

**Academic Library Resources and Services for Online Distance Learners:
An Exploratory Study**

A Dissertation Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

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December 2016

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Dedication

This dissertation is lovingly dedicated to my survivor... my soul mate... my life partner...

Kathy L. Rankin

Thank you for believing in me and making sure I never gave up on myself.

You are my everything and together, we can do anything!

Acknowledgements

Without the support of several individuals, completion of this dissertation would not have been possible. These acknowledgements are but a small manner in which I can express my deepest appreciation and gratitude.

I want to extend my most heartfelt thanks to the following individuals –

To my dissertation advisor, *Dr. Lisa Yamagata-Lynch*. Your guidance, support, and encouragement helped me create this project from start to finish. From ‘building a house using the strengths of the right people’ to ‘gathering dots’, you pushed me to not only become a better student, but also to become a person who has confidence in their own abilities. Your devotion to your work and to your students’ success is truly an inspiration. Thank you!

To the members of my committee, *Dr. Vandana Singh, Dr. Gary Skolits, and Dr. Jennifer Morrow*. You graciously accepted the invitation to be on my committee and I am forever grateful you took a chance on me. Thank you for your words of wisdom and strategic advice along this path.

To my fellow *Educational Psychology and Counseling classmates*. Being witness to your hard work, dedication, and yes, even struggles, on your doctoral journeys allowed me to envision the possibility that I, too, could achieve the same success.

To my supervisor and mentor, *Jerry Riehl*. More than you may know, you have been a blessing in my life. I am the lucky one to be working alongside you each day. You believed in me from the moment we met and that belief has only grown stronger these past eight years. Thank you for helping me to shine bright against my own self-doubts! You will forever hold a special place in my heart!

To my *colleagues in the Office of Information Technology and at UTK*, especially Dr. Jean

Derco, Dr. Christina Goode, Iryna Loboda, Fred Kelly, Janet Miles, and Dr. Jennifer

Gramling. Thank you for always taking the time to listen to my successes as well as my

stumbles. You will never know how much just ‘being there’ has meant to me.

To the members of my *Tennessee family*. Never once have I doubted your unwavering support

and belief that I could do this. Thank you, thank you, thank you!!

To my four-legged kids, *Winnie, Mercedes, Colbie Jak, Chase, MJ*, and *Hope*. I feel as if you’ve

earned this degree as much as I have. Steadfast by my side or in my lap in the office, you

kept me company during many long days and late nights of course work, research, and

writing. I love you!

And lastly, to the woman who holds my heart, *Kathy Rankin*. Your emotional, physical, and

spiritual strength keeps me in awe. Your love has filled my heart and life with a light that

can never be extinguished. I can only hope you know how much your patience,

understanding, and support helped me to realize my dream. Thank you! I love you!

Abstract

In this study distance learning library resources and services as provided by member institutions belonging to the Association of Research Libraries (ARL) were examined. The goals of this study were (a) to identify the types of distance learning library resources and services being provided, and (b) to gain insight into the experiences and perspectives of Association of Research Libraries' library personnel in delivering library resources and services to their distance learning library patrons. This exploratory study consisted of two phases, where both quantitative and qualitative methods were used. Phase one involved a content analysis of member institution's distance learning websites and library subject guides to reveal the types of library resources and services offered to their online, distance learners. ARL member institutions were analyzed: (a) if the institution is an academic library, and (b) if the institution has either a distance learning website and/or a library subject guide. Phase two of the study entailed personal, semi-structured interviews with library personnel at ARL member institutions. Library personnel were selected based on the number of library resources and services offered at their respective institution. The purpose of interviewing library personnel was to gain a deeper understanding of the librarian's experiences, perceptions, challenges, and opportunities in delivering distance learning library resources and services. Content analysis findings revealed that an academic libraries' web presence provides a prime gateway for distance learners to access library resources and services at their point of need. Conversations with academic librarians revealed efforts towards educating users, marketing their collections and services, and discovering/identifying the information needs of their distance learning library users in order to meet them *where they are*. These findings offer academic librarians and institution

administrators information on current practice, trends, and considerations for future planning and improvements related to the support of distance learning library users.

Keywords: academic libraries, distance education, distance learners, library resources,
library services

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Chapter One

Introduction

“It is a truth not yet universally acknowledged that a venture based on information must be in want of a librarian” (Mahraj, 2012, p. 360). As the cornerstone of higher education, academic libraries have long supported the instructional endeavors on college and university campuses across the nation. Academic libraries carry a philosophical mission to provide access to educational resources and services, as well as instruction on locating, accessing, evaluating, and using resources successfully to all its users. “Libraries exist because they add value to teaching, learning, and the production and dissemination of knowledge” (Munde & Marks, 2009, p. 111).

Today’s institutions of higher education are expanding their learners’ educational experiences by removing physical barriers and delivering courses and academic programs online. The online learning environment offers a unique platform for the delivery and access of academic content gathered for educational instruction to anyone, anytime, anywhere. Far removed from the traditional brick-and-mortar classroom of days past, “online learning has become a great catalyst for change in American higher education” (McCluskey & Winter, 2012, p. 163)

The expansion into distance education has significantly contributed to how academic libraries are reshaping their resources and services to meet the needs of online, distance learners. Several authors (Nielsen, 2014; Primus, 2009; Watson, 1999) make note towards the changing nature of library services to distance learners. Watson (1999) describes new professional paradigms for librarians arising from distance education by stating, “distance education has led to the development of specialized library and information services that can appropriately be

called distance librarianship” (p. 1). Primus (2009) emphasizes, “the rise in the number of institutions participating in distance education reflects an increasing demand for distance library services” (p. 22). Nielsen (2014) affirms, “new challenges and opportunities have arisen for academic libraries as they work to support these expansions” (p. 6).

Academic library support for distance learning is where my research interests and concerns lie. In this research study, I examined academic library resources and services provided to online, distance learners by member institutions of the Association of Research Libraries (ARL), a nonprofit organization comprising 124 research libraries in the United States and Canada selected for the breadth and quality of their collections and services. Membership in ARL is by invitation, based on the research nature of the library and the parent institution’s aspirations and achievements as a research institution. The ARL operates as a forum for the exchange of ideas and as an agent for collective action across the broader research library community. Through an exploratory study, I sought not only to identify the types of distance learning library services being provided, but also to gain insight into the perceptions, challenges, and opportunities library personnel at ARL member institutions experienced in delivering library resources and services to their distance learning library patrons.

It may help to first introduce a formal definition of a key concept, *distance learning library services*, provided not only to circumvent reader misinterpretation, but also to distinguish clarity in the context of its use throughout the analyses being reported. The Association of College and Research Libraries (ACRL), in its 2008 *Standards for Distance Learning Library Services*, defines distance learning library services as:

Library services in support of college, university, or other postsecondary courses and programs offered away from a main campus, or in the absence of a traditional campus,

and regardless of where credit is given. Courses thus supported may be taught in traditional or nontraditional formats or media, may or may not require physical facilities, and may or may not involve live interaction of teachers and students. The phrase is inclusive of services to courses in all post-secondary programs designated as: extension, extended, off-campus, extended campus, distance, distributed, open, flexible, franchising, virtual, synchronous, or asynchronous. (Association of College & Research Libraries, 2015, Definitions section, para. 1)

The online learner, already separated physically from their institution, may feel an additional disconnect from their campus library. “Information resources and services provided by a library are as important to the online learner as they are to the traditional learner” (Kramer, 2010, p. 445). Academic librarians have an abundance of knowledge and skills ready to share with the community of learners involved in information-rich online educational environments. The flow of information into, around, and out of online learning environments has the potential to provide numerous opportunities for academic librarians to not only utilize their information expertise, but also to “connect” with the online learner.

Background of the Study

Due to the growth of the Internet and its budding potential for online communications, institutions of higher education have been witness to a rising momentum in the movement from traditional face-to-face education to online, distance education. Starting with one single course moving online, higher education has transitioned to an entity where entire college programs and degrees are being delivered online. Without the constraints of time and space, today’s learners are engaged in unique educational opportunities through online learning environments. Having

the affordance of placing educational units into these online learning environments, colleges and universities are able to stretch their reach towards new and diverse bodies of learners.

Growth of Online Learning and Student Enrollments

Literature published in the early 2000s provided evidence to beliefs in growing student demand for life-long, just in time learning via online learning environments. In explaining how “one never really completes an education” (“The Market,” para. 4), Witherspoon and Johnstone (2001) believed the future growth of distance learning programs would be a response to education becoming a routine part of day-to-day environments at work or at home. They clarified this belief with the notion that “education must be available when it’s needed, under conditions that don’t make learning, work, and home mutually exclusive factors” (Witherspoon & Johnstone, 2001, “The Market,” para. 5). McLoughlin and Luca (2001) mentioned an increase in distance learning opportunities by stating, “judging by present trend, there is no doubt that Web-based learning and training will continue to expand, with the growth in markets, the trend towards life-long learning and the need for universities to offer flexible, on demand educational services” (p. 425). And in 2002, Baird and Wilson described the impact of distance learning on higher education learners by noting that “learners today want to be linked to global resources and learning opportunities anytime/anyplace/anywhere – without the inhibitions of physical structures such as classrooms, libraries or even technology-centered sites” (Baird & Wilson, 2002, p. 56).

Since 2003 the Babson Survey Research Group has conducted research on the state of online learning across higher education institutions in the United States. Each year, the number of enrollments in higher education online courses has increased. In Babson’s 2016 report, *Online Report Card: Tracking Online Education in the United States*, Allen and Seaman

acknowledge that despite overall enrollments decreasing, “distance education enrollments continue to grow at a healthy rate” (Allen & Seaman, 2016). In fall 2014, 5.8 million students took at least one distance education course, which is more than 28.4% of all enrolled students. These numbers reveal how distance education courses have “become a common part of the course delivery modality for many students” (Allen & Seaman, 2016).

The expansion into online learning coupled with the continued growth of student enrollments in distance learning courses and programs have been key catalysts in setting the stage for the changing landscape of today’s higher education institutions. Not only has this expansion changed and impacted the face of the classroom, but also “every aspect of the university has been impacted” (McCluskey & Winter, 2012, p. 11). Years ago, college libraries attracted professors and scholars from afar simply for their rare and vast print collections. Now, with the ability to make collections available digitally, users no longer need to visit the physical library. One must not think that the growth of online learning and student enrollments has caused a decline in library usage. Rather, we must think of these changes as an increasing demand for library services at a user’s point of need – online and from a distance.

Academic Library Resources and Services

From organizing and managing information, to supporting teaching and learning needs, to enhancing information literacy skills, academic libraries function to connect educators and learners with essential resources and services. Historically, “librarians have always played a role in life-long learning as they have stored, classified, circulated materials, and provided reference assistance to patrons” (Hartsell-Gundy & Tumbleson, 2012, p. 53). “Twenty years ago the work of a librarian was generally centered on a specific task (cataloging, reference, circulation)” (Groeling & Boyd, 2009, p. 39-40). However, amid the current day’s changing nature of

information access, communication technologies, and the demand for quality, equitable, and 24/7 on-demand services, academic libraries and librarians are rethinking and reshaping their roles, resources, and services to meet the needs of their online, distance learners (Corbett & Brown, 2015; Groeling & Boyd, 2009; Nielsen, 2014; Primus, 2009; Watson, 1999). “Distance education has impacted not only on the discipline of education, but it has also fundamentally affected services and professions that support distance learning and distance education” (Watson, 1999, p. 1). Working as change agents, today’s academic libraries and librarians are not only facing the reality of ensuring their relevance, but also sustaining the prosperity of academic libraries in the digital, connected age.

Association of Research Libraries

The Association of Research Libraries (ARL) is a nonprofit, member-driven organization comprised of 124 research libraries in the United States and Canada. The ARL is a widespread organization with representative members from research institutions, such as universities, public libraries, national libraries, and special libraries, “that share similar research missions, aspirations, and achievements” (Association of Research Libraries, 2015). Officially established in 1932, the ARL’s mission has continued to “influence the changing environment of scholarly communication and the public policies that affect research libraries and the diverse communities they serve” (Association of Research Libraries, 2015). In pursuit of their mission, the Association: (a) advances the goals of its member research libraries, (b) provides leadership in public and information policy to the scholarly and higher education communities, (c) fosters the exchange of ideas and expertise, (d) facilitates the emergence of new roles for research libraries, and (e) shapes a future environment that leverages its interests with those of allied organizations (Association of Research Libraries, 2015). The notion to study ARL member institutions stems

from the similarity between my personal beliefs on the importance of libraries in society and the elements contributing to the Association's success:

- Open and equitable access to information is a fundamental tenet to society.
- Research libraries are active agents central to the process of the transmission and creation of knowledge.
- Research libraries have a responsibility to anticipate and prepare for the information needs of present and future users.
- Collaboration among libraries improves prospects for individual library success in fulfilling local needs. (Association of Research Libraries, 2015)

Standards for Distance Learning Library Services

Strategies for the provision of library resources and services to support distance education populations must be taken into consideration (Nielsen, 2014). In 2008, the Association of College & Research Libraries (ACRL) established the *Standards for Distance Learning Library Services*. This set of standards is just one of many established to help academic libraries understand the components of an excellent library. The *Standards for Distance Learning Library Services* were established, and are maintained, out of motivation and concern “for ensuring the delivery of equivalent library services and information resources to college and university students, faculty, and other personnel in remote settings” (Association of College & Research Libraries, 2015, Introduction section, para. 1). The following excerpt from the ACRL *Standards for Distance Learning Library Services* is known as the “Access Entitlement Principle” and is the foundation for establishing adequate and equitable access of library resources and services to distance learning populations:

Every student, faculty member, administrator, staff member, or any other member of any institution of higher education, is entitled to the library services and resources of that institution, including direct communication with the appropriate library personnel, regardless of where enrolled or where located in affiliation with the institution.

(Association of College & Research Libraries, 2015, Executive Summary section, para. 1)

Intended to provide direction to librarians providing library services to distance learners, the Standards, along with the Access Entitlement Principle, denote specific, essential requirements necessary to achieve adequate and equitable access. The ACRL *Standards for Distance Learning Library Services* suggest the following, although not necessarily exhaustive, as essential requirements:

- reference assistance;
- online instructional and informational services;
- reliable, rapid, secure access to online resources;
- consultation services;
- a program of library user instruction designed to instill independent and effective information literacy skills while specifically meeting the learner-support needs of the distance learning community;
- reciprocal or contractual borrowing, or interlibrary loan services using broadest application of fair use of copyrighted materials;
- access to reserve materials in accordance with copyright fair use policies;
- adequate service hours for optimum user access;

- promotion of library services to the distance learning community, including documented and updated policies, regulations and procedures for systematic development, and management of information resources;
- prompt delivery to users of items obtained from the institution's collections, or through interlibrary loan agreement via courier or electronic delivery system; and
- assistance with and instruction in the use of nonprint media and equipment. (Association of College & Research Libraries, 2015, Services section, para. 2)

Additional requirements such as fiscal responsibilities, personnel, library education, management, facilities and equipment, resources, services, and documentation frame the efforts of the library as they deliver resources and services. Nevertheless, how an academic library provides for and implements adequate and equitable resources and services varies depending on the personnel, facilities, and resources employed by the individual institution.

Statement of the Problem

Online learning environments have forced educators to adjust to rapidly changing and emerging technologies (Allen & Seaman, 2014, 2015; Johnson, Adams Becker, Estrada, & Freeman, 2014). Library resources and services are vital components of academic institutions, whether instruction occurs on or off campus (Primus, 2009). Like traditional learners, online, distance learners require access to library resources and services. Adequate library resources and services are essential to superior academic knowledge and skills afforded by an institution, however, as previously noted, how an academic library provides said resources and services varies depending on the personnel, facilities, and resources employed by the individual institution. Identifying current practices in the delivery of library resources and services to

distance learners is an important aspect to understanding how academic libraries are serving and meeting the needs of their patrons.

Purpose of Study

The purpose of this exploratory research study was to answer the following questions: (a) what library resources and services do Association of Research Libraries (ARL) member institutions offer to their distance learning library patrons, and (b) what are the perceptions, challenges, and opportunities experienced by library personnel at Association of Research Libraries (ARL) member institutions in delivering library resources and services to their distance learning library patrons?

To address the above exploratory questions, I first compiled a report of library resources and services offered to online, distance learners from specific member institutions belonging to the Association of Research Libraries. Second, after interviewing academic librarians at the aforementioned institutions who serve distance learners, I analyzed and reported on their experiences and perspectives in delivering distance learning library services. It should be noted that this study only focused on academic librarians' responses to distance learning library services and not those of faculty, students, or library administrators. This multi-method research approach, that is, the integration of different ways of knowing, offered greater insight into the problem being studied.

Significance of the Study

Literature addressing research on library services for distance learning has “grown in tandem with developments in distance learning” (Slade, 2004, p. 6). As librarians struggle to provide equitable resources and services to on- and off-campus students, an “increased awareness of the need for research studies to provide a knowledge base for the development of

best practices” has risen (Slade, 2004, p. 7). Slade believed that “the development of a strong research base will help librarians reach consensus on the essential criteria to use in measuring performance and documenting good practice” (p. 7) in regards to the plethora of potential resources and services available to distance learners (Slade, 2004).

The findings of this study contribute to the body of educational research within the landscape of online learning environments with a specific focus on how academic libraries and librarians are delivering distance learning library services to learners and educators. Study results may help to inform academic librarians and institution administrators of current practice and trends as well as to guide future planning and improvements related to the support of distance learning library users. Such an analysis can make a valuable contribution to distance learning library services’ implementation initiatives by member institutions belonging to the Association of Research Libraries’ organization.

Assumptions, Delimitations, and Limitations

As in any research study being conducted, there will be assumptions, delimitations, and limitations. The assumptions, delimitations, and limitations within this study are as follows:

Assumptions

In this study there are three assumptions to be acknowledged. First, academic library resources and services are critical components in distance education. Second, the review of distance learning library resources and services from member institution’s websites and library guides will provide an adequate number of participants from which to select and conduct semi-structured interviews. Finally, the qualitative interview process is meant to enhance and supplement what will be identified in the quantitative content analysis process.

Delimitations

The delimitation of this study is the specific population of interest. Only specific library personnel at select Association of Research Libraries member institutions will be reporting on distance learning library services at their respective institutions. Findings in this study will not be generalizable to other national institutions of higher education.

