (Creswell & Poth, 2018).

Researcher's Role

My name is Pearl Adzei-Stonnes. I am the researcher for the study. I am an academic librarian in one of the higher education institutions in the United States. As an academic librarian, I sometimes teach college freshmen information literacy skills. This experience has led me to develop a personal interest in the topic under study and the research questions. I recognized my own biases about lack of proper training and unpreparedness of some academic librarians in teaching, coupled with some faculties' attitudes toward the teaching of information literacy skills because interpretative phenomenology researchers are expected to be aware of their biases, and assumptions when conducting research, and declare how their assumptions and biases shape their research inquiries (Eatough & Smith, 2017). I used bracketing as I began to ask questions for clear interpretations during the interviews to ensure that prior knowledge and experience as an academic librarian did not interfere with the raw data collected nor influence the research process and the overall data analysis (Jackson et al., 2018). Bracketing is integral in interpretivist qualitative research study (Dörfler & Stierand, 2020). Therefore, researchers are

expected to be objective and use pragmatic approach amidst their perceptions, experiences, and attitudes about the phenomena under study (Christensen, 2017). I did not have any personal relationship with the participants that were interviewed for this study. Neither did I have any influence to manipulate the research setting or the data collection and analysis process.

Procedures

Institutional Review Board (IRB) is the authority that ensures ethical standards in a human research study as stipulated by the American Education Research Association (Connaway & Powell, 2010; Creswell, 2015; Gall et al., 2007). Therefore, the researcher reviewed Liberty University's IRB regulations and guidelines and submitted a research proposal for the study.

Recruitment of Participants

Finding participants for a research study can be daunting due to organizational culture and established protocols (Creswell, 2015). Therefore, after the researcher obtained approval from Institutional Review Board of Liberty University, the researcher adopted a non-institutional recruitment strategy (Singh & Wassenaar, 2016). The researcher obtained contact information of 12 academic librarians teaching information literacy skills from the websites of purposefully selected 4-year academic institutions across the United States. The researcher sent an email to each academic librarian to establish rapport and with an invitation to participate in the study (Marland & Esselment, 2019). In the event of non-response, the email was re-sent. When a relationship was established, the researcher sent the informed consent form through the email and each of the participants signed and returned it by email. The researcher emailed participants and scheduled interview appointments with them. Also, the researcher set ethical standards by building professional relationships and boundaries during the interview (Creswell, 2015; McLaughlin et al., 2013; Terrell, 2012).

Expert Review of Survey Questions, Letter, and Interview

Survey questions, letters, and interviews were critically formulated and organized to elicit meaningful response from participants (Merriam & Tisdell, 2016). Therefore, the researcher crafted the questions creatively to align with the problem statement, purpose of study and research questions. The research questions were organized by topic to be in sync with the three subsidiary research questions (Merriam & Tisdell, 2016). To ensure the survey questions, letter, and interviews aligned with the problem statement, purpose of study, and research questions, the researcher found experts in the field to review and ascertain the validity of the questions to ensure the questions were clear and free from ambiguity, typographical errors, and spelling mistakes.

Permissions

The informed consent letter that included the six major parts of informed consent document which are: invitation, risks, rights, possible benefits, confidentiality of records, and contact information was submitted to IRB for approval (Seidman, 2013). The informed consent letter was written in English language to enable potential participants to read and understand (Gall et al., 2007; Seidman, 2013). See Appendix B.

Recruitment Plan

The researcher adopted purposive sampling method of choosing participants to learn and understand the thought patterns of a larger population (Patton, 2002). This is possible to study a smaller group of people within the larger population (Gall et al., 2007). Also, purposive sampling is recommended in qualitative study as an effective strategy to discover multi-perspectives of meanings to a phenomenon (Merriam & Tisdell, 2016; Moutakas, 1994). Thus, the purposive sampling method was chosen for this study because the researcher set out to explore and

understand the lack of academic librarians' experiential learning in teaching college freshmen information literacy skills. Therefore, participants were not selected by chance as in the case of quantitative study that mostly depends on probability (Gall et al., 2007).

Data Collection Plan

In a good phenomenological research study, concrete descriptions are collected of the phenomenon under study from participants (Jackson et al., 2018). The data that were collected are participants' own thinking, judgment, intuition, and the sense they make of the phenomenon (Moustakas, 1994). The researcher collected data from three different sources to fulfil the principle of triangulation to ensure the validity of the conclusion of the research study (Suter, 2012). The sources of data collection were open-ended questionnaire, letter-writing, and interviews. The researcher chose this order in which to collect data because the letter writing, and interviews are more exploratory sources of data collection where participants can express their thoughts in a reflective atmosphere due to the length of time participants are given to respond to the questions.

Questionnaire (Data Collection Approach #1)

Questionnaires in qualitative research are open response surveys that allow participants to express their experiences and perceptions about the phenomena under study. They are important in eliciting meaningful data from participants. The researcher generated her own questions for the questionnaire. The research questionnaire were organized by topic to be in sync with the three subsidiary research questions (Merriam & Tisdell, 2016). To ensure the questionnaire were in alignment with the problem statement, purpose of study, and research questions, the researcher adopted expert review to ascertain the validity of the questions to ensure the questions were clear and free from ambiguity, typographical errors, and spelling mistakes.

Questionnaire Questions

1. Describe your challenges in teaching college freshmen information literacy skills. CRQ
2. What is your educational background or training in teaching information literacy skills?
SQ1
3. What professional development experiences have you had that prepared you to teach college freshmen information literacy skills? SQ3
4. What level of support do you receive from faculty in teaching information literacy? SQ1
5. How do you get students excited? CRQ
6. What recommendations can you give to make the teaching of information literacy skills better for yourself and your students? SQ2 See Appendix D.

The rationale for the questionnaire is to access the thoughts and feelings of the participants to understand the meaning they ascribe to their experiences (Sutton & Austin, 2015). The questionnaire is open-ended questions because, the researcher intended to harness a more diverse data since open-ended responses allowed participants to provide in-depth description of their experiences of the phenomenon under study (Allen, 2017). The researcher administered the questionnaire to the participants first so she could find out about the experiences that can be explored further in the letter writing and the interviews.

Questionnaire Data Analysis Plan (Data Analysis Plan I)

The open-ended questionnaire was exported to Microsoft Word for analysis. The questionnaire data was coded manually and analyzed identifying themes or patterns. Data collected from the questionnaire was analyzed using a thematic analysis approach. The thematic analysis involved identifying, analyzing, and reporting themes or patterns presented in the data. The thematic analysis categorized the data to align with the research questions (Yevelson-

Shorsher & Bronstein, 2018).

Letter-Writing (Data Collection Approach #2)

Letter-writing was also adopted to collect data. Letters are correspondences that are written to give an account of oneself (Harris, 2002). It is an excellent form of interaction between researchers and participants where participants can articulate their experiences because they have much more time necessary to draft and edit their thoughts several times until they exhaust their ideas about the phenomena (Letherby & Zdrodowski, 1995). The use of letters as primary data collection method establishes equality and rapport among researchers and participants (Harris, 2002).

Two weeks was given to each participant to respond to the following letter:

‘What makes teaching college freshmen information literacy skills ineffective?’ See Appendix E.

Letter-Writing Data Analysis Plan (Data Analysis Plan II)

The researcher used NVivo Qualitative Data Analysis Software to transcribe the data. The researcher coded the data manually in Microsoft Word. The data was organized in themes to find answers to the research questions.

Individual Interviews (Data Collection Approach #3)

One of the data collection methods for the research study was interviewing. Interviewing in qualitative research is a verbal dialogue between a participant and a researcher who have never met each other before (Connaway & Powell, 2010). The researcher poses questions verbally to the participant and the participant responds, and the responses are recorded and transcribed (Gall et al., 2007; Merriam & Tisdell, 2016). Interviewing is a data collection technique recommended for interpretive phenomenological study in qualitative research (Merriam & Tisdell, 2016; Pringle et al., 2011). Interviewing enables researchers to gather

information about participants' perceptions and experiences that researchers cannot directly observe to answer the research questions (Merriam & Tisdell, 2016; Seidman, 2013).

Researchers use semi-structured interviews to collect common demographic information such as age, race, gender, religion, education, and occupation from participants for census and surveys (Connaway & Powell, 2010; Merriam & Tisdell, 2016). The researcher used the same set of questions and procedures for all participants (Doody & Noonan, 2013; Merriam & Tisdell, 2016). The semi-structured interviews did not have a pre-determined order of interview questions. This is a common interview technique used in qualitative research. The greater part of the interview was guided by topics and issues to discuss and ideas to explore in order to gain insights (Connaway & Powell, 2010; Merriam & Tisdell, 2016).

In semi-structured interviews, researchers investigate new ideas, perspectives and insights that emerge through the open-ended questions that were posed to participants. Semi-structured questions enabled the researcher to develop spontaneous questions and adopted an informal approach during the interview process to focus on the phenomenon under study (Doody & Noonan, 2013; Merriam & Tisdell, 2016). Similarly, unstructured interviews are informal and exploratory because the researcher does not follow a rigid interview protocol (Gall et al., 2007; Merriam & Tisdell, 2016). The interview process is very flexible and friendly. The interview usually started with a broad open-ended question about a phenomenon with follow-up questions based on participants' responses (Connaway & Powell, 2010; Doody & Noonan, 2013; Merriam & Tisdell, 2016).

Semi-structured interview was appropriate for the research study because it enabled the researcher to ask probing questions and formulated or re-word open-ended questions to elicit response from the participants and in turn respond to emerging ideas and point of views of the

participants concerning the phenomenon (Gall et al., 2007; Merriam & Tisdell, 2016; Murray & Holmes, 2014; Turner, 201). Also, the semi-structured interview technique was adopted because of its flexibility to elicit information from participants to answer the research questions (Connaway & Powell, 2010; Merriam & Tisdell, 2016; Sorsa et al., 2015).

Individual Interview Questions

1. How has your educational curriculum prepared you for teaching information literacy skills? SQ1
2. Is there more for you to learn? SQ2
3. What are the necessary skills academic librarians need to effectively teach information literacy skills? SQ1
4. Do you think library schools have designed their programs to ensure that students acquire teaching skills and are ready for the field? SQ1
5. What would you recommend in designing information literacy courses in library schools to be beneficial to students who would teach information literacy skills? SQ1
6. Do you receive administrative support from your institution in teaching information literacy skills? SQ3
7. What kind of support do academic librarians require from their institutions to teach information literacy skills? SQ3
8. What professional development workshops do you engage in personally? SQ1
9. What experiences do you have in teaching online or hybrid environment? SQ1
10. Describe any support you have received in teaching information literacy skills to college freshmen. SQ3
11. Do you engage in scholarly writing for publication? SQ1

12. What roles do educational technologies play in assisting academic librarians in teaching?

CRQ

13. Tell me about the types of technology skills you have used or have taught with. CRQ

14. What opportunities do you find in teaching college freshmen information literacy skills?

CRQ

15. What barriers have you experienced in teaching college freshmen information literacy

skills? CRQ

16. Is there anything else you would want to share with me regarding our discussion of your

experiences in teaching college freshmen information literacy skills that we haven't

discussed? CRQ

College freshmen are disinterested in the use of libraries' resources (Aslam, 2017). They prefer to search for information from the internet other than from libraries' database because they do not have research and searching skills which result in writing poor research papers since they do not use scholarly journal articles to support their research papers (Hoffman et al., 2017). In addition, some faculties are adamant to incorporate information literacy instruction in their classrooms because they do not see academic librarians as having the necessary skills in teaching (Barr et al., 2020; Long, 2019). Nevertheless, academic librarians need to collaborate with faculty to ensure students develop information literacy competencies to enhance their learning (Detmering et al., 2019). Academic librarians need to be involved in curricula development with faculty to support the information needs of both faculty and students (Schulte et al., 2018). Also, the 2016 ACRL Framework as a guiding document for information literacy instruction requires academic librarians to focus on the teaching of higher-order thinking skills of students (ACRL Framework, 2016). However, there are challenges to teaching college freshmen critical thinking

skills through information literacy (Goodsett & Schmillen, 2022). To determine why there is a lack of searching skills in some college freshmen, the interview questions were designed to answer the research questions which sought to examine academic librarians' lack of experiential learning in teaching college freshmen information literacy skills.

Individual Interview Data Analysis Plan (Data Analysis Plan III)

The researcher recorded the semi-structured interviews with participants with a digital recorder and transcribed the data with the use of NVivo transcription software. The researcher coded the data manually in Microsoft Word. The researcher used the modified Van Kaam method for data analysis for the study. The modified Van Kaam method was identified by Moustakas (1994), and it has been used by many scholars who consider it a guaranteed data validation method in qualitative research (Omer, 2011; Welch, 2014). The data was organized into themes. The process was done through the eight-step approach of Moustakas' (1994) modified Van Kaam method: Horizontalization, Reduction and Elimination to Determine the Invariant Constituents, Clustering and Thematizing the Invariant Constituents, Final Identification of the Invariant Constituents and Themes, Constructing Individual Textural Descriptions for Each Participant, Constructing Individual Structural Descriptions, Constructing a Textural-Structured Description, and Final Composite Description of the Meanings and Essence of all the Participants (Becho & Kakali, 2017; Carter & Baghurst, 2014; Dincer & Dincer, 2013).

Horizontalization

The researcher deemed the response of each participant equal and read each transcribed response several times to understand the meaning of the data in relation to the phenomenon and took notes (Creswell, 2015; Merriam & Tisdell, 2016; Sullivan & Bhattacharya, 2017). The

researcher manually grouped the transcripts and put together participants' expressions that were relevant to experiences, perceptions and meaning into preliminary codes (Awosan & Hardy, 2017; Mason et al., 2017; Merriam & Tisdell, 2016; Rodriguez & Gill, 2011; Sullivan & Bhattacharya, 2017; Talbert, 2012).

Reduction and Elimination to Determine the Invariant Constituents

The researcher analyzed all the codes from the horizontalization phase to determine whether they aligned with the research questions or not and then, got rid of all irrelevant expressions of participants to narrow the codes into a list of categories to determine the invariant constituents or patterns that show meaning (Mason et al., 2017; Sullivan & Bhattacharya, 2017).

Clustering and Thematizing the Invariant Constituents

At this stage, the researcher grouped similar codes into themes after establishing the invariant constituents or patterns that show meanings. The clusters became the themes of lack of experiential learning of academic librarians in teaching college freshmen information literacy skills (Anthony & Weide, 2015; Gallup & Serianni, 2017; Merriam & Tisdell, 2016; Rodriguez & Gill, 2011; Sullivan & Bhattacharya, 2017; Talbert, 2012).

Final Identification of the Invariant Constituents and Themes

The researcher assessed the transcript and eliminated all the patterns that did not synchronize with each participant's response (Carter & Baghurst, 2014; Mason et al., 2017; Sullivan & Bhattacharya, 2017; Talbert, 2012).

Constructing Individual Textural Descriptions for Each Participant

The researcher extracted verbatim expressions from the transcripts to construct textural description of each participant's experiences of teaching college freshmen information literacy skills (Awosan & Hardy, 2017; Mason et al., 2017; Sullivan & Bhattacharya, 2017). These

textual descriptions made the study easily understandable and useful to its intended audience (Christensen, 2017).

Constructing Individual Structural Descriptions

The researcher set aside previous biases and experiences and incorporated both the individual textural descriptions and imaginative variations into constructed structural description of each participant's experiences of teaching college freshmen information literacy skills (Carter & Baghurst, 2014; Merriam & Tisdell, 2016; Sullivan & Bhattacharya, 2017).

Constructing a Textural-Structured Description

At this stage, the researcher combined both the individual textural descriptions and individual structural descriptions to construct a graphic description of each participant's experiences in teaching college freshmen information literacy skills (Awosan & Hardy, 2017; Carter & Baghurst, 2014; Mason et al., 2017; Sullivan & Bhattacharya, 2017; Talbert, 2012).

Final Composite Description of the Meanings and Essence of all the Participants

At the final stage, the researcher developed a composite description that represented the meanings and essences of the participants' lack of experiential learning in teaching college freshmen information literacy skills (Carter & Baghurst, 2014; Merriam & Tisdell, 2016; Sullivan & Bhattacharya, 2017).

Data Synthesis

Data collection, analysis and synthesis were done simultaneously because it could be overwhelming when they were done separately. This is because the numerous data collected from different sources had the potential to drown and derail the researcher as well as undermine the findings and the entire research study (Merriam & Tisdell, 2016; Suter, 2012). Therefore, the researcher performed the data analysis and synthesis alongside the data collection. The

researcher adopted a general inductive approach in analyzing and synthesizing the data. The data analysis and synthesis started from the beginning after data were collected from the first participants and coded.

After collecting data from the questionnaire and coding it, the data were analyzed and synthesized, and potential themes or categories were identified. The second source of data was letter writing. It was coded, analyzed, and compared to the categories or themes that emerged from the questionnaire. The data from the interview which was the third source was coded and compared to the themes or categories from the questionnaire and letter writing. The various themes generated by each data collection method were compared to determine shared themes (Tewell, 2018). The themes were condensed and refined through the process of organizing, reducing, consolidating, comparing, and reconfiguring the data into manageable and meaningful chunks as they were collected to make good sense of the data. The data were arranged and re-arranged several times until different levels of themes emerged (Swedish Agency for Health Technology Assessment and Assessment of Social Services, 2016). The data uncovered patterns, concepts, understanding, and insights that conveyed meanings and enabled conclusions to be formulated (Patton, 2002; Suter, 2012).