Limitations

There are three major limitations to this study. First, this study is limited to member institutions of the Association of Research Libraries meeting certain selection criteria. Second, findings will not be generalizable to academic institutions that are not member institutions of the Association of Research Libraries' organization. The final limitation is that content analysis is a purely descriptive method of research. Online, web-based content of distance learning library services will be analyzed, and not the underlying intention of what is observed. Content analyses focus on the "what," not the "why."

Definition of Terms

Within this section, I introduce key terminology and concepts that are used throughout the dissertation. Definitions and descriptions are provided to circumvent reader misinterpretation. Presented in alphabetical order, these terms were selected based on their association to the topics under inquiry.

Branch Library

The *ARL Statistics* series is an annual publication reporting statistical data on collections, staffing, expenditures, and service activities for the members of the Association of Research Libraries. In *ARL Statistics 2013-2014*, a branch library is defined as

An auxiliary library service outlet with quarters separate from the central library of an

institution, housing a basic collection of books and other materials, a regular staffing level, and an established schedule, administered either by the central library or through the administrative structure of other units within the university (Kyrillidou, Morris, & Roebuck, 2015, p. 63).

Course Management System (CMS)

Course management systems are web-based, software applications that allow instructors to create and manage self-contained online environments for educational experiences. Course management systems enable instructors to extend the classroom experience beyond its traditional boundaries of physicality, time, and space. Instructors design, develop, and manage their courses within an online framework to convey instructional materials and foster student engagement. Course management systems can also be referred to as ‘learning management systems,’ or LMS.

Distance Learning

Distance learning is learning that takes place when the instructor and the learner are not in the same physical location. “The idea is that students can learn wherever they wish, whenever they wish, in an environment that requires independent work but is structured by an instructor and perhaps involves contact with other students” (Burke, 2013, p. 163). The terms *distance education* and *online education* are synonymous with *distance learning* and may be used in its place throughout this study.

Distance Learning Community

As defined in the ACRL *Standards for Distance Learning Library Services*, a distance learning community consists of all individuals, institutions, or agencies directly involved with academic programs or extension services offered away from or in the absence of a traditional academic campus. Community members may include students, faculty, researchers,

administrators, sponsors, and staff, or any of these whose academic work otherwise takes them away from on-campus library services (Association of College & Research Libraries, 2015).

Embedded Librarian

In order to truly be where their users are, and to be user-centric, librarians need to be embedded. This concept has given rise to what is known as *embedded librarianship*. Kesselman and Watstein (2009) describe embedded librarianship as “bringing the library and the librarian to the user” (p. 385) regardless of the user’s physical location.

Information Literacy

The American Library Association’s Presidential Committee on Information Literacy defines information literacy as a set of abilities requiring individuals to “recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (American Library Association, 1989, para. 3).

Interlibrary Loan (ILL)

Interlibrary loan is a resource sharing service between libraries. When a needed resource is checked out, unavailable, or not owned by the library, registered patrons may request that it be borrowed from another library (Reitz, 2004).

Library

As defined in *The Whole Library Handbook 5*, a library is a collection of resources in a variety of formats that is (1) organized by information professionals or other experts who (2) provide convenient physical, digital, bibliographic, or intellectual access and (3) offer targeted services and programs (4) with the mission of educating, informing, or entertaining a variety of audiences (5) and the goal of stimulating individual learning and advancing society as a whole (Eberhart, 2013, p. 2).

Library Guide

A tailored, electronic bibliography of resources created by librarians to connect learners with content for research or informational purposes. These subject-specific and non-subject-specific lists may include a variety of resources including, but not limited to books, journals, databases, and websites, as well as any other resource the librarian feels would assist learners. Library guides can also be referred to as subject guides, course guides, pathfinders, and information portals.

Off-Campus

The term ‘off-campus’ pertains to facilities or activities utilized by faculty and/or students of an educational institution that are located off, or away from, the main campus.

Online Learning/Education

Online learning, also referred to as web-based learning, is learning that takes place via a computer connected to the Internet. Typically, the learner logs into a system and accesses information from an instructor or tutorial. The learner then follows an established sequence. At each step the learner interacts with the computer to access more information or supporting resources from the Internet.

Originating Institution

Refers to the credit-granting institution entity, the chief administrative officers, and governance organizations responsible for the offering, marketing, and support of distance learning academic courses and programs.

Organization of the Study

This study is structured into five chapters.

Chapter One presents an introduction to the research study. As previously discussed, the

introduction incorporates a brief background on the topic studied; the statement of the problem; the purpose of the study; the significance of the study; all assumptions, delimitations, and limitations; definitions of terminology; and the organizational structure of the study.

Chapter Two provides a review of literature addressing distance learning library services with specific regards to the following topics: (a) general library resources and services offered to distance learners, (b) ways in which libraries are currently implementing and managing web-based research guides, (c) experiences and perspectives delivering resources and services to distance learning patrons among select groups of academic libraries, (d) the content analysis method and its usage in examining communication content, and (e) the interview method. Chapter Three delivers the methodology for the study. In Chapter Four, the results and findings of the study are presented. Chapter Five closes the study with a summary, discussion, and recommendations for future research studies.

Chapter Two

Review of the Literature

A review of the literature addressing distance learning library services is provided to establish the framework and methodological approach addressing my research questions. Literature addressing distance learning library services is quite extensive, while at the same time varied. In an effort to manage the vast scope of literature on this topic, I highlight a few representative examples where the research focus concentrates on the following areas: (a) general library resources and services offered to distance learners, (b) ways in which libraries are currently implementing and managing web-based research guides, (c) experiences and perspectives delivering resources and services to distance learning patrons among academic librarians, (d) the content analysis method and its usage in examining communication content, and (e) the interview method. The literature review provides methodological insights for my study through discussions on how academic libraries are committed to delivering resources and services beyond the walls of the physical entity to all users of the library regardless of their location.

The review of the literature includes case studies, interviews, surveys, and professional library and education articles published in major library and technology journals. The majority of published studies reviewed were limited to research within the past ten years. While older literature is helpful in providing background information on the topic, it does not offer sufficient evidence to assess current academic library resources and services being provided to distance learners. In this review, literature older than ten years will be used to point out significant components, beliefs, and/or theoretical perspectives from experienced professionals in the field.

This purpose of this review is to summarize key findings and implications found within peer-reviewed research articles concentrating on library services for distance learners and educators.

General Library Resources and Services Offered to Distance Learners

Providing resources and helping expand learners' skills and knowledge has always been the focus of libraries and librarians (Corbett & Brown, 2015). However, serving the needs of today's students learning at a distance has become an increasingly challenging matter for academic libraries to address (Diaz, 2012; Gandhi, 2003; Lillard, 2003; Yang, 2005, Watson, 1999).

Cassner and Adams (2004) surveyed distance librarian administrators at Association of Research Libraries (ARL) member libraries to identify library resources and services being offered to distance learners. Of the 112 member libraries surveyed, 73 libraries participated in answering questions pertaining to "access and delivery options, models of staffing, and collaboration of libraries with distance teaching faculty" (Cassner & Adams, 2004, p. 87). Sixty-nine percent of the respondents do offer distance learning library services. These services included a dedicated web page to distance learners, delivery of electronic resources, interlibrary loan, online reference assistance such as E-mail and virtual chat, and library instruction via online tutorials. Additionally, the majority of respondents indicated their library staff members, as a whole unit, serve the needs of both on-campus and distance learners.

In a literature review on improving library services for distance learners, Raraigh-Hopper (2009) found that the most common library services offered to distance learners include:

Remote access to online library catalog; electronic databases; electronic books and journals; online information literacy tutorials; electronic research guides on academic and special interest topics; electronic general library guides; ask-a-librarian (chat, e-mail, or

telephone); interlibrary loan; electronic reserves; and document delivery services.

(Raraigh-Hopper, 2009, p. 73)

This list is evidence towards an almost exclusive electronic delivery of library services.

In a more recent study, Hill, Li, and Macheak (2013) surveyed 65 member libraries within the United States and Canada Coalition of Urban and Metropolitan Universities (CUMU). Hill, Li, and Macheak were interested in identifying “services, activities and policies that urban and metropolitan libraries have developed” (p. 315) in support of their distance library learners. Twenty-four libraries of varying scope and size responded for a response rate of 37%. Similar to Cassner and Adam’s findings, online reference via virtual chat and E-mail were the most prevalent services offered as 96% reported these offerings. Additional services included document delivery (86%), appointment-based reference (91%), online guides and tutorials (~80%), and embedded librarians in online course delivery software (55%). Two-thirds of the respondents reported having either a designated distance learning librarian or a combination of library staff members serving distance learners.

In 2014, Nielsen conducted a study to analyze library resources and services offered by 19 national universities to their distance education population. One aspect of Nielsen’s study was to highlight new or innovative means for service to distance education populations. Nielsen documented interesting service and support approaches which included: online games to introduce users to library web sites and available electronic resources, the creation and utilization of new professional distance education librarian positions, and research portals connecting users to other academic units on campus. Despite the narrow approach and findings of this study, Nielsen did indicate the potential that librarians are considering new ideas for services rather than relying on the convenient provision of electronically accessible materials.

Distance learning library resources and services offered by an academic library are unique to the institution. The types and levels of such provisions reflect the institutional need to provide seamless service to its specific learning community. In addition, library services must be responsive to the specific teaching, learning, and research needs in accordance with the institutional mission.

Integration of Library Resources and Services into Course Management Systems

Course management systems (CMSs), also called *learning management systems (LMS)* or *courseware*, are software applications that allow faculty to create and manage self-contained online environments for learning. Initially designed for and associated with distance learners, CMSs are also being used to supplement the traditional classroom environment. While there are numerous courseware packages available, both commercial and open-source, they all share a certain core set of basic features, including resource sharing, communication, and assessment tools (Shank & Dewald, 2003).

Course management systems provide students with hands-on opportunities to improve their proficiency in becoming technologically literate. Librarians instruct students in best-practice research methods for evaluating diverse sources of information. Together, these facets of education work to develop and enhance a user's information literacy skills. The American Library Association's Presidential Committee on Information Literacy defines *information literacy* as a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (American Library Association, 1989, para. 3).

Across higher education institutions, academic librarians are encouraged to integrate library resources and services into systems their students are using most. Considering that

today's students are increasing enrollment in online courseware environments, it makes sense to have curriculum and research support embedded in these locations. The professional literature indicated that researchers are in agreement regarding the nature of academic libraries and librarians inserting their presence and services into course management systems.

The library is a missing element in course management systems. Bell and Shank (2004a) described the failure to include the library in a CMS as depriving "faculty and students of a convenient access path to valuable library content and services" (p. 1). In discussing rationales pointing to the marginalization of the academic library, Bell and Shank (2004b) indicate "courseware systems allow faculty to create information silos that serve as gateways to all course-related information, including research sources that may or may not include the campus library" (p. 372). Buehler (2004) called attention to the fact that "courseware products are deficient overall in developing a built-in academic library component for student and faculty use" (p. 76). Gibbons (2005b) believes that even if learning is occurring within a virtual environment, such as a CMS, libraries need to be present at the point of learning.

Course management systems have been cited as avenues to offer library instruction, to help faculty develop better research assignments, and to provide higher quality class readings (Buehler, 2004; Shank & Dewald, 2003). Gibbons (2005b) argues that "course management systems should be viewed as another means for academic libraries to become more engaged in the learning and teaching missions of their institutions" (p. 12). Cohen (2002) asserts that the integration of the libraries' digital resources into a CMS is "essential for getting the maximum value from the institutional investments of both money and expertise" (p. 12). These notions are pedagogical in nature, as they do not refer to commercial gains of the CMS developer. The expertise of academic librarians sifting through vast amounts of electronic resources such as

digital books, e-journals, and research databases, results in high quality research material integrated directly into student's online courses rather than students relying on the open web to find adequate materials. Offering appropriate and relevant resources to students, making access to resource links more convenient, and the time and effort saved by faculty in developing research guides are additional recognizable benefits (Gibbons, 2005c; Kearly & Phillips, 2004). Shank and Dewald (2003) report that if libraries successfully establish a presence in courseware, the gain will be an increased relevance with students, and relationships and collaborative ties with faculty would be strengthened. For libraries to remain relevant in the online course environment, Dygert and Moeller (2007) asserts that librarians not only need to understand how CMSs are utilized on their campuses, but also generate awareness of library resources that can be integrated into the CMS.

Solis and Hampton (2009) presented a case study demonstrating the way the University of North Carolina (UNC) Libraries brought their resources into the campus CMS. Course-specific web pages were created and incorporated into online course sites to facilitate the use of the library and to promote a comprehensive view of library resources and services at the UNC at Chapel Hill. The study began in Spring 2006 with 10 course pages being utilized across one department. The study concluded in Spring 2008 with 100 course pages being utilized in over 30 departments. General findings of this study indicated overall student appreciation of course-specific web pages as they were not only directly related to course assignments, but also provided a new way to help students understand the libraries' resources and services.

Several authors (Dygert & Moeller, 2007; Gibbons, 2005a; Shank & Dewald, 2003) also expressed a concern regarding the challenges libraries faced with competing information providers if they didn't integrate themselves into the CMS. Gibbons (2005a) emphasized that in

order to avoid marginalization by Google, libraries “must go into the online-learning environment with offerings that fit into the students’ expectations and course context” (p. 5). Dygert and Moeller (2007) affirm, “publishers are developing course cartridges that compete with and/or duplicate library resources” (p. 306). Shank and Dewald (2003) state the claim that “commercial information distributors, who have already gained a foothold in some courseware environments, may successfully eclipse the library as the primary information provider” (p. 42).

Expanding the library beyond the walls of the physical building, allowing access to its resources and services independent of time or location, and enhancing students’ information literacy skills are clear reasons for integrating library resources and services into course management systems. One final, and crucial, benefit of integrating the library into the courseware domain is the simultaneous preservation and reinvention of the library’s symbolic place in higher academic institutions (Lawrence, 2006). Further research in this area is needed, however, to evaluate the overall integration process and to investigate whether or not integration is impacting student learning.

Collaboration Efforts with Faculty

After discussing the nature of library integration within a CMS, a shift in the literature was detected. The focus now resided in efforts to determine whether or not campus members are willing to collaborate to make library integration happen. Non-research materials such as discussion groups, conference presentations, and professional literature indicate that librarians have already adopted various methods for integrating resources and services into the campus curriculum. However, several research authors agree that partnering is essential to create optimal learning environments that benefit students and to successfully incorporate information

literacy; i.e., the ability of individuals to locate, evaluate and use information effectively, into online courses (Buehler, 2004; Jackson, 2007; Oldham & Skorina, 2009).

Jackson (2007) surveyed 171 librarians throughout the California State University System. The study's objective was to assess librarians' understanding of using the Blackboard learning management system as a teaching and learning tool for information literacy. Jackson's survey results revealed several barriers to collaboration and integration. Respondents indicated that faculty buy-in, cooperation, time, staffing, funding, and the technology learning curve were evidence of the lack of librarian involvement in online courses. Surprisingly, 47 of 56 (84%) respondents who completed their university's training session on the LMS reported infrequently or never collaborating with faculty to include information literacy.

Hightower, Rawl, and Schutt (2008) conducted a similar study at the Auburn University at Montgomery. Limiting their scope to a single university campus, the researchers used an online survey, follow-up interviews, and an examination of the library's server log to assess current faculty practices of delivering the library to students using WebCT. Of the 102 surveys distributed, only 29 faculty (28%) responded. Twenty-two of the 29 respondents did not integrate library resources. Seventy-seven percent (17 out of 22) of these non-integrators indicated a willingness to do so. Faculty argued that the librarians must be proactive in their efforts to encourage and educate faculty about their library and the ways in which the library's resources and services can be integrated into WebCT courses.

As use of course management systems spreads across higher education institutions, librarians find themselves questioning their roles in these educational venues. Today's academic librarians are no longer identified as "keepers of the books." Rather, they are identified as a multi-role educational player encompassing the responsibilities of "educator, information

specialist, instructional designer, and information technologist” (Hartsell-Gundy & Tumbleson, 2012, p. 53).

In order to truly be where their users are, and to manage the aforementioned multi-role position, it is essential for academic librarians to engage in high levels of collaboration between themselves and faculty members. Owens and Bozeman (2009) affirm “librarians cannot fulfill the mission of providing equivalent levels of services to online students without cooperation from the online faculty” (p. 33). A well-documented concept known as *embedded librarianship* has been a significant collaborative effort between these professional groups (Edwards, Kumar, & Ochoa, 2010; Kesselman & Watstein, 2009; York & Vance, 2009). Kesselman and Watstein (2009) describe embedded librarianship as “bringing the library and the librarian to the user” (p. 385) regardless of the user’s physical location.

By embedding a librarian into an online, graduate-level educational technology course, Edwards and Black (2012) were able to study the impact of the embedded librarian’s presence on student learning at The University of Florida. Focusing on four specific characteristics, self-efficacy related to information literacy skills, library skill performance, graduate level research measured by bibliographic citations, and personal reflections on the embedded librarian presence, Edwards and Black used pre- and post-tests, written artifacts, descriptive analyses of bibliographic citations, and online surveys in their case study. While the findings of this study revealed the efficacy of embedding librarians into online courses, the need for careful considerations in several areas, such as understanding course and learner needs, course curriculum, and design of appropriately related embedded content, were identified.

At The University of Rhode Island, Kinnie (2006), a humanities reference librarian, offered his services to faculty using asynchronous courses with assigned research projects. In

essence, Kinnie promoted himself and became embedded into several online courses. His involvement ranged from providing contact information, to posting just-in-time resources, to providing individual reference help. The outcome of Kinnie's efforts to bring the library into the online learning environment at his institution resulted in the following lessons learned:

“the more collaboration there is between a librarian and an instructor, the better the relationships with their students resulting in better research; providing appropriate material at the student's point of need is an effective way to reach distance students who cannot make it to a library; and librarian involvement at the institutional level legitimizes the library's role in instruction” (Kinnie, 2006, p. 3-4).

Kinnie's efforts influenced the notion that in order to retain visibility and viability as an instructional component in academic curriculums, librarians must be creative and proactive in securing involvement in these online learning environments.