Trustworthiness

Trustworthiness is related to credibility, dependability, and transferability of research findings (Merriam & Tisdell, 2016). Trustworthiness is a testament that rigor and transparency characterized the research process (Carlson, 2010; Connelly, 2016; Loh, 2013; Merriam & Tisdell, 2016). Therefore, participants' responses were deemed trustworthy and applicable to others in different settings (Bogdan & Biklen, 2007; Connaway & Powell, 2010; Creswell, 2015; Merriam & Tisdell, 2016). The validity and reliability of any research study is critical because,

they ensure that standard designs and procedures are followed making the research study acceptable in the research community (Connelly, 2016; Merriam & Tisdell, 2016).

Credibility

The researcher ensured credibility through member checking. The researcher sent the transcriptions back to participants for review and validation. Member checks increased the credibility of this study because it gave participants the opportunity to edit and correct statements that they feel do not represent their experiences. (Carlson, 2010; Connaway & Powell, 2010; Creswell, 2015; Merriam & Tisdell, 2016). Furthermore, the researcher used an audit trail to establish credibility. Audit trail is important because it establishes credibility when external auditors are utilized (Carlson, 2010). The researcher kept careful documentation of all components of the study to ensure that no important information was overlooked. The researcher would keep audio recordings and transcripts in a safe and secure place for up to three years.

Transferability

It is difficult for a research study to be transferable when there is lack of detailed description information about the findings (Creswell, 2015; Marvarene, 2011; Merriam & Tisdell, 2016). Hence, the researcher used rich thick descriptions to give enough details about how the research was conducted, data collected, and why conclusions were drawn (Ang et al., 2016; Carlson, 2010; Creswell, 2015; Marvarene, 2011; Merriam & Tisdell, 2016). Furthermore, the researcher used expert review technique. Expert review is to engage peer researchers to assess the process and method of the research, how conclusions are arrived at, and whether the study has been influenced by any form of bias or prejudice (Carlson, 2010; Creswell, 2015; Merriam & Tisdell, 2016). To ensure the interview questions were aligned with the problem statement, purpose of study, and research questions the researcher consulted peer researchers to

review the interview questions to determine its alignment and any prejudicial tendencies before the interview stage.

Dependability

To make certain that dependability is guaranteed, the researcher used prolonged engagement. The researcher engaged each participant during the interview for about 60 minutes to collect relevant, and rich detailed information to ensure data had reached saturated point (Connelly, 2016; Merriam & Tisdell, 2016). In addition, the researcher listened to the audio recording and read the transcriptions several times to eliminate unnecessary codes and discover patterns that were meaningful to the themes (Mason et al., 2017; Merriam & Tisdell, 2016; Sullivan & Bhattacharya, 2017). Also, the researcher provided audit trail such as records of the research process; how participants were selected, and the transcripts anonymized at each stage of the research as evidence for assessment of the study (Bleiker et al., 2019).

Confirmability

During data analysis stage, the researcher laid aside all previous experiences, and prejudices and analyzed the data without biases (Creswell, 2015; Merriam & Tisdell, 2016; Sorsa et al., 2015). The researcher returned the transcripts to each participant to validate the authenticity of their experiences about the phenomenon under study (Creswell, 2015; Merriam & Tisdell, 2016). In interpretive phenomenological study, researchers are of the view that complete bracketing is impossible since human beings are influenced by their past experiences. Therefore, researchers cannot eliminate their previous experiences from the phenomenon under study (Sorsa et al., 2015). The researcher used sensitivity and reflexivity to bracket past experiences and suspend all previous presumptions that might have negative effect on the research process (Merriam & Tisdell, 2016; Murray & Holmes, 2014; Seidman, 2013; Sorsa et al., 2015). The

researcher used reflective journal to document all hunches, feelings, and emotions that surfaced throughout the study as a bracketing strategy (Bjorg, 2016; Creswell, 2015). Sensitivity and reflexivity helped the researcher to establish new understanding throughout the study without prejudice.

Ethical Considerations

Phenomenological studies involve human interactions about socio-cultural, ethnic, and socio-political backgrounds by exploring their experiences about a phenomenon (Merriam & Tisdell, 2016). Therefore, researchers who engage in phenomenological studies need to consider ethical concerns that may harm participants before, during and after the study (Gall et al., 2007). The researcher ensured honesty, respect and openness were demonstrated in recruitment of participants for the study (Connaway & Powell, 2010; Creswell, 2015). The researcher abided by all IRB's regulations regarding the research by ensuring consent forms were discussed and signed by each participant and copies were kept before the data collection stage ((Connaway & Powell, 2010; Creswell, 2015; Gall et al., 2007). The researcher was professional by dressing appropriately for the interviews and did not ask participants leading questions that brought back emotions. In addition, the researcher did not express her opinions or emotions about any responses from participants (Connaway & Powell, 2010; Creswell, 2015; Merriam & Tisdell, 2016). Also, anonymity and privacy of participants were taken into consideration; the researcher protected the privacy of the participants by using pseudonyms (Creswell, 2015; Unluer, 2012). Both physical and electronic data were secured in locked filing cabinet and password protection for electronic files respectively. The data would be destroyed after 3 years.

Summary

The research study explored the lack of experiential learning of academic librarians in teaching college freshmen information literacy skills. The researcher sets out to determine the extent to which academic librarians are pedagogically prepared to teach information literacy skills to college freshmen. It is necessary for academic librarians to enter the field equipped with required skills to support teaching and learning. This chapter discussed how IRB approval was sought. The research questions that were utilized reflected the interpretive phenomenological design that undergirded the study. The interview questions and the data collection methods used were stipulated. Furthermore, how participants were recruited, and the data analysis methods were discussed. Finally, trustworthiness and ethical standards that were maintained in the research study were thoroughly discussed.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this phenomenological study was to explore the lack of academic librarians' experiential learning in teaching college freshmen information literacy skills in the United States. This chapter includes the description of participants, setting, data analyses in the form of narrative themes, research question responses and presentation of findings, and chapter summary. The data collected from open-ended questionnaire and letter-writing are organized and presented in themes and tables, while the eight-step modified Van Kaam method by Moustakas (1994) was used to present the data from one-on-one interviews. I opted for the modified Van Kaam method because most scholars consider it to be a guaranteed data validator (Omer, 2011; Welch, 2014).

Participants

I used purposive sampling to select 12 academic librarians for the study (Patton, 2002). I selected academic librarians that teach college freshmen information literacy skills in four-year colleges and universities or higher education institutions across the United States. The demographic data of participants collected are: gender, age, educational level and experience. Twelve participants were selected because of the use of limited number of participants in phenomenological studies (Merriam & Tisdell, 2016). Nine participants were females while three were males.

Table 1

Participant Demographics

Participant	Years of Experience	Educational Level	Age	Gender
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Angela	16	MIRLS & ABD Ed.D	43	F
Betty	13	MLIS	51	F
Carla	14	MLS	41	F
Dorothy	10	MLIS & MA	39	F
Ethan	20	MLIS	51	M
Flora	17	MLIS & PhD	54	F
Gertrude	4 ^{1/2}	MSI	39	F
Herbert	9	MLS, MA & PhD	37	M
Irene	24	MLIS & Grad. Cert	58	F
Jane	1	MLIS & MEd	33	F
Kirk	2	MSLIS	39	M
Linda	7	MSLIS	37	F

Angela

Angela was a 43-year-old female who had worked in academic libraries for 16 years. She had two master's degrees including Library Science and an ABD EdD. Angela was an instruction librarian who teaches information literacy to college freshmen. In expressing the importance of teaching college freshmen information literacy, she indicated "Information literacy is so essential to humanity that it is no longer the purview of librarians, but rather should

be prioritized across disciplines. If we're going to survive as species, if the United States wants to survive, then we all need to be invested in information literacy.”

Betty

Betty was a female who had Master of Science in Library Science degree. She was 51 years old and had worked in academic libraries for 13 years. She teaches college freshmen information literacy skills. Betty divulged that teaching college freshmen information literacy is important because,

Just as medicine or law is always changing as our knowledge increases and our environment changes, the same thing is true for information literacy. Students are in a completely different information landscape. In times past, it was harder to find the information, but it wasn't as hard to determine authority, whereas now they have too much information, but they must do a lot more due diligence when it comes to verifying it.

Carla

Carla was 41 years old female. She had a Master of Library Science degree and 14 years of experience as an academic librarian. Carla indicated that it is important to teach college freshmen information literacy because they lack the knowledge. She asserted,

I had several first-year students come to ask; how do I find books? Do you have a catalog? They had no idea how to find anything. It was fascinating to me because we bring in such high achieving students that we take it for granted that there are a lot of basic things that students don't know. This is why it's good to start with the first years.