The research experiences and concluding results from these studies demonstrated both the lack of and the willingness to forge collaborative relationships. Librarians have realized that through collaboration efforts with faculty members, the campus course management system is a valued vehicle for the delivery of library resources and services to distance learning students (Bell & Shank, 2007; Hightower, Rawl, & Schutt, 2008). Despite these institution-specific case studies, partnerships should be building across all higher education institutions. “Librarians, instructional technologists, faculty, and students should not plod onwards to isolation” (Oldham & Skorina, 2009, p. 637). Raraigh-Hopper (2009) affirms the importance in understanding “that any quality distance learning library services program will have a high level of cooperation occurring among those individuals providing the services; this is where the relationship between librarians and faculty needs to be recognized” (p. 74). Given the professional and

complementary expertise of these campus members, it would be obvious they partner to enrich the educational experiences of distance learners.

Library Websites and Web-Based Research Guides Serving Distance Learners

A crucial element to a library's success is its online web presence (Burke, 2013). As a gathering point for patrons to locate information, a library's web space provides an arena in which the library can "share its services and tell its story to the community it serves" (Burke, 2013, p. 155). In academia, a library's web space is a gateway towards meeting the informational and instructional needs of on-campus and off-campus communities of users. There is not a one-size-fits-all model for what a library's web site contains. Even though the design, content, and usability of academic library web sites vary, there may be common services and features included such as interaction with the library catalog, electronic resources, library databases, how-to guides or tutorials, virtual reference, and blogs.

In 2002, Adams and Cassner conducted a research study on member institutions of the Association of Research Libraries to identify the content and design of library web sites serving distance learners. Knowing that "distance students expect to remotely access multiple resources and services from their academic institution's library" (p. 3), Adams and Cassner specifically focused their study on libraries' distance education home pages. (Adams & Cassner, 2002). Selection of member institutions analyzed was based on two criteria: the institution is an academic library and the library web site has links to distance education services for library users. In total, 48 of 123 ARL member institutions' library web sites were studied in depth.

Adams and Cassner (2002) analyzed two aspects of data collection: "design characteristics of the distance education home page and content of the distance education and main library home pages as reflected by hyperlinks" (p. 6). Design elements were reflected by

the form and structure of the web site, whereas, content elements reflected the subjects or topics. After providing in-depth numerical results for design elements such as presence of a distance education home page (100%), presence of graphics (90%), and number of screen levels from home page to distance education page (range varied from 1 to 4), the researchers provided results for content elements such as contact information for library distance education services (83%), mission statement or explanation of services offered to distance students and/or distance faculty (87%), and specific library resources and services available to distance students. Resources and services available on the library's home pages included "electronic reference assistance (98%); interlibrary loan forms (96%); library instruction (96%); lists of subject specialist librarians (92%); guides to using the Internet (87%); guides to conducting library research (81%); list of reciprocal borrowing institutions (73%); and electronic reserves (71%)" (p. 9). Additionally, links to subject guides or pathfinders were found on 96% of ARL libraries with distance services (Adams & Cassner, 2002).

"Distance education home pages are a primary venue in reaching distance learners" (Adams & Cassner, 2002, p. 11). The researchers offered the following suggestions and strategies in conclusion: collaboration between librarians and web developers needs to happen in order to make distance education pages more accessible, or findable; services specific to distance faculty should be further developed; library terminology needs clarification for the non-traditional distance learner; and page content should be reviewed for inclusion of links useful to distance learners. Having these strategies in place could help to ensure navigation to resources and services available for distance learners.

A web site alone is not enough to assist patrons in finding the information they need. "Libraries must be focused on building and offering interactive services through the site;"

services that “engage, connect, and communicate with the community of users that it serves” (Burke, 2013, p. 155). One such service is that known as *library subject guides*. Library subject guides were initially called Pathfinders. Defined as “lists of recommended readings,” pathfinders were a static product “created to aid researchers in the initial stages of the research process” (Roberts & Hunter, 2011, p. 68). From the first Pathfinder documentation in the 1950s, to the advent of electronic research guides in the mid-1990s, the format and content of library guides has shifted over time. Today’s library subject guides are dynamic – easily created and instantly updated (Arvin, 2009; Gonzalez & Westbrook, 2010; McMullin & Hutton, 2010; Roberts & Hunter, 2011), responsive to changes in resources or curricula (Roberts & Hunter, 2011), interactive with social learning and Web 2.0 components (Roberts & Hunter, 2011; Robinson & Kim, 2010), and can be embedded or linked in a course management system, putting the resource “where the student is” (Gonzalez & Westbrook, 2010; McMullin & Hutton, 2010; Robinson & Kim, 2010) – and serve as a centralized collection of course-specific or subject-based resources for traditional and distance learners.

In 2012, Ghaphery and White examined two sets of research data, 99 American university ARL libraries’ web-based research guides and 198 survey responses from 188 libraries participating in professional discussion lists, to identify how libraries are currently implementing and managing web-based research guides. Their findings, 75 out of 99 (~ 76%) library websites visited, and 129 out of 188 (69%) libraries, reinforced a common theme found within the literature review, that “subject-based research guides are a core component of academic library web services” (Ghaphery & White, 2012, p. 22). As an always available, online content resource, library guides have the capability of reaching distance learners at their point of need (Grabowsky, 2013; McMullin & Hutton, 2010; Robinson & Kim, 2010).

Experiences and Perspectives Delivering Library Resources and Services at a Distance

A reality in today's academic libraries is "that both the on campus user and the distance user are all requesting the same information and usually in the same format" (Graham, 2009, p. 46). Literature has evidenced that when it comes to providing library resources and services, there is no longer a distinction between serving traditional students versus distance students (Burich, 2004; Graham, 2009). Listed below are a few representative examples of experiences and perspectives from academic librarians in their efforts to provide distance learning library services:

- efforts of "being real" (Coonin, Williams, & Steiner, 2011);
- despite being embedded in an online course there exists an issue of building rapport with students from a distance (Coltrain, 2014);
- understanding and identifying distance learners' needs (Holloway, 2011; Tang, 2009; Yang, 2005);
- identifying online teaching faculty and understanding their needs (Yang, 2005);
- not enough time to devote to distance learning library services due to multitude of responsibilities (Tang, 2009);
- rising service expectations (Li, 2013);
- those providing services are forced to be creative in outreach efforts; and
- staffing and financial considerations.

Academic libraries and librarians "cannot be all things to everybody" (Graham, 2009, p. 46), however, Gibbons (2007) believes "the Internet and Web cannot replace the academic library because, although technology can be a better information provider, it cannot substitute for the essential role of humans in the creation, transmission, and dissemination of knowledge" (p. 11).

Content Analysis Methodology

Since a quantitative content analysis will be utilized to examine ARL member institutions' websites and library guides in order to obtain descriptive information on distance learning library services, an overview of the content analysis methodology is in order. When defining content analysis, various forms of the definition can be discovered in current and past research literature (Berelson, 1971; Krippendorff, 2013; Neuendorf, 2002; Weber, 1985). Despite the diversity of words used to define content analysis, the definitions ultimately state the same notion, that is, content analysis is a systematic, replicable research technique whereby the content of existing written, audio, or visual communication materials are analyzed to draw forth valid inferences and conclusions about the contextual meanings of the text.

Content analysis has its roots in the study of mass communication in the 1950s and is a method that has wide applicability in academic research (McMillan, 2000; White & Marsh, 2006). "Researchers in many fields, including anthropology, library and information studies, management, political science, psychology, and sociology, have used content analysis" (White & Marsh, 2006, p. 23). This research method can be applied in quantitative, qualitative, and mixed modes of research frameworks. "Content analysis enables the analysis of data to be structured and may be used in both qualitative and quantitative studies" (Kim & Kuljis, 2010, p. 370). Content analysis employs a wide range of analytical techniques to describe trends, infer attitudes, understand patterns and arrange them into context. While quantitative content analysis involves specialized procedures that allow for future replication, the procedures can be adapted to suit specific needs of the research. The general process of content analysis consists of the following steps: formulate a research question and/or hypotheses, select a research sample, define

categories, code the content and check for reliability and validity, and analyze and interpret the collected data (Krippendorff, 2013; McMillan, 2000; White & Marsh, 2006).

Advantages

Krippendorff (2013) identifies four advantages of content analysis:

1. *Content analysis is an unobtrusive, nonreactive technique.* The focus of content analysis is on the details of the communication content and not on how the researcher reacts to those details. As the researcher asks questions of the communication content, researcher bias will be limited.
2. *Content analysis can handle unstructured matter as data.* In contrast to the structured nature of surveys or interviews, where predefined choices are readily available for respondents, content analysis allows for diversity in format, purpose, and conception of the data.
3. *Content analysis is context sensitive.* The researcher acknowledges the data as text in relation to its meaning, source, and pre-conceived personal contexts.
4. *Content analysis can cope with large volumes of data.* Quantification by coding permits the reduction of such large amounts of data into manageable components.

Disadvantages

No research method is without its disadvantages. Here, the acknowledgement of disadvantages related to content analysis are identified:

1. Content analytic studies are often times described as being devoid of a theoretical basis. Content analysts may wrongly associate frequency of content with significance of content. Therefore, the research design must consider whether or not there is a relationship with frequency of occurrence.

2. Content analysis *alone* cannot give the answers. To lessen this limitation, content analysis should be combined with additional research methods that are more appropriate for measuring specific aspects of interest, for example, surveys, interviews, or focus groups.
3. Content analysis cannot explain *why* the message is as it is or what motivating factors were at play when the content was developed.
4. When content analysis is applied to web-based content, the changing content can be problematic. Some researchers claim this problem can be overcome by rapid data collection and downloading of website content. (Kim & Kuljis, 2010)

Assumptions

There are three general assumptions that can be applied to all studies of content analysis:

1. “Content analysis assumes that inferences about the relationship between intent and content or between content and effect can validly be made, or the actual relationships established” (Berelson, 1971, p. 18). This is an assumption that knowledge about the content can support interpretations.
2. “Content analysis assumes that study of the manifest content is meaningful” (Berelson, 1971, p. 19). This assumption indicates that the researchers’ analysis of content evokes the same corresponding meaning as intended by the communicator or as understood by the audience.
3. “Content analysis assumes that the quantitative description of communication content is meaningful” (Berelson, 1971, p. 20). Here, the assumption indicates that the words mentioned most frequently are the words reflecting the greatest concerns and have the most meaning.

The content analysis method has been chosen for this study to answer the first research question. The flexible applicability of the method, its advantages, and to some degree, its disadvantages make content analysis an appropriate methodological choice.

Interview Methodology

The qualitative research interview is a conversation with a purpose to identify behaviors, attitudes, and experiences that cannot be directly observed; to find out “what is in and on someone else’s mind” (Hatch, 2002; Patton, 2015, p. 426). Our role as researchers in qualitative interviewing is to “learn something about what is beyond ourselves and our preexisting assumptions” (Josselson, 2013). In describing the relational approach to interviewing, Josselson (2013) considers the interview itself as a “shared product between *what* the interviewer and interviewee talk about and *how* they talk together” (p. 1), a “meeting of two minds” (p. 1), and a “product of evolving constructed interpretation” (p. 2).

Hatch (2002) classifies qualitative interviews into three basic types: informal, formal, and standardized. Informal interviews are considered unstructured as they are conversations occurring at the research site; formal interviews, often times called structured, semi-structured, or in-depth, are planned conversations, outside the research site, set up for the purpose of gathering information from an informant; and standardized interviews are special formal interviews where questions are presented in the same order and form to a number of different informants (Hatch, 2002). At its core, qualitative interviewing furnishes a “framework within which respondents can express *their own* understandings in their own terms” (Patton, 2015, p. 442).

The research design in the majority of literature reviewed consisted of surveying distance librarians, library administrators, faculty, and students. However, in order to draw

methodological reasoning for my research study, I have identified, and describe below, two studies that explicitly indicate the use of interviews with academic librarians at member institutions belonging to the ARL. This research study only addresses the experiences, perceptions, challenges, and opportunities of academic librarians in delivering distance learning library resources and services and does not include other stakeholders, such as library administrators, faculty, or students, as their experiences open the path for future research studies. The combination of a pre-determined set of open-ended questions with an opportunity for researcher exploration into particular themes or new ideas brought forth the decision to conduct semi-structured interviews with ARL academic librarians to address my second research question. Full details on interview procedures and corresponding data analysis are addressed in the following two chapters.

Yang (2005) conducted a standardized, formal interview by using a pre-designed questionnaire during phone conversations with 35 distance education librarians at U.S. ARL libraries. Yang's research purpose was "to determine the extent to which U.S. ARL libraries are providing services to their distance education library patrons and whether each library has a designated librarian in charge of services to distance education students" (Yang, 2005, p. 92). At the time of his research, Yang discovered that 38 out of 103 (36.9%) U.S. ARL libraries do not provide services to distance education learners either due to the lack of a distance program on campus, or the infancy of a distance program on campus that had not yet warranted library services. Of the 62 remaining libraries that do offer library services to distance education learners, 13 (21.0%) libraries have a full-time librarian dedicated to distance education services and 22 (35.5%) libraries have a librarian who spends part of his/her time on library distance services. In addition to collecting numerical data from the questionnaire, Yang discussed with

the distance education librarians their perceived challenges in delivering services to their patrons. Perceived challenges included frustrations with not knowing who their registered distance learners or educators were, the inability to promote library resources and services, lack of training on issues such as copyright and electronic reserves, and not having enough time to devote to distance education library services (Yang, 2005). This first-hand insight into participant's perceptions is what Hatch identifies as the "strength of interviews" (Hatch, 2002, p. 97).

Through a constructivist lens, Jurkowski (2003) investigated the instructional relationship between distance learner and librarian. Jurkowski's research design entailed the content analysis of services offered on a library's website, personal interviews with librarians, and surveys of distance education students. Seventeen library websites were selected based on the amount of distance education offered to students by the institution. Four librarians who contributed to the development of their institutions' library website were selected for personal interviews. And at three institutions where librarians were chosen for interviews, six faculty members distributed surveys to students in their distance education courses. The survey was used to provide learner-based perspectives and satisfaction levels students had with their library web sites and overall services for distance learners.

In order to provide variation and explanation for his quantitative content analysis findings, Jurkowski conducted four phone interviews with librarians from institutions with low, medium, and high levels of distance library service elements. Using pre-determined questions as an interview guide, the interviews were open for discussion on any topic. By asking the librarians to talk freely, Jurkowski was able to listen to first-hand accounts of experiences each librarian faced in their day-to-day operations.

Jurkowski's numerical results indicated that the size of the institution, not the degree to which distance education is provided, had the strongest correlation to the number of library services offered to distance education students. His correlational findings suggest that "just because an institution offers distance education courses and degrees does not mean that the library has necessarily increased or improved their services to meet distance learner needs" (Jurkowski, 2003, p. 88). Evidence for his thematic findings emerged from conversations with the academic librarians. Resulting themes included the following:

- libraries are arranged and staffed, often understaffed, to support distance education students in a variety of ways;
- distance education students should have equivalent library service as those on campus;
- the librarians felt that they were meeting the needs of the distance education students in providing adequate library services;
- distance students need to be taught what resources and services are available and how to use them, prompting proactive initiatives by the librarians;
- the determination of services is made in a variety of ways, for example, the collection of user feedback via surveys and focus groups; and
- problems still exist, such as costs associated with mailing entire books, copyright of video resources, adjunct faculty, conflicts with administrators and/or other departments on campus.

To summarize, the interviews in Yang and Jurkowski's studies highlighted experiences and perceptions of librarians that could not otherwise be obtained from static numerical data. In each case, librarians expressed their need and want to do more in offering services to distance

students. Interviews such as these offer valuable input in a research study and their resulting outcomes prove their worth.

The growth of distance education over the past ten years has significantly contributed to how academic libraries are reshaping their resources and services to meet the needs of online learners. While delivery of resource materials, both physically and electronically, remains a significant source of service provisions; there is evidence to an increasing prevalence of online instruction and guidance, engagement in course delivery software, and collaboration efforts for handling services to distance learners and educators. Distance library services have evolved and adapted in conjunction with the growth of online education. This literature review has demonstrated how academic libraries are committed to providing resources and services beyond the walls of the physical entity to all users of the library regardless of their location.

Chapter Three

Methods and Procedures

In this study I examined distance learning library resources and services as provided by member institutions belonging to the Association of Research Libraries (ARL). The goals of this study were to (a) identify the types of distance learning library resources and services and (b) to gain insight into the experiences of Association of Research Libraries' library personnel in delivering library resources and services to their distance learning library patrons. The following research questions guided my investigation:

1. What library resources and services do Association of Research Libraries (ARL) member institutions offer to their distance learning library patrons?
2. What are the perceptions, challenges, and opportunities experienced by academic librarians at Association of Research Libraries (ARL) member institutions in delivering library resources and services to their distance learning library patrons?

Methods and procedures used to conduct the study, including a description of the research design, sources of data, data collection procedures, and methods of data analysis are outlined within this chapter. In addition, details on how credibility and trustworthiness were ensured are explained.

Research Design

The methods used in this research study involved two different approaches: content analysis of websites and library guides and semi-structured interviews with academic librarians. Content analysis is applicable to many areas of research inquiry due to its flexibility in examining any written, verbal, or visual communication content in order to generate findings and infer context (Krippendorff, 2013; McMillan, 2000; White & Marsh, 2006). The interview

method is a conversation with a purpose to identify behaviors, attitudes, and experiences that cannot be directly observed (Patton, 2015; Ryan, Coughlan, & Cronin, 2009; Schultze & Avital, 2011). The decision to utilize these two research methods was based on the notion that they are the most appropriate methods to address the purpose of my study and would adequately provide answers to my research questions.

Construct and Population of Interest

The primary construct of interest for this research study is distance learning library resources and services as provided by select member institutions of the Association of Research Libraries. The 124 member institutions (<http://www.arl.org/membership/list-of-arl-members>) of the Association of Research Libraries were selected as the population of interest. On 7 January 2016, the Association of Research Libraries' membership list was retrieved. ARL institutions were organized by geographic region in order to manage the data collection and analysis phases in a logical fashion (ARL Statistics, 2016).

Procedures

Institutional Review Board Compliance

This research study complies with all ethical guidelines as regulated by the Institutional Review Board (IRB) at The University of Tennessee, Knoxville, Office of Research and Engagement. The submission request for IRB approval was conducted in two phases. The first phase requested approval to collect and analyze data contained within distance learning websites and library guides at academic libraries belonging to the Association of Research Libraries (ARL). In the second phase, approval was requested to invite and interview academic librarians at select ARL institutions.