Dorothy

Dorothy was a 39-year-old female who had two master's degree including Master of Science in Library and Information Science. She had 10 years of experience as an academic librarian. Dorothy indicated that it is necessary to teach college freshmen information literacy because "It is not a skill that we expect students to have. This is a growth process. Information literacy is grown, and it's built upon."

Ethan

Ethan was a 51-year-old male who had 20 years of experience as academic librarian. He had a master's degree in library and information Science. Ethan is an instruction librarian. He asserted that it is important to teach college freshmen information literacy. He indicated,

We need to get them grounded. The sooner they learn that they are in a different informational environment and the way things work in college is a lot different than they work in high school the better, because the quality of the work that's expected is higher.

Flora

Flora was 54 years old female. She had a master's degree in library and information Science and a PhD. She had been an academic librarian for 17years. She stated that teaching college freshmen information literacy is a privilege to enhance their knowledge through life.

It is a privilege to have the biggest opportunity to teach somebody not only how to use the library content that's available to them now but to be effective students and scholars, and to recognize the information sources that are available to them outside of the university and throughout the course of their lives.

Gertrude

Gertrude was a 39-year-old female. She had a Master of Science in Information and 4^{1/2} years of experience as an academic librarian. Gertrude indicated the need to teach college freshmen information literacy because,

They don't have to unlearn anything they haven't been taught or model something incorrectly. You are working with a blank slate because they're just starting from scratch. Hence, the ability to teach and show them a wide range of skills is an advantage.

Herbert

Herbert was a 37-year-old male with 9 years of experience as academic librarian. He had two master's degrees including Library and Information Science, and a PhD. Herbert was an instruction librarian who believed it is imperative to teach college freshmen information literacy because,

It gives the opportunity to interact with students who have had no experience or no library experience making the approach more basic when you're teaching information literacy to freshmen. It gives you more range to go into very specifics.

Irene

Irene was a 58-year-old female who had 24 years of experience as academic librarian. She had a master's degree in library and information Science and a Graduate Certificate in Higher Education. Irene was an instruction librarian. She indicated the importance of teaching college freshmen information literacy.

It is an opportunity to teach college freshmen that as they come to the university, they've entered a new information landscape and every place they go, they're going to enter an information landscape of one type or another. Therefore, they need to be good discerners of what information landscape they are in.

Jane

Jane was a 33-year-old female with 1 year of experience as academic librarian. She had two master's degrees: master's in education and library science. Jane was an instruction librarian. She divulged that it is vital to teach college freshmen information literacy because,

It is exciting to see them at the start and to help with that transition time and set them up for success. It's been helpful for me to see what they know and don't know, and what they're bringing to the table.

Kirk

Kirk was a 39-year-old male with 2 years of experience as an instruction librarian. He had master's degree in library and information Science. Kirk intimated that it is important to teach college freshmen information literacy because,

It's nice to be able to catch them at the start of their program. A lot of them come in from high school, they don't know any better. They think they are fine having Google on their phones. And so being able to get to them before they develop bad habits or start working on assignments where they realize Google's not enough and they start to get overwhelmed.

Linda

Linda had 7 years of experience as an academic librarian. She had a master's degree in library and information science. She was 37-year-old female. Linda was an instruction librarian.

She indicated that it is vital to teach college freshmen information literacy because “it allows me to ensure that when I see them again in upper-level classes, I know they've had the basics and makes me feel much more confident that the students that I'm teaching are at a more equal playing field.”

Results

The data collected from 12 academic librarians were through questionnaire, letter-writing and individual interviews respectively. The data collected through questionnaire and letter-writing were coded manually and analyzed identifying themes or patterns. The thematic analysis categorized the data to align with the research questions (Yevelson-Shorsher & Bronstein, 2018). The data collected through individual interviews were analyzed using Moustakas’s (1994) modified Van Kaam method phenomenological procedure. The findings from the three methods of data collection were grouped into themes based on the invariant constituents that emerged from the analyses. Table 2 shows the preliminary themes for the open-ended questionnaire, letter-writing and individual interviews while table 3 shows the groupings of the preliminary themes.

Table 2

Preliminary Themes (codes)

Preliminary Themes (Codes)	Number of Invariant Constituents from Data Type		
	Open-ended Questionnaire	Letter-writing	Individual Interviews
Lack of pedagogical training from library school	12	4	12
Professional development in pedagogical skills	12	6	12
Avoid use of library jargons	3	2	4

Connect teaching IL to real world	2	2	12
Faculty support	3		9
Administrative support	4	3	9
Design library programs to reflect the industry	9	8	12
Lack of staff	4		5
Technology know-how			9
Scholarly writing for publications			12
The essence of teaching college-freshmen ILs			12
Embed IL in curriculum			9
Student's disinterest in ILs	5	2	2
Advocacy for faculty	1	1	4
Effective communication skills			4
Library schools should corporate internship component into their IL courses			11
Outreach			4
The use of technology in teaching			12
The essence of teaching freshmen ILs			
Incorporate online teaching in curriculum			12
Institutional support in technology			12
Experience in online teaching			12
Uneven faculty support	12		9
Scholarly writing			12
Inadequate teaching skills			12

Making the teaching of IL practical	3	3
Students bring varying levels of IL skills to class	4	4
I never know the level of information literacy knowledge students enter college with	1	
Getting faculty to make room in syllabi for library instruction	1	4
It's a real problem trying to scaffold	1	3
Student's apathy to IL	2	1
Not enough time to teach	2	1
Lack of access to students	1	
Not having a credit bearing course	1	3
Different levels of engagement with students	1	1
Engaging students in deeper thinking	1	

Table 3*Grouping of Codes into Themes*

Grouping of Codes into Themes	Number of Invariant Constituents from Data Type		
	Open-ended Questionnaire	Letter-writing	Individual Question
Lack of training in pedagogical skills (T)	12	12	12
Need to incorporate teaching component in library schools' curricula	12	12	12
	12	12	12

Professional development opportunities			
Need for effective teaching strategies to engage students in the classroom (T)	12	12	
Avoid the use of library jargon.	3	2	12
Need for proper assessment.	2	2	
Varying levels of freshmen ILS	4	4	5
Lack of setting learning goals	4	1	
Simplify concepts into terms and strategies for students to understand.	1	1	5
Getting students to understand IL as lifelong learning.	1	1	
Engage students in deeper thinking.	3	1	
Lack of assessment			
Faculty-librarian collaboration (T)	3		
Need to scaffold IL across curriculum.	1	1	
Uneven faculty support for teaching	12	1	9
Students' apathy to teaching ILS.	2		9
Lack of access to students	3	1	
Not enough time to teach.	3		3
Getting faculty to make room for library instruction.	3	2	
Students' apathy to IL	3		3
	2	2	

Lack of Institutional Support (T)		2	
Lack of staff	4	2	9
Low salaries for staff	4	3	9
Lack of consistent engagement in scholarly writing			12
Need for Technological Skills (T)	4	5	9
Need to engage in online teaching	4	4	12

Note: Items in column flanked with (T) denote themes.

Theme 1: Need for Training in Pedagogical Skills and Professional Development

Opportunities

All 12 participants expressed that there is lack of training in pedagogical skills from the library schools in teaching information literacy. The supporting data was drawn from the questionnaire, letter-writing and individual interviews. All the participants indicated that they did not have pedagogical training in their library science degrees. Some of the participants who did take information literacy class did not get the opportunity to engage in practical teaching. Therefore, they got their teaching skills through a second degree or professional development opportunities.

Angela divulged that her training did not focus on pedagogy because she was trained as an archivist. “I was trained to be an archivist. I fell into the job of research and instruction.”

Betty affirmed her training did not include pedagogical training in teaching. “My track was

special libraries, the school may have offered that, but I didn't take it because I was taking other courses.” Carla expressed the lack of pedagogical training in the library school she attended.

“When I was in library school, there were not a lot of classes that you could take that would help you be a better teacher or teach information literacy.” Dorothy reiterated that her degree did not train her in how to teach. “We had no coursework in instruction at all. The only thing even marginally close would be a course on proper reference interview.”

Ethan acknowledged he took an information literacy course in library school only because it was what fit his schedule at the time. “When I got my library degree, I was working full time and going to school in the evening, and there was information literacy; an evening class in summer, and it fit my schedule, so I took it.” Flora indicated she took a course in information literacy which was an elective. “When I was in library school, there was a bibliography instruction class I took as an elective. It was not required.” Gertrude stated she did not receive training in pedagogy in library school. “As far as library school is concerned, I don't really think that they offered that, it's not really embedded into any of the courses that you take.”

Herbert admitted that he did not receive pedagogical training in the library school he attended. “My training in library program didn't give much practical training in instruction. The library program focused on reference skills and bibliographic instruction.” Irene expressed her training in library school did not focus on pedagogy. “Getting my master's degree from library school didn't really do a lot to prepare me for teaching.” Jane asserted she did not receive training in pedagogy from the library school she attended. “The library science degree didn't prepare me a lot for information literacy.”

Kirk stated he did not receive training in pedagogy from the library school he attended. “My degree program didn't cover a lot of material on providing instruction.” Linda disclosed that

her degree was in Master of Science with libraries which focused on information technology and not instruction. “My degree was in information science with libraries. So, our emphasis was less on librarianship and more on the structures around data and data management such as records.”

Theme 2: Need for Effective Teaching Strategies to Engage Students in the Classroom

All 12 participants affirmed the need for academic librarians to develop competencies in effective teaching strategies to engage students in the classroom. Angela asserted that there is the need for teaching critical thinking skills and having technological skills. “Teach students not just how to find peer reviewed articles, but why a peer reviewed article has value, and also be abreast with changes in technology.” Betty indicated that academic librarians need to engage students and make the content relevant to them. “A good teacher isn't based on content but the ability to engage your students and make the content relevant to them.”

Carla stressed the need to set learning goals and the ability to communicate effectively. “Set learning goals before teaching information literacy. Adapt information literacy to the needs of the students and have good communication skills.” Dorothy asserted there is the need to be effective and engage students in the classroom. “Engage students in activities and reflections in the classroom and have presentation and organizational skills.” Ethan expressed the need for academic librarians to know how to structure a lesson and have public speaking and technological skills. “A very important skill is public speaking. You need to feel comfortable speaking in front of a group. Then other teaching skills such as how to structure a lesson and technological competencies. You need to be able to design tutorials for asynchronous learning and teach students on Zoom.”

Flora observed that academic librarians need to understand the ACRL Framework, effective classroom presentation and communication skills. “You need to know the information

literacy framework that you want to communicate in your teaching, have effective classroom presentation like speaking skills and the need to define all your terms. Know the principles of adult learning and work effectively with the simple technology in a classroom, and practice in a class and get feedback before you're in front of a class” Gertrude indicated the need to have knowledge of information literacy and how to structure classroom activities to engage students. “You need knowledge of what information literacy stands for and how to best convey the information, both visually and auditorily. If you're doing an activity, know how to structure that activity to maximize learning and engagement.”

Herbert stipulated that academic librarians need to understand their students’ abilities so they can structure their lessons appropriately. “The most difficult aspect of teaching information literacy is gauging the skill level of students, particularly freshmen. Have the ability to quickly read the room.” Irene indicated that academic librarians need the ability to use a LibGuide to teach. “If you have a guide you can work from, get them to that guide. That's another classroom tool, you can help them navigate to the library’s web page and narrow it down to the one thing that they need to work on for that class.” Jane expressed the need to build class activities for students to practice and ask questions. “Understand pedagogy and how people learn and know how to build activities so students can process new information. It’s not about presenting the information or putting together a cohesive lecture but give students the opportunity to practice and ask questions.”

Kirk intimated the ability to communicate effectively with students. “Have good communication skills, good classroom presentation skills, and the ability to connect with people quickly in that little time frame. Be able to convince your listeners that what you're saying is important.” Linda indicated the need to understand information literacy concepts and classroom

management. “The most important skills are a foundation in information literacy and its concepts, and classroom management. Also, have a firm understanding of the pedagogical approach that's considered most valuable at your institution.”

Theme 3: Need for Faculty-Librarian Collaboration

Ten participants expressed the need for faculty-librarian collaboration in teaching information literacy skills. The participants indicated that information literacy should be embedded across the curricula to make teaching effective and create significant impact. Angela indicated the need for faculty-librarian collaboration to embed information literacy into the curricula. “There is not so much support from faculty and administration. The more buy-in you can have from the faculty who is the instructor of the class, the better the student buy-in will be.” Betty indicated the need for partnership between faculty and librarians to teach information literacy. “There should be some kind of structure and emphasis on partnerships with disciplined faculty to give us the opportunity to get into the classroom.”

Dorothy reiterated the need to collaborate with faculty. “Faculty don't always understand the importance of partnering well with the library. Collaborating and crafting assignments that allow students to explore but are also meaningful to their development and understanding information literacy skills can be a challenge.” Ethan divulged that there is uneven support from faculty. “Support from faculty varies. It depends on the school, the department, and the individual. Lots of support from some, zero support from others.” Flora affirmed that collaborating with faculty is a challenge. “Our faculty have not been open to that. They're very defensive of their classroom time so it has been difficult trying to get into the classrooms of the people who don't already recognize the value of it.”

Gertrude indicated that collaborating with faculty is difficult. “The hardest part is that information literacy is not fully integrated into their curriculum experience, so you're only seeing them one time. But it would be better, more valuable if you're seeing them over a period, as opposed to just one time sharing all the information and hoping that they get it. There's no real opportunity for follow up.” Herbert divulged the difficulty collaborating with faculty to teach information literacy. “The struggle is working with the host faculty to teach the needs of the course versus teaching the actual skill of information literacy that apply not just to the immediate assignment, but to their academic career, which is the point of these freshmen classes.”

Irene affirmed the need for faculty-librarian collaboration in teaching information literacy. “Librarians have a gulf to cross without a stated curriculum. We are add-ons to first-year writing/composition or are working hard to attach ourselves somewhere. In these cases, we are blending in information literacy into a class that has its own learning outcomes and goals.”

Jane posited that there is a need to embed information literacy across the curriculum. “It would be great to be part of the curriculum. We teach at the request of the professor so, if a professor of a course changes, we might not necessarily be part of that curriculum anymore.” Linda affirmed the need for partnership with faculty in teaching information literacy. “If my instructional faculty is very clear that this is a skill they will use, that's easier because then the students are interested, and they'll come to listen. If the faculty member doesn't necessarily see the need to emphasize the value, a lot of the students tend to see it as one more thing they must try to cram.”

Theme 4: Need for Institutional Support

Nine participants stipulated that there is need for institutional support for academic librarians. Betty divulged the need for staffing and professional development opportunities to develop their skillset. “We need staffing. We are a very large institution that serves a large

student body, we're short-staffed. We also need professional development opportunities to develop our skillset.” Dorothy posited that librarians need the same support that is given to instructional faculty. “The same support that our teaching faculty get should be extended to librarians to ensure that someone observes your teaching class and gives you formal feedback about how you're doing in order to reinforce the idea that librarians are the same as the teaching faculty.”

Ethan intimated the need for comfortable learning space, resources, and professional development opportunities. “It is critical to have good technology, good projectors in the classroom, smart boards etc. We need chalk and dry erase markers, and the time and money to do professional development.” Flora indicated the need for staffing, good salaries, and professional development opportunities for librarians to thrive. “There need to be enough staff in the library to be able to cover core responsibilities of collections and acquisitions and public services and instruction. We need support for continued professional development for librarians and increase in staff salaries.” Herbert asserted, librarians need support from colleagues and professional development opportunities. “We need the support of colleagues who are open enough that if you have a terrible class, you feel comfortable telling them. Also, we need time and space to develop our skillset and the recognition that it's not a one off.”

Irene reiterated the need for staff, budget, and professional development opportunities. “We need budgets, staff, and classrooms. We need the support to continue to develop our skills.” Jane indicated the need for a budget for professional development. “It would be great to have a professional development budget, especially for things like memberships.” Kirk affirmed the need for professional development opportunities and recognition. “We need time to develop professionally, and administration to support instruction, and the recognition that librarians do

more than shelf books.” Linda posited that there is a need for teambuilding, staffing and professional development opportunities. “We need to work as a team to ensure that all the students get some real basics. Also, professional development time is important to keep up with all the educational and learning theories, developments and tools that are coming out.”

Theme 5: Need for Technological Skills

Nine participants expressed the need for academic librarians to have technological skills. Angela indicated that technology enhances teaching and learning but librarians should be more concerned about mastering content. “Technology is necessary to facilitate learning, but it can be overwhelming. You need to get the basics of what you want to say and then select the tool, you don't start with the tool and then ask, what content am I going to use this for? But rather, the question should be, this is the content, what tool should I select?” Betty divulged that technological skills are a necessity for academic librarians. “Online and hybrid teaching, creating videos, and creating courses are necessary skill set for students coming out of library schools who are interested in information literacy.”

Dorothy indicated that technological skills are necessary in this time and age. “In a post-COVID world, we've moved from paper handouts to online digital research logs so we can assess the work that's being done in the classroom.” Ethan admitted that technological competencies are important as an academic librarian. “Having technological skills is necessary especially during the pandemic. We wouldn't have been able to reach students at all.” Flora posited that technology enhances teaching. Technology is important in terms of distance education, online learning and, producing instructional materials that could be used asynchronously. Classroom technology is important in making you an effective presenter.”