Documentation including ARL membership list, participant informed consent forms,

email invitations, an interview guide, and the assisting transcriber's pledge of confidentiality are on file with the Institutional Review Board (IRB) at The University of Tennessee, Knoxville, Office of Research and Engagement. Full IRB approval was granted for both submission request phases. After proper IRB approval was obtained for this research study, the process of collecting research data for analysis began. Both phases of data collection were entered with the understanding that additional websites and library subject guides may be examined and additional interviews may be conducted if the results warranted more data collection.

Content Analysis

Content analysis is a scholarly methodology used to analyze communication messages found within texts, visuals, and sounds (Krippendorff, 2013). The purpose of content analysis is to learn about the meanings contained within the communication messages. Therefore, the first procedural phase of data collection and review consisted of a quantitative content analysis of select ARL member institution's distance learning websites and/or library subject guides. Examining websites and library guides led to the identification and quantification of the types of resources and services offered by ARL member institutions to their distance learning community. My content analysis process followed and relied upon the steps outlined by Krippendorff (2013):

1. Search for and collect suitable data for analysis.
2. Define units of analysis.
3. Develop coding categories and reduce data.
4. Find relationships, i.e., identify noteworthy and significant themes and/or patterns among the data, and make inferences.
5. Interpret and present findings.

Collect Suitable Data

As this research study focused only on academic library services to distance learners and educators, it was necessary to establish specific selection criteria as membership in the ARL consists of academic, public, national, and special research libraries. Knowing this, it was obvious that the first criteria for selection must be that ARL member institutions are academic libraries. Similar to the analysis of ARL academic library websites for distance learners conducted by Adams and Cassner (2002), confirmation was needed regarding whether or not ARL member institution library websites had either or both a webpage or library guide dedicated to distance learning resources and services for distance students and/or distance faculty, thereby establishing the second and third selection criteria. More concisely, the selection criteria of ARL member institutions for data inclusion are as follows: (a) the ARL member institution must be an academic library, (b) the ARL member institution library website has a webpage dedicated to distance learning resources and services for distance students and/or distance faculty, and/or (c) the ARL member institution library website has a library guide dedicated to distance learning resources and services for distance students and/or distance faculty.

Data collection began by visiting each of the 124 ARL institution's library websites, as provided in the membership list, to determine whether or not the institution was an academic library. Ten ARL member institutions are not considered academic libraries and therefore were removed from the data set: Boston Public Library, Center for Research Libraries, Library of Congress, National Agricultural Library, National Archives and Records Administration, National Library of Medicine, National Research Council Canada (NRCC), New York Public Library, New York State Library, and Smithsonian Libraries. Of the remaining 114 institutions, each library website was again reviewed to determine whether or not a website and/or library

guide dedicated to distance learning library resources and services existed. Forty-nine institutions did not meet this criterion and were removed from inclusion. Overall, 65 ARL member institutions met the selection criteria for inclusion and became the data sample. Arranged by geographic regions, the ARL member institutions selected for analysis and their respective website and/or library guide web addresses can be found in Tables 1 through 5.

Units of Analysis

Once the sources of data were finalized, the next design step was to decide what exactly will be analyzed. The ‘what’ that will be analyzed is known as the *units of analysis*. “The unit of analysis determines how the overall discussion is to be broken down into manageable items for subsequent coding according to the analysis categories” (De Wever, Schellens, Valcke, & Van Keer, 2006, p. 24). For this content analysis, the main unit of analysis, also known as the coding unit, was each distance learning library resource or service offered by the institutions in the data set.

I visited each institution’s website and/or library guide to identify and record the units of analysis as provided on the specific page. If a resource or service was not visible on the website or library guide page, it was not counted during coding. In doing so, I unknowingly could have limited the counting of resources and services offered as part of higher education accreditation standards.

Knowing that content contained on websites and library guides may change on any given day, before recording began, for each website and/or library guide that was examined, contents were first saved as an image, in PNG format, using the Google Chrome browser extension *Save to Google Drive* (version 2.1.1). This Internet browser extension allowed me to save the entire contents of the web page as a screen capture directly into my university-provided Google Drive

Table 1

ARL Libraries by Geographic Region: Northeast

Region	ARL University Libraries	URL	Resource
New England	Boston University Libraries	http://www.bu.edu/library/music/services/dist-ed	Webpage
	University of Connecticut Libraries	https://library.law.uconn.edu/insurance-law-research/distance-learning-research	Webpage
	New York University Libraries	http://guides.nyu.edu/online	Webpage
Middle Atlantic	Pennsylvania State University Libraries	https://www.libraries.psu.edu/psul/wc.html http://psu.libguides.com/MOOCs/Educators http://psu.libguides.com/MOOCs/Leaners	Webpage Library Guide Library Guide
	Rutgers University Libraries	http://www.libraries.rutgers.edu/services_off-campus_users http://libguides.rutgers.edu/onlinelearning http://libguides.rutgers.edu/intro	Webpage Library Guide Library Guide
	University at Albany, SUNY, Libraries	http://library.albany.edu/services/distance/	Webpage
	University at Buffalo, SUNY, Libraries	http://libweb1.lib.buffalo.edu/help/help.asp?ID1=460	Webpage
	Stony Brook University, SUNY, Libraries	http://library.stonybrook.edu/services/access-services/distance-learning-students/	Webpage
	Syracuse University Libraries	http://library.syr.edu/services/work_off_campus/Distance_Learning/index.php	Webpage

Table 2

ARL Libraries by Geographic Region: North Central

Region	ARL University Libraries	URL	Resource
East North Central	Case Western Reserve University Libraries	http://researchguides.case.edu/onlinestudents	Library Guide
	Indiana University Libraries Bloomington	https://libraries.indiana.edu/services/online-learning	Webpage
		https://libraries.indiana.edu/distance-education-document-and-book-delivery	Webpage
	Kent State University Libraries	http://libguides.library.kent.edu/dl	Library Guide
		http://libguides.library.kent.edu/DistanceEdMusic	Library Guide
	Michigan State University Libraries	http://www.lib.msu.edu/dls/	Webpage
		http://www.lib.msu.edu/dls/onlineoffcampus/	Webpage
	Northwestern University Library	http://www.library.northwestern.edu/services/distance-education-study-abroad	Webpage
	Ohio University Libraries	https://www.library.ohiou.edu/services/distance-learning-resources/	Webpage
	Ohio State University Libraries	https://library.osu.edu/account/student-services/de/	Webpage
	Southern Illinois University Carbondale Library	http://www.lib.siu.edu/distance-learning	Webpage
		http://www.lib.siu.edu/distance-learning-services	Library Guide
		http://libguides.lib.siu.edu/content.php?pid=177600	Library Guide
	University of Cincinnati Libraries	http://guides.libraries.uc.edu/distancelearners	Library Guide
		http://guides.libraries.uc.edu/clermont-distancelearning	Library Guide
		http://guides.libraries.uc.edu/hsdl	Library Guide
	University of Illinois at Chicago Library	http://researchguides.uic.edu/distance	Library Guide
	University of Illinois at Urbana-Champaign Library	http://guides.library.illinois.edu/distance_learners/	Library Guide
	University of Wisconsin–Madison Libraries	http://www.library.wisc.edu/services/distance-services/	Webpage

Table 2 cont.

Region	ARL University Libraries	URL	Resource
West North Central	Iowa State University Library	http://instr.iastate.libguides.com/c.php?g=49513	Library Guide
	University of Iowa Libraries	http://guides.lib.uiowa.edu/distance	Library Guide
	University of Kansas Libraries	http://guides.lib.ku.edu/online_ku	Library Guide
		http://guides.lib.ku.edu/online	Library Guide
		http://guides.lib.ku.edu/distancepharmchem	Library Guide
	University of Minnesota Libraries	https://www.lib.umn.edu/faq/190	Webpage
	University of Missouri–Columbia Libraries	http://libraryguides.missouri.edu/distance	Library Guide
	University of Nebraska–Lincoln Libraries	http://libraries.unl.edu/disted	Webpage

Table 3

ARL Libraries by Geographic Region: South

Region	ARL University Libraries	URL	Resource
South Atlantic	Florida State University Libraries	https://www.lib.fsu.edu/department/distance-learning	Webpage
		https://www.lib.fsu.edu/distance-learning/faculty	Webpage
		http://guides.lib.fsu.edu/distancefaculty	Library Guide
		http://guides.lib.fsu.edu/distancelearners	Library Guide
	George Washington University Library	http://himmelfarb.gwu.edu/services/de.cfm	Webpage
	Georgetown University Library	http://guides.library.georgetown.edu/online	Library Guide
	Georgia Institute of Technology Library	http://www.library.gatech.edu/services/distance.php	Webpage
	North Carolina State University Libraries	http://www.lib.ncsu.edu/distance	Webpage
		http://www.lib.ncsu.edu/distance/faculty	Webpage
	University of Delaware Library	http://guides.lib.udel.edu/distanceed	Library Guide
	University of Florida Libraries	http://guides.uflib.ufl.edu/distancelearners	Library Guide
	University of Georgia Libraries	http://www.libs.uga.edu/ref/dl/index.html	Webpage
		http://guides.libs.uga.edu/c.php?g=349758	Library Guide
		http://guides.libs.uga.edu/c.php?g=349720	Library Guide
	University of North Carolina at Chapel Hill Libraries	http://library.unc.edu/services/distance-education/	Webpage
	University of South Carolina Libraries	http://library.sc.edu/p/Services/AtaDistance	Webpage
		http://library.sc.edu/p/Services/AtaDistance/Faculty	Webpage
	University of Virginia Library	https://www.library.virginia.edu/services/ils/scps-distance-education-delivery/	Webpage
	Virginia Tech Libraries	http://www.lib.vt.edu/info/distance.html	Webpage

Table 3 cont.

Region	ARL University Libraries	URL	Resource
East South Central	Auburn University Libraries	http://libguides.auburn.edu/distanceeducation	Library Guide
	University of Alabama Libraries	http://guides.lib.ua.edu/distance_learning	Library Guide
	University of Kentucky Libraries	http://libraries.uky.edu/DLLS http://www.uky.edu/DistanceLearning/current/DLLS/overview.html	Webpage Webpage
	University of Louisville Libraries	http://louisville.edu/library/ekstrom/research/distance/services	Webpage
	University of Tennessee, Knoxville, Libraries	https://www.lib.utk.edu/info/distance-ed/	Webpage
West South Central	Louisiana State University Libraries	http://www.lib.lsu.edu/services/distance	Webpage
	Texas A&M University Libraries	http://guides.library.tamu.edu/content.php?pid=377786	Library Guide
	Texas Tech University Libraries	http://www.library.ttu.edu/help/dis_learn.php	Webpage
	University of Houston Libraries	http://info.lib.uh.edu/services/faculty-and-graduate-students/support-distance-education-de-courses	Webpage
	University of Oklahoma Libraries	https://libraries.ou.edu/node/3919 https://libraries.ou.edu/distanceservices	Webpage Webpage
	University of Texas Libraries	http://wiki.lib.utexas.edu/hdi/pmwiki.php/Main/GetItemsIfImADistanceLearner	Webpage

Table 4

ARL Libraries by Geographic Region: West

Region	ARL University Libraries	URL	Resource
Mountain	Arizona State University Libraries	https://lib.asu.edu/services/online-students http://libguides.asu.edu/online	Webpage Library Guide
	Colorado State University Libraries	http://libguides.colostate.edu/distance	Library Guide
	University of Arizona Libraries	http://new.library.arizona.edu/online	Webpage
	University of Utah Library	http://campusguides.lib.utah.edu/distanceed	Library Guide
		http://campusguides.lib.utah.edu/distance_ed	Library Guide
Pacific	University of Hawai'i at Mānoa Library	http://library.manoa.hawaii.edu/services/instruction/distance.php	Webpage
		http://guides.library.manoa.hawaii.edu/education?p=686409	Library Guide
		http://guides.library.uhh.hawaii.edu/distance	Library Guide
	University of Oregon Libraries	https://library.uoregon.edu/distanceeducation/index.html	Webpage
	University of Southern California Libraries	https://libraries.usc.edu/faculty-students/distance-learners http://libguides.usc.edu/distancelearning	Webpage Library Guide
	Washington State University Libraries	http://libguides.libraries.wsu.edu/global	Library Guide

Table 5

ARL Libraries by Geographic Region: Canada

Region	ARL University Libraries	URL	Resource
Canada	Bibliothèque de l'Université Laval	http://www.bibl.ulaval.ca/vous-etes/etudiant-a-distance	Webpage
	University of Alberta Libraries	https://www.library.ualberta.ca/services/distance-students	Webpage
	University of British Columbia Library	http://guides.library.ubc.ca/distance-students	Library Guide
	University of Calgary - Libraries and Cultural Resources	http://libguides.ucalgary.ca/distanced	Library Guide
	University of Ottawa Library	http://biblio.uottawa.ca/en/services/distance-services	Webpage
	University of Saskatchewan Library	http://library.usask.ca/offcampus/ http://libguides.usask.ca/EducationDDLS	Webpage Library Guide
	University of Waterloo Library	https://uwaterloo.ca/library/services/library-services-co-op-students-work-term-and-distance	Webpage

online account. Second, the contents of the websites and/or library guides were saved as a complete web file on an external jump drive. These files are in standard web and HTML format. By creating these snapshots of web-based content, the researcher ensured a fixed, visual representation of the content at a specific point in time.

Two document files were created using Microsoft Word - one for the website units of analysis and one for the library guide units of analysis. For every website and library guide visited, the units of analysis were identified and manually recorded in their respective document files. Additionally, the date of visit and time spent on data collection were recorded. Time spent reviewing units of analysis on websites ranged from 2 – 22 minutes and time spent reviewing units of analysis on library guides ranged from 3 – 21 minutes.

Coding Categories

“Content analysis stands or falls by its categories. Since the categories contain the substance of the investigation, a content analysis can be no better than its system of categories.” (Berelson, 1971, p. 147). Berelson also indicates that productive studies contained clearly formulated and well adapted categories in relation to the research problem and the content. The literature review provided some categorical ideas to think about and the units of analysis recording process provided additional insights. There is no single set of categories to be developed and applied in content analysis, therefore, coding categories for this content analysis were developed inductively, that is, derived from the data, and recorded.

Throughout the process of reviewing the units of analysis, the following three primary requirements in the inductive development of categories were adhered to:

1. *Tailored* – Categories must be accurately tailored to fit the needs of the study so as to provide the answers to the first research question asked. The need of this research study

was to identify what library resources and services are being offered to distance learners and educators.

2. *Exhaustive* – When there is a category in which to place every relevant item of content the categories are considered exhaustive. Some grouping of categories is necessary, but grouping must be logical and defensible. A ‘Miscellaneous’ category will be used to avoid fitting an item into a category where it rightfully does not belong, as this would inject error into the findings.
3. *Mutually exclusive* – Categories are considered mutually exclusive if there is one and only one proper place to put each item. Every subject category must be completely and thoroughly defined indicating what type of material is and is not to be included under a particular heading. When conducting the analysis, it may be necessary to expand the categorical definitions to account for unanticipated findings.

From the unit of analysis recordings, the types of distance library resources and services provided were first categorized separately; one list for the websites and one list for the library guides. Next, the two lists of categories were combined. Each category was reviewed for similarity and duplication. This first review generated a total of 46 categories. In a second review, several categories were refined and broken down, or reduced, into subcategories. For example, ‘Articles, Books, eBooks, Journals, eJournals, Multimedia,’ each initially an individual category, were rolled into an all-inclusive ‘Materials’ category. The second review reduced the categories to 24.

Tally results for each categorical offering, indicated by a “1” if offered, and a “0” if not offered, were then compiled, per institution, on an electronic coding sheet using Microsoft Excel. As the essence of a library is the offering of materials, it was expected that resources such as

books and audio-visual materials were offered at each institution. Therefore, each institution was coded as '1' under the 'Materials' category.

For those institutions having branch libraries, each with their own website and/or library guide related to distance learning library resources and services, or institutions with both a website and library guide, tally results were marked accordingly and then combined to count as one institution's overall offerings. As an example, The University of Cincinnati Libraries has 16 branch libraries on its campus. Two of the 16 branch libraries, Clermont College Library and Harrison Health Sciences Library, had a website dedicated to distance learning library services for their specific distance learning community. Resources and services offered at each library, three in this example, were marked on the coding sheet respectively, and then combined to reflect 'The University of Cincinnati Libraries' as a whole institutional unit.

This reduction removed any chance of inflated calculations for the number of resources or services being offered at a specific institution. There were 13 instances where reduction occurred. The coding sheet was left open for modification throughout the content analysis process in case any website or library guide had to be re-reviewed.

A third, and final, review of the categories was conducted after the results were tabulated. Additional category refinements were made after questions arose from the coding of services. As an example, the researcher questioned whether or not 'Book Loan' and 'Interlibrary Loan' should be joined with 'Document Delivery.' It was decided that all three categories dealt with the delivery of library materials, and as such, one new category, 'Material Delivery' was created. The finalized list of 18 content analysis categories, along with their descriptions, is provided in Table 6.

Table 6

Content Analysis: Finalized Categories with Descriptions

Category	Description
Ask a Librarian	Research and reference assistance via Chat/IM, Email (address and/or online form), In-person, Mailing Address, Phone (local and/or toll-free number), Schedule Consult/Appointment, Social Media, Text Message
Course Management System Support	Resources for developing and/or supporting massive open online courses; Instruction on linking library resources directly into a CMS course site
Copyright Resources	Fair Use; TEACH Act
Course Reserves/Electronic Reserves	Materials housed separately from library collection pertaining to a specific course
FAQs	Frequently asked questions
For Faculty	Assistance designing and testing library assignments; Creating class-related bibliographies; Instructional sessions on library research strategies, critical thinking skills, and information literacy; Purchase requests for library materials; Scholarly and Open Access publishing
General Information	Getting started; Library account information; Library website as gateway to resources; Register for online distance services; Welcome message: video or text
Information Ethics	Academic Integrity; Citing Sources: Generators (<i>BibMe</i> , <i>EasyBib</i>), Style Guides, Management Tools (<i>RefWorks</i> , <i>Endnote</i> , <i>Zotero</i>); Plagiarism: Academic writing
Materials	Library materials for use via Catalog, Google, or WorldCat: Databases/Indexes, Books/eBooks, Articles/Journals/eJournals, Multimedia - includes images, photographs, videos, films, music, audio, streaming media; Online reference collections
Material Delivery	Delivery of library materials via book loans, document delivery, and/or interlibrary loan
Miscellaneous	Content not directly provided by the academic library
Proctoring Exams	Online exam proctoring services
Research Guides	Course Guides; Subject Guides
Research Process	Services to assist with the academic research process including evaluating resources; instruction on library vs. web research; instruction on scholarly vs. peer review vs. public articles; organizing research, etc.
Subject Librarians	Contact information on subject librarians

Table 6 cont.