Gertrude reiterated that using technology in teaching boosts students' hands-on experience. "Technology is a great tool. If you're teaching in a computer lab, students can work on their assignments or their research while you're modeling it for them, that's a great way to get hands-on experience." Herbert indicated that having technological skills facilitates teaching and learning, however there is a limit to the use of technology in teaching. "With increase in technology, teaching is more interactive in interesting ways. As exciting new technologies get introduced, it's enticing for us to try to use them even when we don't necessarily have to."

Kirk asserted that having competencies in technology complements teaching and learning. "Technologies provide so many opportunities. When the students see examples being modeled as they follow, the more their senses are involved, the more connections it makes in their brain to give them experiential learning." Linda revealed that technology enhances online teaching experience with a large class size. "I really appreciate the fact that we have so much technology. Zoom has been awesome in my teaching. That's where I can get a lot of that active learning, especially with my large classes."

Outlier Data and Findings

There were 2 unexpected findings and themes that did not align with specific research questions or themes. These 2 findings are stated below.

Outlier Finding #1

Angela expressed that the challenge of teaching information literacy skills is the level of misinformation and disinformation that had taken over the information landscape due to the existence of Google. This has the tendency to influence academic librarians in teaching information literacy. Angela indicated,

The politicization of fake news will manipulate academic librarians into making poor decisions. They must continually challenge their personal bias and lean into their own intellectual integrity to seek out credible information, even if that information goes against what they believe to be true and to alter their beliefs when they find credible evidence that they were wrong.

Outlier Finding #2

Irene indicated that some faculty find it difficult to express their students' information need which makes it difficult for librarians to tailor their teaching to the needs of their students. She asserted, "It is difficult to work with faculty who have a good notion of what they want students to be able to do with a librarian, but they have a terrible time articulating what it should be."

Research Question Responses

I coded the data collected from the questionnaire, letter-writing, and interviews and established the themes. I compared the themes to the research questions to determine their relationships. It was evident that the themes corresponded with each research question. The relationships between the research questions and the themes are listed in Table 4 below.

Table 4

Themes to Address the Research Questions

Research Question	Themes to Address Research Question
CRQ: What challenges do academic librarians experience in teaching information literacy skills?	Need for Training in Pedagogical Skills and Professional Development Opportunities
SQ1: What readiness and personal preparations do academic librarians have in teaching information literacy skills?	Need for Effective Teaching Strategies to Engage Students in the Classroom
SQ2: How have academic librarians maximized their potentials in teaching college freshmen information literacy skills?	Need for Technological Skills

SQ3: What professional development and support do academic librarians require from their institutions to teach information literacy skills?

Need for Institutional Support
Need for Faculty-Librarian Collaboration

Central Research Question

What challenges do academic librarians experience in teaching information literacy skills? All 12 participants underscored the need for pedagogical training from library schools. Library schools are expected to incorporate pedagogical training in their curricula to equip academic librarians for effective teaching. Dorothy stated, “There was no teaching component in my MLIS program, most skills were learned on the job and through professional development.”

Sub-Question One

What readiness and personal preparations do academic librarians have in teaching information literacy skills? The 12 participants expressed the need for academic librarians to be equipped with effective teaching strategies to impact students in the classroom. Betty indicated, “A good teacher isn't based on content. It's based on engaging your students and using examples that are relevant to their lives and simplify concepts into terms and strategies they can understand.”

Sub-Question Two

How have academic librarians maximized their potential in teaching college freshmen information literacy skills? Nine participants indicated that librarians maximized their potential through training in effective teaching skills and strategies to engage students in the classroom and having technological skills. Ethan intimated, “Having technological skills is necessary especially during the pandemic. We wouldn't have been able to reach students at all.”

Sub-Question Three

What professional development and support do academic librarians require from their institutions to teach information literacy skills? Nine participants intimated that academic librarians require institutional support. Flora indicated,

There need to be enough staff in the library to cover core responsibilities of collections, acquisitions, public services, and instruction. We need support for continued professional development for librarians and to be paid appropriate professional salaries to expand the diversity of our field to attract people who are sharp and dynamic and effective teachers.

Summary

Chapter four of this study covered the results of the data analyses of the open-ended questionnaire, letter-writing, and individual interviews of 12 academic librarians that teach college freshmen information literacy skills across the United States. The purpose of this interpretive phenomenological study was to explore the lack of experiential learning of academic librarians that teach college freshmen information literacy skills. The researcher answered the central research question and the three sub-questions using the modified Van Kaam method by Moustakas (1994) to analyze the responses from the individual interviews and the thematic analysis approach for both the open-ended questionnaire and letter-writing.

Grouping of related codes from the study established 5 themes from the open-ended questionnaire, letter-writing, and individual interviews. These are: need for training in pedagogical skills and professional development opportunities, need for effective teaching strategies to engage students in the classroom, faculty-librarian collaboration, lack of institutional support, and need for technological skills, and two outliers.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this interpretive phenomenological study was to explore academic librarians' lack of experiential learning in teaching college freshmen information literacy skills in the United States. The problem addressed in this study was that most academic librarians do not have the necessary experiential learning to teach information literacy skills (Detmering et al., 2019). Teaching information literacy is ineffective because of lack of adequate pedagogical training in library schools (Lowe et al., 2020). The data were collected from 12 academic librarians who teach college freshmen information literacy skills. The data were collected through open-ended questionnaire, letter-writing and individual interviews. Data collected from the open-ended questionnaire and letter-writing were analyzed using a thematic analysis approach. The data collected from individual interviews were analyzed with the use of Moustakas (1994) modified Van Kaam method for phenomenological study data analysis.

Discussion

After data analyses, the findings revealed that all 12 participants indicated the need for training in pedagogical skills and professional development opportunities, need for effective teaching strategies to engage students in the classroom, faculty-librarian collaboration, need for institutional support, and need for technological skills are significant challenges in teaching college freshmen information literacy. Five sections were discussed which include (a) Interpretation of Findings; (b) Implications for Policy or Practice; (c) Theoretical and Empirical Implications; (d) Limitations and Delimitations; and (e) Recommendations for Future Research.

Interpretation of Findings

In exploring the lack of experiential learning of academic librarians in teaching college freshmen information literacy skills, the prevalent opinions and viewpoints expressed by the participants from the data analyses revealed that the most important needs in teaching information literacy are: training in pedagogical skills and professional development opportunities, academic librarians using effective teaching strategies to engage students in the classroom, faculty-librarian collaboration, institutional support, and having technological skills. This section presented a specific discussion of the study interpretation findings. It began with a summary of the thematic findings discussed in Chapter Four and a series of interpretations deemed significant were also discussed.

Summary of Thematic Findings

Five themes were identified in this study. The themes are: need for training in pedagogical skills and professional development opportunities, need for effective teaching strategies to engage students in the classroom, need for faculty-librarian collaboration, need for institutional support, and need for technological skills. Each of these themes helped to enhance the understanding of the lack of experiential learning of academic librarians in teaching college freshmen information literacy skills and highlighted the support structures academic librarians need to engage in teaching and learning meaningfully. Four interpretations of these themes were identified and discussed below.

Lack of training in library school. Academic librarians who teach information literacy skills lack the needed teaching skills and professional development opportunities to enhance their skills in teaching. This is due to the kind of training librarians receive from library schools. Most library schools do not include pedagogical training in their curricula. Where it exists,

pedagogical training is more of theory than practical. Hence, most academic librarians who do not have the necessary pedagogical skills struggle to teach information literacy skills. Lowe et al. (2020), reiterated that academic librarians are ineffective in teaching information literacy because of lack of adequate pedagogical training in library schools. Therefore, for the participants to be effective in teaching college freshmen information literacy, they need pedagogical training and professional development opportunities that would equip them with current best practices in educational theories and their applications in teaching.

Lack of effective teaching strategies in the classroom. Academic librarians who teach information literacy need to have basic knowledge in effective teaching strategies and classroom management skills. Effective teaching is the ability to engage all students to participate fully in class to achieve intended outcomes. It requires academic librarians to understand how their students learn and to develop their instruction to include more problem-based learning to meet the needs of all learning styles in the classroom. The more students are involved in the learning process, the more they learn and the easier it is to manage them. Folk (2016) indicated the need for academic librarians to be knowledgeable in Dweck's theories of intelligence which emphasize that teachers' theories of intelligence could affect instructional goals, teachers' desire to improve their teaching skills and their perceptions of students' abilities, as well as help-seeking behavior in students. For the participants to have student-centered instruction lesson, Chesley and Anantachai (2019) recommended that academic librarians need to be knowledgeable and skillful in the use of Backward Design theory which provides a framework for making classroom activities hands-on.

Lack of support from some faculty. Academic librarians depend on faculty to give them the opportunity to teach information literacy in their classes. Some academic librarians

integrate information literacy in some core courses which they find faculty to be interested in library programs. They work with program chairs, deans or classroom faculty of some programs or departments to integrate information literacy on a course-by-course basis which sometimes is curtailed when there is a change in departmental leadership. Yevelson-Shorsher and Bronstein (2018), reiterated that how faculties view information literacy skills is important in teaching information literacy effectively because they have direct and regular contact with the students and know the academic requirements in their fields.

Unfortunately, some faculties are not willing to involve academic librarians in the classroom (Huddleston et al., 2019). Some faculties see librarians as administrators than educators and expect them to be more concerned with running the library than teaching because they (librarians) do not have doctoral degrees to qualify them as teachers (Long, 2019). Therefore, for the participants to have access to freshmen and teach information literacy effectively, faculty need to recognize information literacy as a core component of undergraduate instruction and incorporate it across the curriculum.

Lack of institutional support. Most academic libraries are under-resourced in terms of staffing, monies for salaries and professional development, and learning resources. Academic librarians are usually underpaid. Hence, there is lack of motivation to give their all, in teaching information literacy. Also, most academic librarians are saddled with so many responsibilities of performing the duties of two or three people because of lack of staffing that, little time is left to engage in innovative teaching of information literacy. In addition, some academic institutions lack learning resources such as projectors, smartboards, dry erase markers etc which make it difficult for academic librarians to engage in effective teaching. Another debilitating issue is the lack of professional development opportunities for academic librarians to continue to develop

their skillset. Academic librarians need to engage in periodic professional development to be abreast with literature. They need budget and time out of their busy schedules to engage in professional development in pedagogy. It is important that academic librarians acquire the knowledge and skills in new and emerging learning theories and innovative educational technologies to enhance the learning experiences of college freshmen. Again, academic librarians need the support of their institutions in assessment initiatives. Information literacy needs to be systematically assessed (Fosnacht, 2020). Academic librarians need to be obligated and provided with the needed tools to conduct assessment (Detmering et al., 2019). Therefore, for the participants to teach information literacy effectively, academic institutions/administration need to provide the needed resources to equip them.

Implications for Policy or Practice

This study identified implications for policy and practice which include recommendations for policymakers and various stakeholders in higher education institutions. The identified implications for both policy and practice are discussed below.

Implications for Policy

This study's findings have policy implications. In exploring the lack of experiential learning of academic librarians that teach college freshmen information literacy skills, the findings revealed that there is a disconnect between library schools and what happens in the field (Higher education institutions). The results may be beneficial to library schools to develop innovative pedagogical policies that incorporate pedagogical skills training in their curricula. Information literacy should be a core course in library schools' curricula, so every student receives pedagogical skills training that focuses on practical hands-on experiences in teaching and effective teaching strategies.

Implications for Practice

Based on the literature review and findings, the study has practical implications. It is evident that a more integrated approach to implementing information literacy skills in the curricula of undergraduate degrees in higher education institutions is needed. This may enable faculty to recognize information literacy as a core component of undergraduate instruction. By so doing, faculty could create the enabling environment for librarians to have access to freshmen who would embrace the teaching of information literacy skills that would enable them to gain the needed knowledge and critical thinking skills to equip them thrive in the world of work.

Also, pedagogical skills training is necessary for academic librarians especially so, for those in their early careers. Therefore, higher education institutions or administrators may organize professional development training in pedagogical skills for academic librarians who teach freshmen information literacy to develop their teaching and teaching strategies skills. Equally important is that academic librarians who teach college freshmen information literacy may hone their technological skills by engaging in professional development opportunities where they can network and learn from one another.

In addition, higher education institutions or administrators may increase staffing in academic libraries to ease the burden of teaching large classes on a few to prevent burn-out so librarians can give of their best in teaching college freshmen. Furthermore, higher education administrators may assist librarians to engage in formal assessment of content and not just measure student satisfaction and perceptions of their learning. By assessing content, librarians would be informed about how much content students are taking in, what teaching strategies are working or not working and how they can improve their teaching to enhance the learning experiences for their students.

Theoretical and Empirical Implications

The themes that emerged from this research study described the essences of the experiences of academic librarians who teach college freshmen information literacy skills and corroborate Kolb's (1984) experiential learning theory that guided this research study. The theoretical and empirical implications of this study are discussed below.

Theoretical Implications

The theoretical framework that undergirded this study was Kolb's experiential learning (Kolb, 1984). The findings from the present study expanded the theory. As participants described their experiences of teaching college freshmen information literacy skills, the importance of people's experiential learning is based on the concept that their experiences and ideas interact to create new knowledge was clearly defined (Kolb & Kolb, 2009). Kolb's experiential learning theory emphasizes the process of learning in which knowledge is created through the transformation of experience (Morris, 2020). Therefore, an individual's experiences of life, work, and education is central in the learning and understanding of new knowledge (Kolb & Kolb, 2009). By exploring the unique experiences of academic librarians who teach college freshmen information literacy skills through the perspective of experiential learning framework, this study's findings provided invaluable insights into the experiential learning needs of academic librarians who teach college freshmen information literacy to hone their pedagogical skills and receive purpose-driven support from faculty and administrators to enhance students' learning experiences.

Empirical Implications

The participants in this study highlighted the need for pedagogical training and professional development opportunities, need for academic librarians having effective teaching

strategies in the classroom, need for faculty-librarian collaboration, need for institutional support, and need for technological skills.

This study's findings both support and add to the empirical literature. For example, studies that have examined the effects of information literacy on academic success revealed several key findings (Croxton & Moore, 2020; Lowe et al., 2020; Pinto et al., 2021). Information literacy empowers and strengthens the formative processes of students (Pinto et al., 2021). Studies have shown a positive relationship between freshmen's retention rates and information literacy skills (Lowe et al., 2020). Professors who incorporate research and information literacy competencies in individual assignments for freshmen find their students perform higher than students who do not have information literacy skills or engage in research (Croxton & Moore, 2020; Huddleston et al., 2019). The ACRL (2016) Core Competencies for information literacy stipulates that academic librarians should use active learning and teaching strategies to enable college freshmen to develop transferable information literacy skills that would impact freshmen's experiences throughout life (Napier et al., 2018). Most college freshmen have not acquired the necessary information literacy skills due to ineffective teaching of the skills because academic librarians lack adequate pedagogical training in library schools and insufficient teaching strategy skills (Carlozzi, 2018; Lowe et al., 2020).

The emergence of technology has provided opportunities for academic libraries to use innovative ways to engage their learning communities in teaching, learning and research (Llewellyn, 2019). Since the inception of social media, academic libraries have been exploring ways to find their place in the social media landscape (Julien et al., 2018). Academic libraries are therefore mandated to take advantage of students' extensive use of mobile technologies to

incorporate information literacy lessons that would reflect the new reality in the classroom to develop the information and digital literacy of students (Pinto et al., 2021).

Institutions that set higher standards for academic work compel students to use the library effectively to meet academic expectations (Yevelson-Shorsher & Bronstein, 2018). Sadly, there is lack of administrative support in the teaching of information literacy in some institutions (Detmering et al., 2019). The outcome of a survey taken on academic librarians' views on administrative support to information literacy instruction indicated that some higher education administration give little support to academic librarians to teach information literacy (Lowe et al., 2020). Academic librarians bemoaned that there had not been any support for assessment to evaluate students' skills which would allow them to identify students' information literacy competencies when they entered college or propose changes to the information literacy curriculum if need be (Julien et al., 2018).

These findings are consistent with the current study's results. The empirical implications of this study are that: academic librarians who receive training in pedagogical skills from library schools are likely to gain effective teaching strategies to enhance the learning experiences of college freshmen. Also, academic librarians who receive institutional support are likely to receive professional development opportunities to develop their technological skills and collaborate with faculty in teaching college freshmen information literacy. Therefore, this study reaffirms the results of other studies which indicated that teaching information literacy is ineffective because of academic librarians' lack of experiential learning (Lowe et al., 2020).

Limitations and Delimitations

Three limitations encountered while conducting this study are, sample size, poor response from participants, and a narrowed target population. A small sample size of 12 participants were

used to gather relevant data for analysis. The participants consisted of 9 females and 3 males. Using a sample size of 12 participants to represent academic librarians in the United States may pose a challenge in generalizing the findings because it is not a true representation of all academic librarians who teach college freshmen information literacy in the United States. Thus, presenting a biased representation of findings.

The second limitation of this study was the difficulties the researcher encountered in getting participants to commit their time to the study. While some academic librarians who were contacted refused to participate in the study, others accepted the invitation and began the study but, decided to discontinue along the way, which caused a delay in the process.