Category	Description
Technical Assistance	Software ordering; Off-campus access; BrowZine mobile app; Browser plugins: <i>Google Scholar</i> , <i>LibX</i>
Tutorials	Lynda.com; Text based; Video: How-Tos, How Do I?
Workshops	Demonstrations; Orientations; Training Sessions

Finding Relationships and Making Inferences

The main objective in conducting content analysis is to transform large quantities of information into a format that is useful for analysis. This transformation step in the content analysis process involved: (a) summarizing the coded data, (b) discovering patterns and relationships within the data, and (c) relating the results obtained from other methods or assessing the validity of the analysis. To relate results and assess validity, I reviewed data from my two research methods, content analysis and interviewing, in tandem.

Present Findings

In Chapter Four of this dissertation, the findings report, I explain the scope and nature of my work; that is, what was done, why it was done, and why the results provide a sound basis for conclusions and recommendations. Additionally, the content analysis items to be presented in the findings are the types and frequencies of library resources and services provided to distance learners and educators as found on the ARL member institutions' websites and/or library guides.

Semi-Structured Interviews

Across diverse academic disciplines, the interview persists as a means to gain insight into a person's experiences and how they interpret them through conversational interaction (Doody & Noonan, 2013; Ryan et al., 2009; Schultze & Avital, 2011; Turner, 2010). Using suggestions offered by Doody & Noonan, Ryan et al., and Turner as guidance, what follows is a

summarization of procedures I used for conducting the interviews. My interview procedures consist of three steps: preparing, doing, and processing.

The first step in preparing the interview is the identification of which kind of interview to conduct. After reviewing examples in the literature and reflecting on how best to answer my second research question, I decided to use a semi-structured interview format, asking open-ended and unrestricted questions to reveal the experiences, perceptions, challenges, and opportunities academic librarians at ARL member institutions have in delivering distance learning library services to their distance learning library patrons. By design, semi-structured interviews are open-ended and un-prescribed. However, it is the unstructured *and* bounded nature of this approach that allowed me to investigate the wholeness of the academic librarians' experience in relation to the various aspects of delivering distance learning library services.

Second, the decision on who to interview was made. In order to answer the second research question, academic librarians at member institutions belonging to the Association of Research Libraries were interviewed. Selection of potential interviewees was based upon the findings generated from the content analysis of websites and library guides. Specifically, academic librarians at institutions delivering the lowest and highest numbers of distance learning resources and services were targeted for selection.

Before selection sampling could occur, the content analysis coding data was exported from Microsoft Excel and imported into the IBM SPSS Statistics (version 23) statistical analysis package for manipulation and analysis. Frequency counts of distance learning library resources and services offered by the number of institutions were calculated and are displayed in Figure 1.

To determine how interviewees would be selected, it was necessary to first compute descriptive statistics on the content analysis data ($N = 65$). The average number of distance

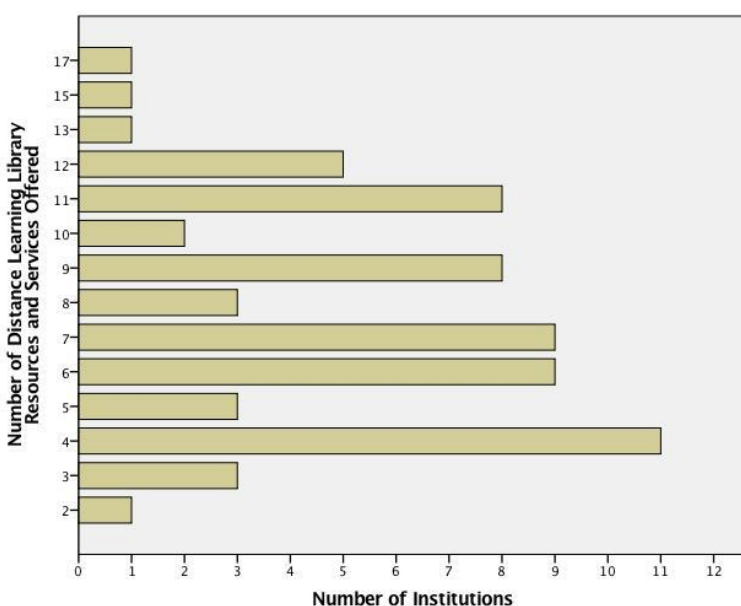


Figure 1. Distance learning library resources and services frequency counts.

learning library resources and services offered at the 65 ARL institutions was 7.63 ($SD = 3.24$).

Based on these results, ARL member institutions were then clustered into three homogenous subgroups. The first subgroup consisted of institutions offering the lowest number; that is, institutions one standard deviation below the mean, less than 5 resources and services. The second subgroup consisted of institutions offering the middle range, between, and including 5 and 10 resources and services. The third subgroup consisted of institutions offering the highest number; that is, institutions one standard deviation above the mean, more than 10 resources and services.

Once the institutions were arranged by subgroups, a stratified sampling strategy was utilized in IBM SPSS Statistics (version 23) to select typical cases from both the low group and the high group. This method of probability sampling ensured that each institution in the two strata subgroups had an equal chance of being selected. I chose to combine this sampling strategy with the typical case sampling strategy in order to achieve a desired sample that

appropriately met the purpose of my study. Typical case sampling “involves selecting and studying several cases that are average to understand, illustrate, and highlight what is typical and normal” (Patton, 2015, p. 284). The purpose of typical case sampling is to provide illustrative, not definitive, examples in regards to what is “typical to those unfamiliar with the setting,” i.e., distance learning library services, and “not to make generalized statements about the experiences of all participants” (Patton, 2015, p. 284). The combination of these two approaches gave me the opportunity to provide rich descriptions of the academic librarians’ experiences and perspectives under study.

The third preparation step consisted of two parts: (a) contacting and confirming potential participants, and (b) selecting proper interview equipment. An initial invitation (Appendix A) to participate was delivered via email to the identified library personnel at each of the 31 institutions in the low and high groups. It was assumed that these personnel have the knowledge and understanding to actively participate in the interview. Contact information for appropriate personnel was gathered from the institution’s library websites. While only six librarians volunteered and agreed to participate, this phase of data collection was entered with the understanding that additional interviews would have been conducted if the results warranted more data collection. Upon agreeing to partake in the research study, I then obtained participant’s consent. Potential participants were asked to read and agree to the *Participant Information and Consent Form* (Appendix B). This form described the purpose of the research, how the study was to be conducted, and provided researcher contact information. Participants were informed of the voluntary nature of the study and their right to withdraw at any time without consequence. Based on the participant’s availability schedule, formal interview date and time arrangements were established during March 2016 and April 2016. Interviews were

conducted in real-time, via Zoom, a high quality video and audio conferencing application offered by The University of Tennessee, Knoxville, Office of Information Technology. Zoom was selected based on ease of use, zero-cost, multi-platform accessibility, MP4 recording ability, and graduate student support services.

Developing questions was the final interview preparation step. An interview guide (Appendix C) was used to ask specific questions of all participants. My request to adapt questions from Jurkowski's (2003) interview guide along with his permission can be found in Appendix D. I followed the questions on this guide in a particular order, however, I allowed for unanticipated responses and accordingly, I shifted my focus to "permit the exploration of spontaneous issues raised by the interviewee" (Ryan, et al., 2009, p. 310). The length of each interview ranged from 40 minutes (15 transcribed pages) to 54 minutes (25 transcribed pages).

There are certain qualities that make the process and results of conducting interviews effective. Qualities such as "respect, interest, attention, good manners, and encouragement on the part of the researcher" help to establish a short-term relationship (Hatch, 2002, p. 107). The researcher and participant should maintain "a position of equality and mutual respect" to build trust and rapport with one another in order to generate useful data (Doody & Noonan, 2013, p. 31). At the start of interviews, I began with introductions and general small talk to get my participants talking. Even though the participants had already reviewed the *Participant Information and Consent Form*, it was helpful to re-state the purpose of my research, to reassure the participants that there would be no right or wrong answers, and to stress that hearing their stories, their experiences, and perceptions, were vital to the goals of my research.

Once a connection had been established, I began asking questions from the interview guide. Throughout their responses I listened attentively and probed; that is, invited further

reflection, examples, and details on any unique or unclear responses. Despite having a list of pre-determined questions, the nature of a semi-structured interview not only allows for flexibility to the point that the interviewer could “respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic” (Merriam & Tisdell, 2016, p. 111), but also “facilitates the collection of richer more textured data from the interviewee” (Ryan et al., 2009). When I felt the questions had adequately been addressed and the discussion brought forward no new conversation, I began to close out the interview and expressed my thanks for the participant’s time, willingness to share, and candor and insights in their responses.

During the interview, I kept the interview guide in front of me so that I could keep track of which questions had been addressed. Additionally, notes were taken to document thoughts, phrases, keywords, and/or impressions that come to mind. Upon completion of my interviews, I immediately reflected on the interview questions, interview techniques, participant reactions, and the interview as a whole. By documenting these reflections in a research journal, I was able to evaluate how the interview went, record first impressions, and make any necessary adjustments before conducting the remaining interviews.

Data Analysis

In qualitative research, the collection of data and the analysis of data are simultaneous activities (Duncan & Holtslander, 2012; Merriam & Tisdell, 2016; Ryan et al., 2009). With the first piece of data collected, data analysis will be ongoing throughout the study. The purpose of data analysis is not only to “make sense out of what was just uncovered” (Turner, 2010, p. 759), but also to “construct a framework for communicating the essence of what the data reveal” (Patton, 2015, p. 521), and “to find *answers* to your research questions” (Merriam & Tisdell, 2016, p. 203).

Several researchers (Duncan & Holtslander, 2010; Roulston, 2001; Ryan et al., 2009; Turner, 2010) offer representative examples on how to work through the analysis of qualitative interview data. While the examples provide guidelines and procedural suggestions, each researcher believes that there are no definitive rules for conducting data analysis. For example, in a study of undergraduate nursing students, Duncan and Holtslander (2010) sought to identify library searching skills and barriers to successful searching by analyzing student journals documenting their search processes and transcripts from in-depth, semi-structured interviews using a grounded theory approach. Whereas in 2001, Roulston re-analyzed one of her previous research projects by utilizing two different approaches, that of thematic analysis and conversation analysis. As a novice researcher myself, I agree with the sentiment offered by Merriam and Tisdell; the sentiment that it “isn’t until you work with your own data in trying to answer your own research questions that you really see how data analysis “works” in qualitative research” (Merriam & Tisdell, 2016, p. 201).

Managing Data

An early step in beginning data analysis is the development of a system for organizing and managing the data. All collected data, that is, content analysis codes and categories, interview recordings, transcripts, and categories, and personal reflections needed to be inventoried so that they were readily available when needed. My data sets were electronically organized, labeled appropriately, and safely stored in multiple places.

Processing Data

The execution of the content analysis process, that is, the categorizing, coding, and identification of types of distance learning library resources and services offered, answered my first research question. As previously noted, the content analysis data was imported into the

IBM SPSS Statistics (version 23) statistical package for analysis and was examined for outliers and missing data. In addition, the question, “What library resources and services do Association of Research Libraries (ARL) member institutions offer to their distance learning library patrons?” was answered using descriptive statistics including the mean, frequencies, and percentages. These results are discussed in Chapter Four.

In order to analyze the qualitative data generated from the interviews, Merriam and Tisdell’s approach was adopted. Their strategy, and belief that “qualitative data analysis is primarily *inductive* and *comparative*” (Merriam & Tisdell, 2016, p. 201), helped me generate meaning by establishing relationships between the interview data and the second research question. To start, for each of my interviews, with the assistance of one transcriber, the interview recordings were transcribed using InqScribe, a digital media transcription software application. Immediately after the interview transcriptions were complete, the data was migrated to NVivo, a qualitative analysis software package, for manipulation and analysis. The NVivo application is available at no charge to students and full support is offered by The University of Tennessee, Knoxville Office of Information Technology Research Support Group.

Category Construction

It should be noted that prior to this research study, I had only conducted a brief data analysis exercise similar to the one used to answer my second research question. Therefore, I relied heavily on the qualitative analysis and coding strategies offered by Merriam and Tisdell (2016), Charmaz (2014), and Corbin and Strauss (2015) to guide me as I engaged with the data. What follows next is a brief overview of the category construction process.

Within NVivo, I read through each transcript to identify areas that were responsive to my second research question. Notations for each responsive area were documented. This notation

method is known as ‘open coding’ as I conversed with the data to identify any segment that I found useful in answering my research question. The assignment of codes is the first step in constructing categories. Once I coded the first interview transcript, I then reviewed all codes in an effort to group similar codes together. Charmaz (2014) and Corbin and Strauss (2015) identify this grouping process as ‘axial coding.’ Moving to the next interview transcript, the same extraction of codes occurred. At this point then, the two lists of codes were compared for similarities and differences. This coding and comparison process continued for the remainder my of interview data until saturation was achieved with the sixth interview transcript. The concept of saturation is explained at the end of this chapter. A final merged list of categories was then compiled once all interview data had been reviewed and analyzed in this manner. The finalized list of five interview categories, along with their descriptions, is provided in Table 7.

Table 7

Semi-Structured Interviews: Finalized Categories with Descriptions

Category	Description
Collaboration and Communication	Collaboration efforts with faculty and with library colleagues; Making personal connections; Marketing and outreach of services; Professional development
Course Management System Support	Embedded librarian; Instruction and support within course management system
Equal Delivery of Library Services	Answering student/faculty questions; Delegation of responsibility for delivery; Maintaining content on library guide and/or webpage; Methods of delivery; Reference and research assistance; Subject librarians/Liaisons; Training
Institutional Distance Education Knowledge	Distance students are not typical students; How distance education courses/programs are offered; Need to understand instructional technology, online learning/pedagogy
User Needs	Defining distance students; Identifying and assessing online teaching faculty and distance student needs; Sense of meeting user needs; Troubleshooting access to resources

Naming the Categories

The names of categories can come from at least three sources: the researcher, the participants exact words, or sources outside the study, such as the literature (Merriam & Tisdell, 2016, p. 211; Raju, 2014, p. 167). In this research instance, categories were named from the researcher, the participants, the literature, and the results of the content analysis. The categories constructed from the content analysis process were compared and contrasted with the categories constructed from the interview transcripts. By doing so, I was able to further reduce data to strengthen its validity, and as such, a resulting list of core categories became evident. The data analysis revealed the types of and delivery efforts of distance learning library resources and services organized around four core categories: Circulation Services, Reference and Research, Instruction, and Course Integration.

Emergence of Themes

In essence, the resulting core categories became the findings of the study. After the core categories were finalized, the analysis moved toward thematic development to explain the data's meaning. Through the process of data reduction and refinement, verification occurred, that is, possible conclusions and explanations were made from the data (Ryan et al., 2009).

The final piece of data analysis is the narrative description as expressed in the results and summary chapters. In these chapters, I report the results in detail; call attention to major findings; identify which literature, judgments, or decisions my results contribute to; and raise questions for further exploration. It is within the results and summary chapters where I demonstrate convincing knowledge of my research claims based on the data collected and analyzed.

Saturation

How will I know when I have collected and analyzed enough data? The answer to this question depends on the notion of saturation, that is, the “building of rich data within the process of inquiry, by attending to scope and replication” (Morse, 2015). There are no explicit rules or guidelines for determining saturation of data. Due to an unlimited number of research designs in academia, Fusch and Ness (2015) believe that “there is no *one-size-fits-all* method to reach data saturation” (Fusch & Ness, 2015, p. 1409). What follows then is a brief overview of perspectives on saturation that was used to guide my processes in achieving data saturation.

Bowen (2008) indicates “saturation is reached when the researcher gathers data to the point of diminishing returns, when nothing new is being added” (p. 140). Morse (2015) believes researchers should not “saturate particular details of individual events and random incidents. Rather, she contends that researchers “saturate *characteristics within categories*” (Morse, 2015). Developed in the approach to grounded theory, Corbin and Strauss (2015) believe saturation is more than just no new, emerging categories or themes. They believe that a researcher has to do more than simply create a list of categories or themes, but rather “define categories in terms of their properties and dimensions, show how that concept varies under varying conditions, and relate the categories to each other and to the core category” (p. 139). Briefly described here, the core category may be considered an umbrella term used to capture the theme or essence of the study. Thus, in order to arrive at saturation, a researcher “must continue data collection until the theory is dense and logical and there are no gaps in the explanations” (Corbin & Strauss, 2015, p. 139-140).

In order to produce new knowledge from my collected materials, my coding and analysis processes were ongoing, refined, and guided by noteworthy pieces of content that were unique

and thought-provoking; thus allowing me pause for consideration of interest by members of the greater academic community while achieving saturation at the same time. The saturation of all collected data was reached after I completed the iterative process of coding and comparing my content analysis data with my semi-structured interview data. This iterative analysis led to the identification of the previously mentioned four core categories and it became evident that saturation was achieved in the process.

Quality of Research

As the researcher, it is my responsibility to ensure quality in my study. If my findings are to be incorporated into professional practice, it is essential that I evaluate the quality of my research. The nature of ensuring quality in any research study is surrounded by differing viewpoints and controversies, for both quantitative and qualitative research studies (Gordon & Patterson, 2013; Leung, 2015; Loh, 2013). A resulting consequence of the lack of consensus amongst researchers regarding assessing and achieving quality, is the existence of a plethora of checklists, guidelines, and universal criteria to assist novice researchers, like myself, in evaluating the quality of their research (Leung, 2015).

My research study exists equally in the quantitative and qualitative worlds of thought. The quantitative researcher in me easily identifies with statistical methods necessary for establishing validity and reliability of my content analysis findings. However, the qualitative researcher in me struggled somewhat in grasping the strategies used to ensure the trustworthiness, or credibility, of the findings arising from my semi-structured interviews. I aligned my thought-processes for assessing quality from a brief article outlining strategies used to ensure credibility in qualitative studies. In Table 8, I offer specific examples where Noble and

Smith's (2015) list of nine strategies to ensure 'trustworthiness' of research findings are utilized in my research study.

Table 8

Noble and Smith's Strategies for Ensuring Trustworthiness

Strategy	Researcher Utilization
1. Accounting for personal biases which may have influenced findings.	Expressed in Chapter 5.
2. Acknowledging biases in sampling and ongoing critical reflection of methods to ensure sufficient depth and relevance of data collection and analysis.	Expressed in Chapter 4 and Chapter 5.
3. Meticulous record keeping, demonstrating a clear decision trail, and ensuring interpretations of data are consistent and transparent.	Evidenced in explanation of methods and research design as well as in narrative report of semi-structured interview conversations.
4. Establishing a comparison case/seeking out similarities and differences across accounts to ensure different perspectives are represented.	Semi-structured interviews with participants of varying experience levels offering low- and high-numbers of library resources and services offered.
5. Including rich and thick verbatim descriptions of participants' accounts to support findings.	Expressed in narrative report of semi-structured interview conversations.
6. Demonstrating clarity in terms of thought processes during data analysis and subsequent interpretations.	Evidenced throughout methods, research design, and analysis.
7. Engaging with other researchers to reduce research bias.	Not applicable.
8. Respondent validation: includes inviting participants to comment on the interview transcript and whether the final themes and concepts created adequately reflect the phenomena being investigated.	Not applicable.
9. Data triangulation, whereby different methods and perspectives help produce a more comprehensive set of findings.	Research design utilizing two methods: content analysis and semi-structured interviews.

Chapter Four

Findings of the Study

The purpose of this exploratory research study was not only to identify the types of distance learning library resources and services being provided, but also to gain insight into the experiences of Association of Research Libraries' library personnel in delivering library resources and services to their distance learning library patrons. Content on websites and library guides from select Association of Research Libraries' member institutions was analyzed. Semi-structured interviews with academic librarians at Association of Research Libraries offering the lowest and highest numbers of resources and services were conducted. The findings are presented to answer the following questions:

1. What library resources and services do Association of Research Libraries (ARL) member institutions offer to their distance learning library patrons?
2. What are the perceptions, challenges, and opportunities experienced by library personnel at Association of Research Libraries (ARL) member institutions in delivering library resources and services to their distance learning library patrons?

This chapter summarizes data collected and analyzed from websites and library guides belonging to 65 Association of Research Libraries' institutions and six interviews with Association of Research Libraries' academic librarians.

Content Analysis

The first research question was answered through a content analysis of Association of Research Libraries' websites and library guides. Of the 65 academic libraries in the data set, 35 had websites dedicated to distance learning resources and services for distance students and/or distance faculty, 21 had a library guide dedicated to distance learning resources and services for

distance students and/or distance faculty, and nine had both a website and a library guide dedicated to distance learning resources and services for distance students and/or distance faculty (see Tables 1 through 5). In total, 50 websites at 44 institutions and 40 library guides at 30 institutions were analyzed.

Intended Audience

In their standards for distance learning library services, the Association of College and Research Libraries briefly mention the need for online services as a means to virtually communicate its services to their intended audience. Of the 50 websites analyzed, 32 (64%) offered an introductory statement which included reference to both faculty and students as the intended audience. Of the 40 library guides analyzed, 35 (88%) offered an introductory statement describing for whom the library guide was intended. Thirteen library guides were specifically intended for faculty teaching online and 34 library guides were intended for students taking online courses. These statements ranged in grammatical structure, from simple to compound-complex, and often included definitive characteristics classifying members of their distance learning community who were eligible to receive distance learning library resources and services. For example, Arizona State University Libraries' library guide statement is succinct and to the point, "A guide to using ASU Libraries for online students." Whereas, the University of Oregon Libraries' website statement is longer so as to include specific distance criteria, "The University of Oregon Libraries' distance education services are designed to support the research needs of UO faculty, students, and staff who live more than 30 miles from Eugene and do not attend class or work on the Eugene campus."

Identifying Distance Learning Library Resources and Services

The total number of distance learning library resources and services offered, as listed and described in Table 6, were tabulated for each of the 65 institutions. Table 9 shows a summary of distance learning library resource and service offerings per institution from highest to lowest. This summary displays two main points of analysis: (a) institutions that had the strongest and weakest numbers of resources and services, and (b) a balanced distribution of the numbers of resources and services offered across the institutions. Florida State University Libraries offered 17, the highest number of resources and services, and Louisiana State University offered two, the lowest number of resources and services. With regard to actual distance learning library resources and services delivered to distance learners and educators, Table 10 shows a summary of available resources and services at the 65 ARL institutions analyzed; ranked highest to lowest, each identified with their assigned core category.

Core categories. A brief descriptive explanation for the four core categories identified in the content analysis is needed and presented in this section. ‘Circulation Services’ constitutes 17% of the total resources and services offered. These services encompass the physical and electronic library materials themselves and the methods used to deliver and/or obtain such materials. Fifty percent of the total resources and services offered fall within the ‘Reference and Research’ core category. Resources and services residing in this categorization represent the receiving of direct reference and research assistance from a professional academic librarian via face-to-face or virtually. The ‘Instruction’ core category makes up 28% of the total resources and services offered. Instructional services refer to any library-related content delivering instruction such as workshops, tutorials, citation methods, the research process, and information ethics, i.e., integrity and plagiarism in academic writing. The final core category, ‘Course

Table 9

Total Number of Distance Learning Library Resources and Services by Institution

Association of Research Library	Number of Services
Florida State University Libraries	17
University of Georgia Libraries	15
University of Saskatchewan Library	13
Pennsylvania State University Libraries	12
Rutgers University Libraries	12
University of British Columbia Library	12
University of Southern California Libraries	12
Virginia Tech Libraries	12
Arizona State University Libraries	11
University of Cincinnati Libraries	11
University of Florida Libraries	11
University of Illinois at Urbana-Champaign Library	11
University of Iowa Libraries	11
University of Kentucky Libraries	11
University of Missouri-Columbia Libraries	11
University of Utah Library	11
New York University Libraries	10
University of Kansas Libraries	10
Kent State University Libraries	9
Southern Illinois University Carbondale Library	9
Texas A&M University Libraries	9
University of Alabama Libraries	9
University of Calgary	9
University of Delaware Library	9
University of Illinois at Chicago Library	9
University of Louisville Libraries	9
Bibliothèque de l' Université Laval	8
Iowa State University Library	8
North Carolina State University Libraries	8
Auburn University Libraries	7
Case Western Reserve University Libraries	7
Colorado State University Libraries	7
George Washington University Library (Health Sciences Library)	7
Ohio University Libraries	7
University at Buffalo, SUNY, Libraries	7

Table 9 cont.

Association of Research Library	Number of Services
University of Hawai'i at Mānoa Library	7
University of South Carolina Libraries	7
Washington State University Libraries	7
Georgetown University Library	6
Georgia Institute of Technology Library	6
Michigan State University Libraries	6
Ohio State University Libraries	6
University at Albany, SUNY, Libraries	6
University of Alberta Libraries	6
University of Arizona Libraries	6
University of Nebraska–Lincoln Libraries	6
University of North Carolina at Chapel Hill Libraries	6
Boston University Libraries	5
Stony Brook University, SUNY, Libraries	5
University of Oregon Libraries	5
Indiana University Libraries Bloomington	4
Northwestern University Library	4
University of Connecticut Libraries	4
University of Houston Libraries	4
University of Minnesota Libraries	4
University of Oklahoma Libraries	4
University of Ottawa Library	4
University of Tennessee, Knoxville, Libraries	4
University of Texas Libraries	4
University of Virginia Library	4
University of Waterloo Library	4
Syracuse University Libraries	3
Texas Tech University Libraries	3
University of Wisconsin–Madison Libraries	3
Louisiana State University Libraries	2

Table 10

Total Number of Distance Learning Library Resources and Services by Type

Distance Learning Library Resource and/or Service	Total	Core Category
Materials	65	Circulation Services
Material Delivery	64	Circulation Services
Ask a Librarian	60	Reference and Research
Research Guides	39	Reference and Research
General Information	29	Reference and Research
Subject Librarians	29	Reference and Research
Technical Assistance	29	Reference and Research
Course Reserves/Electronic Reserves	28	Circulation Services
Information Ethics	27	Reference and Research, Instruction
Tutorials	27	Instruction
Research Process	24	Instruction
FAQs	19	Reference and Research
Workshops	17	Instruction
For Faculty	13	Reference and Research, Instruction, Course Integration
Copyright Resources	11	Course Integration
CMS Support	9	Course Integration
Miscellaneous	4	Reference and Research
Proctoring Exams	2	Course Integration

Integration,’ comprised 22% of the total resources and services offered. This core category pertains to resources and services offered specifically to online teaching faculty members and include copyright resources, course management system assistance, and proctoring exams.

The total percentage of core category offerings described above is more than 100%. Two library resources, ‘Information Ethics’ and ‘For Faculty,’ were assigned to more than one core category and as such, were calculated into each individual core category percentage. Analysis at the category level revealed the percentage of ARL institutions included in the study that offered the top five and bottom five resources and services: Materials (100%); Material Delivery (98%); Ask A Librarian (92%); Research Guides (60%); General Information (45%); For Faculty (20%); Copyright Resources (17%); CMS Support (14%); Miscellaneous (6%); and Proctoring Exams (3%).

Circulation services. Distance learning library resources and services identified in this category include ‘Materials,’ ‘Material Delivery,’ and ‘Course Reserves/Electronic Reserves.’ Aside from the general offering of library materials as previously described, ‘Material Delivery’ was the next most frequent resource and service found listed on websites and library guides. Recall from the ‘Access Entitlement Principle’ the notion that distance learners are entitled to adequate and equitable access of library resources and services, and as such, the delivery of materials stands as an obvious reason why this service is offered most frequently. Distance learning community members need to know how to request and receive library materials such as books, multimedia, and journal articles via delivery by mail, interlibrary loan, or e-mail (Association of College & Research Libraries, 2015, Executive Summary section, para. 1).

Reference and research. Where do distance learning community members go for reference and research help? What appears to be a standard offering, across nearly all ARL

institutions included in this study, is that of ‘Ask A Librarian.’ The ‘Ask A Librarian’ service is a method in which library patrons may contact a librarian for assistance. Communication with librarians can occur along various methods such as by phone, e-mail, text message, chat/instant message, and social media. Of the 65 ARL institutions included in this study, 60 (92%) institutions offered the ‘Ask A Librarian’ service. The method chosen is ultimately decided by the user, as they are the ones seeking the help.

The ‘Research Guides’ resource was comprised of Subject Guides and Course Guides. Both types of library guides are created by librarians designated by their subject specialty area, such as *History* or *Nursing*, or by librarians asked by faculty or department members to compile specific course-related references, such as *English 101: English Composition* or *Political Science 102: The American Presidency*. The guides contain an organized collection of information including videos, bibliographies, journal articles, image collections, etc., joined together to centralize available resources for both on- and off-campus patrons.

The ‘General Information’ service encapsulated basic information pertaining to how to get started with distance learning library resources and services as a whole. It was not uncommon to see a welcome message, either text- or video-based, welcoming the user in an attempt to lessen the user’s sense of physical distance. Library account information, instructions on registering for online distance services, and emphasizing the library website as a gateway to all resources and services were also included as general information.

Instruction. In my analysis of distance learning library resources and services, I discovered that one of the least offered resources and services, ‘For Faculty,’ may actually be a misrepresentation or inaccurate assessment of actual offerings being provided. I mention this inaccuracy because my review of websites and library guides were looked at with a slight bias

towards distance learner's needs first and distance educator's needs second. This bias may have resulted in overlooked, or missed, resources and services provided for faculty. That being noted, resources and services provided for faculty that were able to be found were identified, coded, and consolidated into the library resource and service tagged as 'For Faculty.' Here, resources and services identified include: assistance designing and testing library assignments for course work; creating class-related bibliographies; instructional sessions on library research strategies, critical thinking skills, and information literacy; purchase requests for library materials; and assistance with scholarly and open access publishing.

Course integration. As it relates to distance learning, 'Copyright Resources' as a service was surprisingly offered at only 11 institutions. Like the 'For Faculty' service, this service may also be an inaccurate assessment as, one could assume, that legal departments at institutions of higher education are more than fleetingly concerned with drastic repercussions stemming from copyright violations. It is my assumption then, that with the prevalence of library materials in digital format, how, and to what extent, materials are being implemented in online learning environments, in accordance with copyright guidelines, is not being overlooked by academic librarians. In this analysis, however, the provision of copyright assistance could not be solely determined by what was listed, or not listed, on the website or library guide.

The final three services rounding out the least offered list consist of 'Course Management System Support,' 'Miscellaneous,' and 'Proctoring.' Consistent with research described in the literature review (York & Vance, 2009), providing resources and/or support to faculty and learners from within or for the online learning environment is still an area in need.

'Miscellaneous' became the category into which resources and/or services that were listed on a website or library guide, yet not directly offered by the library, were placed. Website links to

Disability Services and Student Success Support are examples of items within this category. And finally, ‘Proctoring,’ that is, the service to proctor online exams for instructors, was only identified at two institutions; one noting they do offer the service and one noting they do not offer the service.

Semi-Structured Interviews

The second research question sought to provide insight into the perspectives, challenges, and opportunities experienced by Association of Research Libraries’ academic librarians. Obtaining a sample of six voluntary interviewees proved sufficient to gather first-hand accounts of academic librarians’ experiences, perspectives, challenges, and opportunities in delivering distance learning library resources and services.

Interviewees

All participants willingly answered my interview questions during the 40-60 minute sessions and expressed sincere interest in my dissertation research. Of the individuals interviewed, two were male and four were female. All interviewees work at an institution within the United States; five work at a public university and one works at a private university. The length of time served in their current academic librarian position delivering distance learning library resources and services ranged from one year to 11 years. Each interviewee carried a unique professional title, for instance: ‘Education and Distance Learning Librarian,’ ‘Online Learning Librarian,’ ‘Teaching & Learning Librarian,’ ‘Distance Education Librarian,’ ‘Virtual Academic Center Librarian,’ and ‘Head, Distance Learning Library Services.’ Table 11 presents basic descriptive information for each interviewee. Abiding by Institutional Review Board requirements, and for ease of readability, the interviewees names have been replaced with pseudonyms.

Table 11

Descriptive Information of Interviewees

Interviewee Pseudonym	Professional Title	Length of Service	Institution Type	Length of Interview
Thomas	Distance Education Librarian	8 years	Public	46 minutes
Elizabeth	Virtual Academic Center Librarian	3 years	Private	40 minutes
Darlene	Head, Distance Learning Library Services	11 years	Public	43 minutes
Natalie	Education & Distance Learning Librarian	1 year	Public	43 minutes
Kaylee	Teaching & Learning Librarian	3 years	Public	54 minutes
Jerald	Online Learning Librarian	5 years	Public	52 minutes

Thomas is a Distance Education Librarian at a public institution and has served eight years in his current position. For the past three years, Elizabeth has served as the Virtual Academic Center Librarian at her private institution. A veteran distance librarian, having served 11 years, Darlene works at a public institution. Natalie, a newcomer to the profession, is a first-year Education & Distance Learning Librarian at her institution. Like Elizabeth, Kaylee has also served three years as a Teaching & Learning Librarian at a public institution. Finally, Jerald is the Online Learning Librarian at a public institution where he has been for the past five years. Thomas, Elizabeth, Darlene, and Kaylee work at institutions which ranked in the top subgroup, that is, institutions offering the highest number of distance learning library resources and services. Natalie and Jerald work at institutions which ranked in the bottom subgroup; that is, institutions offering the lowest number of distance learning library resources and services.

Delivering Distance Learning Library Resources and Services

In Chapter 2, I referenced past literature to showcase representative examples of experiences and perspectives from academic librarians in their efforts to provide distance learning library resources and services. After an extensive analysis of my interview data, it became evident that the experiences and perspectives from past literature mirrored similar

sentiments as expressed in the stories my interviewees shared. What follows is a summary of interviewee conversations across the five categories as identified in Table 7: (1) Collaboration and Communication, (2) Course Management System Support, (3) Equal Delivery of Library Services, (4) Institutional Distance Education Knowledge, and (5) User Needs.

Collaboration and communication. The first category identified from my interview analysis is collaboration and communication. Topics discussed by the interviewees included collaboration efforts with faculty members and library colleagues, making personal connections with their users, marketing and outreach of services, and professional development.

Collaboration efforts with faculty members and library colleagues. Collaborative efforts with faculty members and library colleagues presented a mix of challenges and opportunities for all interviewees. Having been in her position for only one year, Natalie mentioned a struggle she faces with her library colleagues,

Although I'm the distance learning librarian, I can't support all of the students like they should be. So I see a challenge in having my colleagues understand that they do have responsibilities to distance learning students and that just because distance learning is tagged on to my title, I'm not the only one who should do it. (personal communication, March 18, 2016)

When compared to Natalie, Kaylee expressed how she had a more positive sense of collaboration with faculty members and library colleagues. She explained working closely with a faculty member and her students in Nursing to create an e-textbook. During the interview, Kaylee (personal communication, March 18, 2016) stated, "She [the faculty member] had her students creating the material for the e-textbook and rather than just turning in a paper and calling it a day, we put it together into this e-textbook that is freely available." Reflecting on experiences working collaboratively with her library colleagues, Kaylee felt "lucky in that it's really not just

me all alone doing this. I get to draw on all of my colleagues as appropriate...as they are available.”

Making personal connections with their users. The librarians I spoke with expressed a desire to make personal connections with their users in order to lessen the sense of distance. Thomas recalled a memorable quote from his mentor that described distance students (personal communication, March 8, 2016). His mentor stated, “We keep on talking about them like they are distant. But we’re the ones who are distant. They’re right where they’re supposed to be. They’re where they live. We’re the ones who are inconvenient.” After explaining face-to-face training he provides to distance students, via traveling around the state, Thomas shared how meeting in person can make that connection and overcome the distance, “They get to know me personally and it’s I think a little bit psychological ... a little bit easier to call somebody you happen to know at the big in-person state university than it is just to call some random phone number.”

Darlene stated a similar opinion, “What I think I need to concentrate on is being that friendly voice as they’re not going to see me” (personal communication, March 15, 2016). Darlene also believed that “the fact that there’s an identifiable person in that position of distance learning librarian . . . it’s really important and I think the students appreciate having a resource person by name that they can go to for help.” Kaylee mentioned, “the most important services are knowing that they [the students] can actually talk to a librarian person and that we’re here to help them.”