The third limitation of this study was the target population. The researcher used only academic librarians in 4-year colleges and universities who teach college freshmen information literacy rather than including other academic librarians from other institutions like community colleges to compare their experiences. Therefore, using purposive sampling may not permit generalizability and transferability of findings because academic librarians from other higher educational institutions may experience diverse situations and experiences that may not be captured in the current setting of the study.

Delimitations

Some delimitations of this study were that the researcher only included participants over the age of 18 years. Participants were bound by three specific requirements. First, participants were required to have an MLIS degree from library school. Secondly, all participants should be academic librarians in 4-year colleges or universities. Lastly, each participant should be involved in teaching college freshmen information literacy skills. To limit this study within the defined

boundaries, it was expected that each participant of the study experienced the shared phenomenon under investigation (Creswell & Poth, 2018).

Recommendations for Future Research

This study has two recommendations for future research. The recommendations are primarily based on the limitations of the study. The sample size limited this study. A small sample size of 12 participants were used to gather relevant data for analysis. The small sample size may pose a challenge in generalizing this study's findings since it may not be a fair representation of all academic librarians in the United States, presenting a biased representation of findings. Future studies should use a larger sample size to generalize their findings.

The second limitation of this study was the target population. The researcher used only academic librarians in 4-year colleges and universities rather than including other academic institutions like community colleges to compare their experiences. Future studies should expand the target population to include academic librarians from other higher education institutions to ensure generalizability of the study.

Conclusion

The purpose of this study was to explore the lack of experiential learning of academic librarians in teaching college freshmen information literacy skills. An interpretive phenomenological research design was utilized to obtain the essence of the lived experiences of participants and provided them the opportunity for their voices to be heard. Kolb's experiential learning (Kolb, 1984) framework was drawn upon to guide the study. Data were collected from 12 academic librarians through open-ended questionnaire, letter-writing, and individual interviews. Data collected from open-ended questionnaire and letter-writing were analyzed using thematic analysis approach while Moustakas's (1994) modified Van Kaam phenomenological

procedure for data analysis was used to analyze data from individual interviews. The findings revealed that academic librarians need pedagogical training and other support structures to effectively teach college freshmen information literacy skills.

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Appendix A: IRB Exempt Letter

LIBERTY UNIVERSITY

INSTITUTIONAL REVIEW BOARD

September 27, 2022

Pearl Adzei-Stonnes
Leldon Nichols

Re: IRB Exemption - IRB-FY22-23-58 Exploring academic librarians' lack of experiential learning in teaching college freshmen information literacy skills: An interpretive phenomenological study

Dear Pearl Adzei-Stonnes, Leldon Nichols,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2. (iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, MA, CIP

Administrative Chair of Institutional Research

Research Ethics Office

Appendix B: Recruitment Letter

Dear

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a PhD degree. The purpose of my research is to understand the challenges academic librarians experience in teaching college freshmen and how ready and prepared academic librarians are in teaching information literacy skills, how academic librarians have maximized their potentials in teaching and what professional development and support do academic librarians require to teach college freshmen information literacy skills. I am writing to invite eligible participants to join my study.

Participants must be 18 years of age or older and academic librarians who teach college freshmen information literacy skills in four-year colleges and universities or higher education institutions in the United States. Participants, if willing, will be asked to engage in a 60-minute, individual semi-structured interview, answer a questionnaire that will take about 30 minutes to complete, and engage in letter-writing which will take about 20 minutes to complete and can be submitted after 2 weeks. After I transcribe the data, I will send the transcriptions back to you to review and validate the information. Names and other identifying information will be requested as part of this study, but the information will remain confidential.

A consent document will be emailed to you if you choose to participate in the research. The consent document contains additional information about my research. If you choose to participate, you will need to sign the consent document and email it to me prior to completing any of the research procedures.

Sincerely,

Pearl Adzei-Stonnes
Graduate Student

Appendix C: Consent Form

Consent

Title of the Project: Exploring Academic Librarians' Lack of Experiential Learning in Teaching College Freshmen Information Literacy Skills: An Interpretive Phenomenological Study

Principal Investigator: Pearl Adzei-Stonnes, PhD Student, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you should be 18 years of age and above and be an academic librarian who teaches college freshmen information literacy skills in a four-year college and university or a higher education institution in the United States. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research project.

What is the study about and why is it being done?

The purpose of this phenomenological study is to explore the lack of academic librarians' experiential learning in teaching college freshmen information literacy skills in the United States.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following things:

1. Answer an open-response questionnaire through email. The questionnaire will last for about 30 minutes. You will not be video-taped, or audio-recorded for this procedure.
2. Respond to a letter-writing prompt, which will take about 20 minutes, through email. You will have two weeks to respond. You will not be video-taped, or audio-recorded for this procedure.
3. Participate in a one-on-one, 60-minute, semi-structured interview with me through Zoom. You will be audio-recorded during this procedure.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include library schools providing adequate pedagogical training to academic librarians to enhance their teaching skills, academic librarians receiving institutional support from both faculty and higher education administrators to enhance their teaching of college freshmen information literacy skills, college freshmen will be equipped to develop the required skills to write good academic papers, faculty will be more willing to integrate information literacy instruction in their classrooms for students' understanding and critical thinking and not just impartation of information, and higher education administrators may perhaps churn out holistic students who are information literate and equipped for the world of work.

What risks might you experience from being in this study?

The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Published reports will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records. The results of this study will be published but your identity and confidentiality will be protected.

- Your name will be coded with a number. Your responses will be kept confidential using codes. Interviews will be conducted in a location where others will not easily overhear the conversation.
- Data will be stored on a password-locked computer and in a locked filing cabinet. The data may be used in future presentations. The linking list will be stored in a locked cabinet or drawer separately from the raw data and only the researcher will have access to it. After three years, all electronic records will be deleted and all physical records will be shredded.
- Interviews will be recorded and transcribed. Recordings will be stored on a password-locked computer for three years and then erased. Only the researcher will have access to these recordings.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Pearl Adzei-Stonnes. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her. You may also contact the researcher's faculty sponsor, Dr. Leldon Nichols.

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

The researcher has my permission to audio-record me as part of my participation in this study.

Printed Subject Name

Signature & Date

Appendix D: Research Questions

Interpretive Phenomenological Research Questions:

Central Research Question

What challenges do academic librarians experience in teaching information literacy skills?

Sub-Question One

What readiness and personal preparations do academic librarians have in teaching information literacy skills?

Sub-Question Two

How have academic librarians maximized their potential in teaching college freshmen information literacy skills?

Sub-Question Three

What professional development and support do academic librarians require from their institutions to teach information literacy skills?

Appendix E: Open-ended Questionnaire

Thanks again for agreeing to participate in the research. Below is the open-ended questionnaire. I would appreciate having it within 3 days. You may send your response through email.

1. What is your gender?
2. What is your age?
3. What is your educational level?
4. What are your years of experience as an academic librarian?
5. Describe your challenges in teaching college freshmen information literacy skills.
6. What is your educational background or training in teaching information literacy skills?
7. What professional development experiences have you had that prepared you to teach college freshmen information literacy skills?
8. What level of support do you receive from faculty in teaching information literacy?
9. How do you get students excited?
10. What recommendations can you give to make the teaching of information literacy skills better for yourself and your students?

Appendix F: Letter-writing Question

Letter-Writing

Thanks again for agreeing to participate in the research. Below is the letter-writing question. Your response can be a page or more and I would appreciate having it within two weeks. You may send your response through email.

Letter-writing Question

What makes teaching college freshmen information literacy skills ineffective?

Appendix G: Individual Interview Questions

1. How has your educational curriculum prepared you for teaching information literacy skills? SQ1
2. Is there more for you to learn? SQ2
3. What are the necessary skills academic librarians need to effectively teach information literacy skills? SQ1
4. Do you think library schools have designed their programs to ensure that students acquire teaching skills and are ready for the field? SQ1
5. What would you recommend in designing information literacy courses in library schools to be beneficial to students who would teach information literacy skills? SQ1
6. Do you receive administrative support from your institution in teaching information literacy skills? SQ3
7. What kind of support do academic librarians require from their institutions to teach information literacy skills? SQ3
8. What professional development workshops do you engage in personally? SQ1
9. What experiences do you have in teaching online or hybrid environment? SQ1
10. Describe any support you have received in teaching information literacy skills to college freshmen. SQ3
11. Do you engage in scholarly writing for publication? SQ1

12. What roles do educational technologies play in assisting academic librarians in teaching?

CRQ

13. Tell me about the types of technology skills you have used or have taught with. CRQ

14. What opportunities do you find in teaching college freshmen information literacy skills?

CRQ

15. What barriers have you experienced in teaching college freshmen information literacy

skills? CRQ

16. Is there anything else you would want to share with me regarding our discussion of your

experiences in teaching college freshmen information literacy skills that we haven't

discussed? CRQ