As evidenced from the quotes noted, the academic librarians expressed how they were making connections to bridge the distance gap between themselves and their users. Examples of making connections include taking on the role of a distance learner or educator to better

understand their needs, utilizing face-to-face interactions where they could, and making themselves more identifiable than just appearing as a name on the library webpage. In doing so, each of the librarians felt more connected to their users and provided guidance towards what the library has to offer.

Marketing and outreach of services. Librarian efforts towards marketing and outreach of distance learning library services are varied. One may think that with years of experience comes expert strategic efforts in reaching distance library users. No so, as I found it surprising that even after 11 years serving distance users, Darlene feels she faces a continual, never-ending struggle in reaching her users. She stated, “The ever-lasting gobstopper of a challenge is how to make people aware of your service and presence. Have I solved that? No.”

Marketing and outreach efforts that may work for one librarian may not work for another. For example, while Thomas and Elizabeth stressed that “mostly what has been effective is word of mouth,” and “there is some word of mouth happening,” Kaylee manages an electronic newsletter delivered to faculty on a quarterly basis and Jerald mentioned marketing via “departmental student listservs” as well as through “outlets like social media.”

Noted differences in marketing efforts towards faculty and marketing efforts towards students were identified. Natalie reported, “one of your biggest challenges is getting your foot in the door with faculty.” Thomas cultivates faculty teaching online via the institutional continuing education department. He states,

What does seem to work is, I mentioned the continuing education department and they have 4 or 5 course designers that help people convert their face to face class into an online or whatever other format class, how to work through, how to make things work in a different environment. So I cultivate them and I, you know, I make sure they know who I am and what I can do and how I can help and they pass that information on. So a lot of the faculty I meet I get because they’re referred to me. (personal communication, March 8, 2016)

By also attending technology meetings on campus, Thomas wants his faculty “to know that there’s this distance ed library guy and I really don’t know what he does, but he’s there, maybe he’d have something to say about that.” When reaching faculty members, Elizabeth noted,

. . . the hardest component, is systematically doing outreach to the adjunct faculty. Like I said, it’s mostly the [faculty and student] listserv but I know that’s not . . . effective, when I want them to start to see me as an educational partner and I am . . . I don’t have a good plan for that. Sometimes I think it’s just an issue of figuring out what will work to connect. I’m always having to think of different ways to connect. (personal communication, March 9, 2016)

Kaylee also mentioned orientations as an avenue for marketing and outreach to both sets of distance users, “I do go to a lot of orientations. I go to a lot of student orientations, but there are faculty there who can hear the message too.”

Professional development. Despite the lack of time being a challenge faced by the librarians I interviewed, they all managed to partake in some aspect of professional development, often times communicating with other librarians serving distance users. Three of the librarians are active members of the Association of College & Research Libraries’ Distance Learning Section and were slated to attend this year’s conference. Two librarians reported interest in the fields of instructional technology and online/e-learning where they are currently pursuing a graduate degree and certificate, respectively, to enhance what they’re doing now and to gain more knowledge in the field. As an opportunity for learning, Elizabeth shared,

I would like to see, in general, in the library profession, more focus on educational technologies, on instructional technologies. Also, pedagogy, how to actually use them in the most effective, appropriate ways and a better understanding of why online learners are online, and what makes them different, and what makes them the same. (personal communication, March 9, 2016)

The librarian pursuing a certificate in e-learning noted that she is attending the *Innovations in Online Learning* conference this year “to just get an idea for what other people are doing; how other people are approaching their online learning development and techniques.” In reference to

online learning in general, she stated, “I recognize that this is a ‘thing’ that is not going away. It’s getting bigger and we really need to be on board, if not at the forefront.” Darlene mentioned attending online webinars and participating in massive open online courses if they appeared relevant and helpful. Additionally, she reported “reading and sometimes I just do a good literature search to find out what’s going on.”

Through the librarians’ discussions on collaboration and communication, I learned that the librarians actively and strategically work towards connecting resources and services to their distance users in each and every interaction with them. Whether they work collaboratively with other librarians and faculty members on research or assignments, make personal connections with their users face-to-face or virtually, utilize different marketing or outreach strategies, or further their professional knowledge, the librarians are doing so in order to reach their users at their point of need and to lessen their anxiety or sense of feeling distant.

Course management system support. The second category identified from my interview analysis is course management system support. Each of the librarians identified which course management system was in use at their institution. Three institutions use Instructure Canvas, one uses Desire2Learn Brightspace, one uses Moodle, and one uses Pearson. The librarians shared their experiences assisting both students and faculty through the course management system whether it be as an embedded librarian, linking to the library guide(s), designing customized tutorials, and collaborating on assignment consultations.

Thomas mentioned that he, and other subject librarians at his institution, embed themselves into course sites within the CMS. He also mentioned,

One of the things we do consistently is have a ... D2L calls them widgets, so we’ve got a library widget that gets incorporated into each D2L course site and based on the number of the course, if it’s in like the Religion department, the widget has direct links to a religion lib guide. (personal communication, March 8, 2016)

Depending on the needs of the class, Thomas stated, “I make customized tutorials for different classes, so we use Camtasia and I’ll throw together a couple minute Camtasia video illustrating how to find scholarly articles...” However, he did express, “it’s not like I’m [pause] you know present in every class session or anything like that, it’s as the need arises.”

Elizabeth has experience being embedded in a ‘Library Support’ classroom where “it should be that every student and faculty are automatically enrolled in it”. While not everyone makes it in to that classroom, Elizabeth can post announcements and fliers to the site, but mainly uses it as a reference tool. She states, “Students will ask reference questions on the wall of the classroom. And I’ll respond to it there, but that is maybe only like . . . maybe 5 or 6 questions a month.”

For Natalie, her interaction with the course management system has been a bit of a struggle. While she has been embedded in online Information Science classes, she found herself spending her first year as distance librarian working around the program’s curriculum specialist and course designers to reach the director of the program in order to make inroads with the faculty. She successfully was able to get the online program to “at least, update their library information inside of their course” and also to “link directly to the lib guide that has the information for distance learners and, you know, specialized information for the different disciplines.” Looking towards the future, she envisions working with the IT department “so we can actually have our lib guides embedded automatically by subject.”

In a virtual advising Canvas course for nurses, Kaylee has created a “whole library section with some resources, research guides, and videos.” Additionally, she mentioned,

There’s a gerontology class that I have a module in, so for one week I am a guest lecturer in the class. I’m added to the Canvas course for that week. And so they have some videos, some assignments and stuff that they do during that module and I’m available to

ask questions . . . or to answer questions that they post to the discussion board. (personal communication, March 18, 2016)

To expand on the existing library section, Kaylee is “interested in actually putting a lot of this kind of instruction that we do into Canvas modules and putting them up in Canvas Commons so that faculty can just integrate them into their courses as appropriate.” To clarify, Canvas is an online learning management system that allows course content to be structured using modules, thereby allowing a learner to progress through the content in a logical, sequential order. The Canvas Commons is a learning object repository, housed within the Canvas learning environment, enabling instructors to find, import, and share resources. Kaylee believes that utilizing the Canvas features in this manner “would give us a really nice opportunity to do less of the kind of basic library instruction and focus more on advanced.” She is “looking at developing some modules that we can put up in Canvas Commons and try and integrate in different ways.” Kaylee firmly stated her belief in regards to offering support within the course management system, “why make them [students] go if they’re already in the LMS; why make them go outside to find things?”

Jerald stated, “I am embedded in a wide variety of courses as the librarian” (personal communication, April 5, 2016). He also indicated, “In our LMS, Canvas, not unlike I would imagine most; there is a librarian role. So I am . . . I serve that role in several classes. I also am a co-instructor in a few classes so I’m in that role in those. And when discussing distance learning library support with national colleagues, he is frequently asked, “where the library’s role in support for course instructors within the LMS is” and hears “that’s kind of all over the place.”

From what I heard of librarian’s experiences in the institution’s course management system, it seems as if a stronger relationship between the campus library and technology departments is in order. While their embedded efforts have mostly been successful, I see a

territorial nature evolving that dramatically hinders efforts to enhance distance students' learning and strengthen distance faculty's use of technology tools. Working closer together, librarians and technology support personnel could counteract the current reality of library support in the LMS 'being all over the place,' as Jerald noted, to a future reality of 'being right where it is needed.'

Equal delivery of library services. As previously mentioned, adequate and equitable access of library resources and services to distance learning populations stands as the foundation of the ACRL *Standards for Distance Learning Library Services*. It became evident, after talking with my interviewees, that the responsibility to provide adequate and equitable access was forefront in each of their minds. This sense of responsibility weighed heavily as an undertone throughout our discussions.

Typical library resources and services such as library guides, document delivery, interlibrary loan, and video streaming were discussed, of course, but for this analysis, I am offering a few examples showcasing the librarian's day-to-day experiences in delivering equitable resources and services. I was most surprised to learn that two librarians actually travel within the state, beyond their institution's campus grounds, to reach and meet their distance student users. Thomas travels every fall to the three cities that offer the Master of Social Work online program and presents what he calls a "welcome to the library, pretty intense how to do research session." Similarly, when new Social Work cohorts begin course work in the fall semesters, Darlene states that she "travels to those parts of [state] and conducts in-person hour, hour and a half session on what can the library do for you, how to use Social Work abstracts and what other databases that are helpful and here's the lib guide."

Reference and research assistance happens primarily over e-mail correspondence and is

often times supplemented with virtual interactions through web conferencing software programs.

Elizabeth offered the following:

Most of my reference happens over email. And from what I understand from my other colleagues that work with distance students; their distance student interaction is over email. I have access to Adobe Connect through the School of Social Work, so not through the libraries. The School of Social Work has given me an Adobe Connect account, so that's how . . . if I wanted to do a face-to-face meeting, I do it through Adobe Connect. (personal communication, March 9, 2016)

While Thomas has utilized the Adobe Connect videoconferencing software as a guest lecturer, he would rather not use it for virtual research consultations with distant student users. He states,

One thing I would like to be able to do is easily have screen sharing research consultations; which the technology is there to do it, but people just don't want to do that . . . it's intimidating. What it can't do is overcome the initial discomfort of using a new system or something that the students want to be quick and easy. (personal communication, March 8, 2016)

Natalie also mentions user intimidation caused by technology when trying to deliver equitable research assistance,

These are people that are coming back and sometimes they are older . . . databases were not a big deal whenever they were in school. And now they need to know how to use them. And they're intimidated at times and I would like to find a way to overcome that because I think sometimes the instructors aren't aware that their students don't have those skills. (personal communication, March 18, 2016)

Another struggle faced when delivering and receiving reference and research assistance was what delivery method worked the best and most efficiently. Natalie shared her perspective, "Basically, I look at the services that we offer our on-campus students and see how we can do the same thing, with modifications, for our distance students." For example, regarding user instruction, recording a short video demonstration walking the user through a journal search was found to be more efficient than writing out a lengthy email with step-by-step instructions and screen shots. Natalie offered an example of this concern,

I just didn't feel like typing down instructions. It was like, if she [the student] just sees it, it will be easier. I just recorded it for the student and sent her a link to the video. And if I could see what they're doing on the screen it would be easier for me to give suggestions of what might be working or what might not be working. (personal communication, March 18, 2016)

Darlene gave a delivery method example utilizing phone consults,

I will also do a lot of phone consults. They can call from home and they can be at their computer, and I can be at a computer so I can walk them through how to do something like e-journals to get the full text of what they need. (personal communication, March 15, 2016)

In an effort to replicate an in-person training session by utilizing an online interaction, Kaylee has created mini, self-guided tutorials. She explains,

I've made a couple of 'guide on the side' tutorials. You have this little guide that comes up on the side of your screen. And it's attached to a website so you can do it with your library page. You could do it with a database. You could do it with a website. And so the little guide just kind of says "Hey, this is an introduction to Academic Search Premiere." And so we're going to talk about some of the features and functions of Academic Search Premiere. And then you have a little navigation button so you can go to the next thing. It's up to the user to look at what the guide on the side is saying and then actually implement it. So it's, like, real time. It's like having a person there with you. (personal communication, March 18, 2016)

When designing and delivering equitable distance learning library resources and services, Jerald offered the following summative perspective, "I think really the approach that we do things is, as we are thinking about them, how a non-traditional student or instructor would avail themselves of these offerings or these services."

Creating tutorials, conducting on-site training sessions, phone consult, and writing instructional emails are just a few examples of the various day-to-day experiences in delivering equitable distance learning resources and services. Reading these examples of how academic librarians structure equal delivery of resources and services shows that a one-size-fits-all approach is currently unattainable. Each academic library, having their own unique set of distance learners and educators, adjusts accordingly to delivery equitable resources and services.

It's no wonder that the *ACRL Standards for Distance Learning Library Services* does not delineate one particular way of achieving equitable delivery, but rather allows for flexibility and fluidity based on the knowledge and experience of the librarians to deliver equal resources and services. In summary, Darlene stated it best when she said, "It's distance learning students get the same service they would if they were here on campus. So that is kind of the underpinning for everything."

Institutional distance education knowledge. Knowing how an institution delivers, manages, and supports distance education is the fourth category identified in my interview analysis. Amongst the interviewees, commonalities within this category include how distance education courses and/or programs are offered, understanding that distance students are not typical students, and understanding the methods and practices of instructional/educational technologies and online pedagogy.

Institutional distance education. In reference to two interview questions, specifically, 'how are distance learning library services determined' and 'what changes do you foresee,' the librarians' answers were rooted in the context of how distance education classes are offered. "Without necessarily being through any kind of formal distance education infrastructure," Thomas noted that his institution's continuing education department runs the online classes. His insight and perspective continued,

Personally I don't see the model of a separate continuing education department separating out distance education being sustainable in the long run. I think everything is going to be distance education in a lot of ways. I think campus will still be here. I think there will be bricks and mortar. (personal communication, March 8, 2016)

Darlene shared that at her institution there is a "distance learning office on campus that offers all the courses." Jerald explained how his responsibilities have shifted towards "a more proactive

role in the actual teaching process in online environments” due to the shift in how his university is offering online courses,

In the past, most of the distance education that has been done throughout the university system has been very decentralized and has had more to do with school and individual departments and those sorts of things. Now there’s a vested interest in the university in centralizing all this. The university system is right in the middle of centralizing all of its online education initiatives. (personal communication, April 5, 2016)

Defining distance. No matter the manner in which institutions deliver their online programs and/or courses, one outlying characteristic remained consistent, how distance education students are defined or classified. Distance students are not typical and cannot be described in consistent language across higher education institutions. Elizabeth shared her view by stating, “Distance students are fundamentally different students. They are different kinds of students than on campus students. And they are so much more varied in terms of where they are academically.” Even though she feels distance students may be fundamentally different from traditional students, she complements these feelings by saying,

I do also like to tell people all the time that all of our students are distance students, right? They might just be on the other side of campus or wherever, you know, everyone is sort of using these services we have for distance students. (personal communication, March 9, 2016)

Darlene struggles with defining distance students. She states, “I kind of cross a murky area of ‘are you actually a distance learning student?’ or ‘do you just live 50 miles away and consider yourself a distance learner?’” Whereas Natalie, being a first-year distance librarian, worked with the Registrar’s office to develop a working definition of a distance learner. She delineated the following as a distance student, “basically, if a student is an *[Institution Name]* Online or if they’re enrolled in a course that is 100% online and no other type of course that requires them to come to campus, then they can get these special services.” Here, special services refer to resources and services provided by the library. The broadest definition of a distance student

came from Jerald. As he discussed traditional manners in which services were provided to distance users, he indicated that “anyone that was learning from a distance” was able to receive assistance.

Instructional technology and online pedagogy. The connection between traditional aspects of academic librarianship and technology skills is a foreseeable opportunity and challenge experienced by a few of the librarians I interviewed. Elizabeth is very much interested in learning more about instructional technology and would like to witness “much more work on online pedagogy.” At his institution, Jerald discussed how learning management systems, complications of access to electronic materials, and copyright concerns are impacting the library’s approach to supporting their distance learning community. He described the following initiative in their approach,

We are currently in the midst of rolling out an online tutorial geared to new online instructors that talks not just about access to library licensed databases, and e-resources, but talks specifically about assignment design and teaching pedagogy within online environments. (personal communication, April 5, 2016)

Kaylee mentioned, “our library has been involved in and been sort of a leader in educational technology.” Noting again that she is currently pursuing a certificate in e-learning/instructional design, Kaylee states “one of my goals for this year is to re-focus on educational technology.”

I learned that these academic librarians are indeed recognizing the impact and importance of instructional/educational technologies in academic libraries. By understanding how their institution delivers online courses and/or programs, defining what it means to be a distance student or learner, and furthering their knowledge of instructional technologies will help these librarians stay relevant in an every-changing technological society. Hearing their stories has allowed me to understand their perspectives in their efforts at being responsive to the changing nature of their institution’s specific teaching, learning, and research needs.

User needs. The final category identified relates to user needs. How do academic librarians assess their user's needs? Are they meeting their needs? What could they be doing to understand their users? The answers to these questions may be few in number, but their content is rich with evidence and emotion.

Assessing needs. Assessing the needs of their community of distance learners and educators is a strategic maneuver towards better understanding their users in efforts to provide adequate and equitable resources and services. Whether the assessment occurs with an in-house, or third-party, user-satisfaction survey, academic librarians have the opportunity to envision a clearer picture of attitudes, beliefs, and/or general knowledge held by their distance patrons. Unfortunately, not all interviewees have this survey-type opportunity. Elizabeth explained, "We don't really have any systematic way of assessing what students need or what they like or what they would like us to do differently..." (personal communication, March 9, 2016). Elizabeth makes up for the lack of formal assessment by conducting her own informal assessment. She states, "I'm listening to what students are saying and I'm inferring a lot from the kinds of questions that I get." Thomas mentioned a needs assessment survey he conducted close to eight years ago via the institution's continuing education department. Currently he relies on direct feedback from instructors and students, "I work with faculty teaching distance ed, so I get feedback from them about what they are teaching and what their students are doing. I get questions directly from the students so I can respond basically to that." Natalie expressed a fortunate opportunity she had in regards to assessment. Due to accreditation policies, "student services sent out a survey and the assessment librarian was on the re-accreditation committee. So there was a pretty substantial section about library services." Having an existing survey in place was great, however, the results were less than pleasing. She explains, "if I look at their

survey results, it was clear that some of them didn't realize that they even had access to our databases...which I found horrifying." Kaylee was unaware of any major assessment of distance students, but hazarded a guess that her predecessor could have done some assessment because "she was very, very focused on distance education resources." Recalling her 'guide-on-the-side' tutorials, Kaylee mentioned how students could leave her feedback. She states,

They can leave feedback about how it worked. Like, if it was helpful or not helpful. And you can also include little quiz questions or knowledge checks or whatever along the way. So, I will often direct students to those and then I can see the feedback that they give from that. (personal communication, March 18, 2016)

Meeting needs. When asked to describe how well they believed their library meets the needs of distance education students, the interviewees' answers varied. Thomas said, "I'd like to think we do an above adequate job; I don't think we are spectacular." Elizabeth stated, "I think we're doing a good job meeting their needs." Darlene said, "I think we do well and offer great service, but I am only one person." Natalie stated, "To be frank, the library is not doing all it can. And I just cringe inside because I feel we're so far behind where we should be."

Kaylee and Jerald did not answer this question directly, but rather discussed the history of library support for distance education at their institutions. Both librarians inherited their current positions from librarians who were long established in providing distance services. For Kaylee, her library, specifically focused on the health sciences, does not maintain a physical collection, but rather a collection that is completely available online. She feels the online collection "supports our in-person students as well as our distance students." Jerald explained how his library institution has traditionally "focused more on academic research support by discipline" and "provided support to any learners or researchers within those core disciplines."

Access to resources. Concern for access to resources was expressed in one of four areas: technological access itself, that is, the hardware and/or software users use; the abundance of

information available to users; the use of available resources, such as digital learning objects; and the consolidation of resources. Darlene shared how technology has become a benefit to her while at the same time becoming an obstruction for users. As a benefit she shared,

Technology has made the job as distance learning librarian here, I'm not going to say easier, but I'm going to say...well there's routine things are faster to do with the technology and I can get them done quickly and move on to something else. (personal communication, March 15, 2016)

And as an obstruction, she recalled, "for a while I had a ton of videos out there . . . on how do you search and then I realized talking to students who were calling in or emailing with issues, they weren't really watching those." Kaylee shared a common criticism of librarians, albeit a positive criticism in essence. She stated, "...one of the challenges of being a good librarian is knowing how to pare down. We have this inclination to just throw as much as possible. You need to know all of these things." For example, when Kaylee asks her users what they found valuable in library sessions, she reports, "They often say, 'You know, it's helpful but you guys give us so much information and we can't keep track of it all. It's overwhelming.'" Similarly, when reviewing other ARL libraries' distance learning services on websites and/or library guides, Darlene expressed how she "sometimes wonders do I have too much on there? but, you know I want to make it as helpful for people who are trying to find assistance at 3 in the morning." Once the resources are out there for users, how are they being, or not being, utilized? To answer this, Kaylee discussed the creation of digital learning objects for faculty and reported,

I mean it's like if you do it really well, then they're going to want you to do it all the time. If it's not meeting their needs then you feel like, well, then why did I spend my time doing that if they're not going to implement it?

I can create Canvas Common things and that's great but am I going to do it in a way that's useful to instructors? Am I going to poll all of the instructors and see what they want...and are they actually going to be able to come to a consensus...or do they even know what they want? They know what they don't want after they see what you've already done. (personal communication, March 18, 2016)

Finding a delicate balance between providing too much or too little information with the right technology is but one of the challenges these librarians face. To add to this challenge, librarians are also facing unfortunate consolidations of library resources such as physical space and time. Darlene said, “We have about 12 libraries on campus and four of them have collapsed into a shared space.” Likewise, Jerald shared his institution is “starting to see some consolidation of campus libraries.” In the same regard, Natalie stated,

I would like to actually be able to have support for our students that reaches beyond my working hours, because, you know, if you are an online student or a distance learning student, my guess is that your schedule is probably not going to allow for you to contact me personally by phone or by chat during your workday. (personal communication, March 18, 2016)

Discussion surrounding user needs left some, not all, of the academic librarians feeling a bit apprehensive in regards to assessing, meeting, and understanding what exactly is needed from, and for, these distance learners. I noticed hesitation when each librarian answered my question on how well they believed their library meets the needs of distance education students. It seemed as if their answers lacked confidence; confidence in self as well as confidence in their libraries’ role in serving distance learners and educators. I learned that although the librarians felt they were doing all they could for their users, they also felt their ‘all’ would never be 100% satisfying for users learning and teaching in the ‘anywhere, anytime’ environment.

The narrative presented in this chapter addressed the four categories of my content analysis and the five categories of my semi-structured interviews to answer the research questions of this study. The content analysis categories were (1) Circulation Services, (2) Reference and Research, (3) Instruction, and (4) Course Integration. The interview categories were (1) Collaboration and Communication, (2) Course Management System Support, (3) Equal Delivery of Library Services, (4) Institutional Distance Education Knowledge, and (5) User

Needs. In the next and final chapter, I present a summary of the major findings, discuss their implications for academic librarians, and offer recommendations for potential future research studies related to online learning and academic librarianship.

Chapter Five

Summary and Discussion

Identifying current practices in the delivery of library resources and services to distance learners is an important aspect to understanding how academic libraries are serving and meeting the needs of their patrons. In this study I examined distance learning library resources and services as provided by member institutions belonging to the Association of Research Libraries (ARL). The purpose of this study was (a) to identify the types of distance learning library resources and services being provided and (b) to gain insight into the experiences of Association of Research Libraries' library personnel in delivering library resources and services to their distance learning library patrons. As noted in Chapter One, two research questions guided my investigation:

1. What library resources and services do Association of Research Libraries (ARL) member institutions offer to their distance learning library patrons?
2. What are the perceptions, challenges, and opportunities experienced by academic librarians at Association of Research Libraries (ARL) member institutions in delivering library resources and services to their distance learning library patrons?

The methods used in this research study involved two different approaches: content analysis of websites and library guides and semi-structured interviews with academic librarians.

The previous chapter presented the results from the content analysis and interview methods used in this study. In this final chapter, major findings, a discussion of their implications for academic librarians, and researcher reflections are presented. Additionally, recommendations are offered for future research studies related to online learning and academic librarianship.

Major Findings

The first research question addressed actual resources and services being offered at specific member institutions of the Association of Research Libraries (ARL). A content analysis of websites and library guides dedicated to distance learning resources and services for distance students and/or distance faculty was conducted in order to answer this research question. The types of and number of distance learning library resources and services were identified and tabulated for each of the 65 ARL institutions in the sample.

I found that the types of resources and services offered to distance learning library patrons were categorized into four main areas: Circulation Services, Reference and Research, Instruction, and Course Integration. Circulation Services encompass the physical and electronic library materials themselves and the methods used to deliver and/or obtain such materials. Reference and Research represent the receiving of direct reference and research assistance from a professional academic librarian via face-to-face or virtually. Instructional services refer to any library-related content delivering instruction such as workshops, tutorials, citation methods, the research process, and information ethics. Course Integration pertains to resources and services offered specifically to online teaching faculty members and include copyright resources, course management system assistance, and proctoring exams.

As identified on the institution's websites and/or library guides, the number of distance learning library resources and services ranged from two to 17. Florida State University Libraries offered 17, the highest number of resources and services, and Louisiana State University offered two, the lowest number of resources and services. It was only after conducting the interviews whereby I concluded that what may be listed on a website or library guide certainly does not constitute the full realm of distance learning library resources and services offered at the

institution.

The second research question was aimed at gaining insight into the perceptions, challenges, and opportunities experienced by academic librarians at ARL member institutions in delivering library resources and services to their distance learning library patrons. Six ARL academic librarians, two males and four females, participated in semi-structured interviews. The librarians interviewed varied in time served at their current position, from one year to 11 years. The diversity in delivering distance learning library resources and services was evidenced by their success stories as well as their struggles.

No matter the institution, the length of service, nor their diverse delivery methods, the librarians shared commonalities across our conversations. These commonalities were categorized into five main areas: Collaboration and Communication, Course Management System Support, Equal Delivery of Library Services, Institutional Distance Education Knowledge, and User Needs. Communication and Collaboration entailed librarian efforts to collaborate with faculty members and library colleagues, making personal connections with their users, marketing and outreach of services, and professional development. Course Management System Support involved experiences assisting both students and faculty through the course management system whether it be as an embedded librarian, linking to the library guide(s), designing customized tutorials, and collaborating on assignment consultations. Equal Delivery of Library Services affirmed the librarian's sense of responsibility to provide adequate and equitable access to resources and services. Institutional Distance Education Knowledge include the librarian's awareness of how distance education courses and/or programs are offered, understanding that distance students are not typical students, and understanding the methods and practices of instructional/educational technologies and online pedagogy. User Needs

encompasses the ability, or inability, to assess the needs of distance learning library patrons and to strive to meet those needs with currently available library resources.

Discussion

The first underlying finding, as realized from the content analysis of websites and library guides, is that an academic libraries' web presence provides a prime gateway for distance learners to access library resources and services. This finding is consistent with previous research conducted by Adams and Cassner (2002), Jurkowski (2003), and Grabowsky (2013). A brief recap of these researcher's studies and findings are detailed below to provide evidence of consistency with my research findings.

Adams and Cassner (2002) analyzed the content and design analysis of ARL libraries' websites. Their findings not only revealed that "distance education home pages are a primary venue to reach distance learners," but also that distance learners' "primary contact with libraries is through a Web page (Adams & Cassner, 2002). They found that 83% of the ARL websites analyzed contained information pertaining to 'primary contact with librarians via a web page,' and as such, this percentage relatively compares with my finding that 60 of the 65 (92%) ARL libraries' websites and library guides reviewed offered the 'Ask A Librarian' feature; a feature that puts users in direct contact with an academic librarian.

Jurkowski's study revealed a disconnect between an institution's distance learning offerings and the library's full range of available Web services. At the time of his study, Jurkowski noted academic librarian's quick, and unprepared, venture into providing distance learning services via the Web without first understanding distance student's needs. My conversations with Darlene, Natalie, and Jerald on defining distance students and assessing their needs read as evidence that today's academic librarians, like the academic librarians Jurkowski

interviewed over 10 years ago, continue to struggle with discerning the differences between traditional and distance students.

The struggle to define and discern the needs of distance learners has resulted in either a lack of or overwhelming abundance of distance learning library resources and services listed on libraries' websites and library guides. As a prime gateway to accessing library resources and services, an academic libraries' web presence can be an intimidating destination for distance learners. An example of this intimidation is evidenced by Kaylee's distance learning students, when she asked them to report on her library's web services. She quoted them as saying, "you guys give us so much information and we can't keep track of it all. It's overwhelming" (Kaylee, personal communication, March 18, 2016).

In her literature review discussing meeting the information and interaction needs of distance students, Grabowsky (2013) provided examples to support the notion that library guides have the capability of reaching distance learners at their point of need. The reiteration of the comment by Darlene (personal communication, March 15, 2016), that "it's distance learning students get the same service they would if they were here on campus," offers an example of a librarian's thinking behind the scenes to meet users at their point of need, be it via a webpage or library guide.

My investigation into the first research question validates the notion that having a library web presence for distance learners is an essential component to delivering distance learning library resources and services. My findings are in line and consistent with the aforementioned previous research studies. Knowing this, the following sentiment from Gibbons (2007) still stands as a poignant reminder for all academic librarians: "The Internet and Web cannot replace the academic library because, although technology can be a better information provider, it cannot

substitute for the essential role of humans in the creation, transmission, and dissemination of knowledge” (p. 11).

The second underlying finding, as realized from my semi-structured interviews, is that academic librarians are still struggling to overcome the divide of ‘distance,’ in all its forms, in order to provide adequate and equitable distance learning library resources and services. As distance learning library patrons are where they’re supposed to be, it is up to the academic librarians to meet them at their point of need. Crossing that divide entails numerous efforts including, but not limited to educating users, marketing their collections and services, and discovering/identifying the information needs of their distance learning users. While there has been much research on these efforts over the past 10 to 15 years, the findings in this study did not reveal any new approaches or strategies being used to implement the delivery of distance learning library resources and services. What the findings did reveal is the notion that librarians will continually change and grow their existing services and practices in direct response to the needs of their particular distance learning communities.

A third finding in this research study stemmed from the content analysis and was affirmed by the individual interviews. This finding is that the numbers of distance learning library resources and services documented from ARL institution’s webpages and library guides mirrored sentiments expressed during the interview conversations. For example, Natalie, being a novice distance librarian who struggled making connections with the technical support group at her institution, had a difficult time adding resources to the library webpage. Her institution, in part due to her length of service, was part of the subgroup of institution’s offering the lowest numbers of resources and services. If this research study were to be replicated, the number of distance learning library resources and services visibly present on an institution’s webpage or

library guide would be a direct relation, not a causation, to the challenges and opportunities faced on a day-to-day basis.

Implications for Practice

Results of my research revealed the types of distance learning library resources and services being offered at ARL institutions as well as the experiences by academic librarians in delivering those services. The findings of this study reflect the 65 academic institutions reviewed and six academic librarians interviewed and cannot be generalizable to all ARL academic institutions. Nevertheless, they are a genuine representative group of higher education institutions providing distance learning library resources and services.

From my research, I've drawn the following implications and offered potential implementation examples, for practice concerning academic library resources and services for online distance learners:

Implication 1: For a future defined by ongoing change, academic librarians need to remain proactive and aggressive in supporting and promoting the learning process in any environment and with any technology. Academic librarians could embrace a 'change agent' attitude; an attitude that possesses the vision and skills to profoundly alter the distance learning culture and practice amongst higher education academic libraries. For example, as change agents, academic librarians can develop a mindset to be solution-focused, prioritize responsibilities, continuously evaluate procedures currently in practice, and step outside their comfort zone to try, and/or learn, new ways of accomplishing support services.

Implication 2: Establish a strategy for continuing education and continuing understanding. Education in the instructional technology discipline will help to strengthen academic librarian's understanding of how people learn and how best to design instructional

materials to help foster that learning. Understanding user needs and usage of resources and services will help shape academic collections and instructional methods as different users make different choices when utilizing resources and services. Continuing education and understanding can occur through participation in freely available online course offerings or through learning opportunities such as courses, discussion forums, and webcasts, offered by the *Online Learning* section of the ACRL.

Implication 3: Engage in evaluation and assessment research to better understand the needs of the learners and educators within the distance learning community. Conducting focus groups, virtually and face-to-face, with learners and educators could provide a narrower glimpse into what works and what doesn't work for distance learners and educators. As the member institutions of the ARL are highly focused on research, perhaps the academic librarians could work with the institutional department of research to design a long-term study that tracks and follows distance learners as they progress through several courses or semesters.

Implication 4: Work more collaboratively with the information technology department. Break through the 'territorial' boundaries between the departments. The online learning environment is the meeting ground for technology and instructional learning. What better institutional units to join together than IT and academic librarians; units that can work together openly and without hesitation all for the betterment of their users. Collaboration efforts could include connecting with instructional designers to receive training on educational technologies, discussing opportunities for bringing the library into the learning management system, developing online instructional assignments or modules, and sharing articles, scholarly and non-scholarly, that focus on bringing their units together.

Implication 5: Engage in scholarly dialogue amongst other distance learning librarians

discussing issues, concerns, and potential changes to benefit in their current and future efforts delivering distance learning library resources and services. Academic librarians can actively engage in scholarly dialogue by contributing and exchanging ideas in online community pages, attending annual face-to-face or virtual conferences, and reading or writing scholarly articles pertaining to distance learning library resources and services.

Researcher Reflections

The pursuit of my doctorate degree has been an invaluable learning experience. Forefront in my pursuit has been this research study; a study which catered to my strong belief in the relationship between academic libraries and instructional technologies in institutions of higher education. While I have gained a clearer understanding of the research process, that is, its evolving and iterative nature, its time-consuming efforts, and its strength in expanding one's perceptions of a phenomena, I also have gained a better understanding and appreciation for my own professional values and preconceived notions of academic librarianship. I learned that the work academic librarians do to provide library resources and services to distance learners and educators is ever-evolving to support an individual's basic need to perform in an information-rich world. This research process has afforded me a wealth of strategies and resources from which I can learn in order to improve the quality of distance learning library resources and services being provided to distance learners and educators through my work administering an online learning environment.

Future Research

The following recommendations are offered for related research in the fields of online/distance education and academic librarianship:

1. Replicate this study in a similar fashion by targeting academic libraries at national institutions of higher education that offer distance education programs in order to draw results from a more diverse group of libraries. Having a wider pool of academic libraries to draw upon and obtain data from would allow for more than just frequency counts and types of distance learning library resources and services being offered.
2. Investigate the use of scenarios in long-range planning efforts of distance learning library services. Scenarios focus on the future and can inform strategic planning in academic libraries that support distance learning programs (Casey, Cawthorne, & Citro, 2014). Scenarios offer academic librarians a chance to suspend their beliefs and assumptions in order to imagine alternative futures, re-think library services, and identify uncertainties and potential risks.

Conclusion

“A good library is the heart of every campus. That is neither dreamy romanticism nor metaphor; it is a simple statement of fact” (Crawford, 1999). As a symbolic structure of scholarship and service, the physical entity that is an academic library in no way limits the ability to reach beyond their walls. “While our patrons were once expected to come to the library, we now ask how can we better reach the patron, with distance no longer a barrier” (Snyder, Logue, & Preece, 1997). The message coming out of this study is one of understanding that a library is driven by service; whether that service is face-to-face or online is extraneous to the ideal of reaching all patrons adequately and equally.

I end this dissertation with a quote from Shelby Foote, an American novelist and a noted historian of the American Civil War. Upon visiting his alma mater’s library, the Wilson Library at the University of North Carolina at Chapel Hill, Foote explained the influence and impact this

library had on his writing career. Foote developed a deep respect for libraries during his time at the university. No matter that he was not referring to distance learning library resources and services, his poignant proclamation reflects a sentiment I wholeheartedly believe in, in regards to academic libraries worldwide: “A university is just a group of buildings gathered around a library. The library is the university.” (Chepesiuk, 1994).

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Appendix

Appendix A

Email Invitation for Interview Participation

DATE: [Month, Day, 2016]

FROM: Rosie Sasso [rsasso@utk.edu]

TO: Name of Library Staff Member [email address]

SUBJECT: Invitation to Participate in *Distance Learning Library Services Interview*

Dear Librarian,

My name is Rosie Sasso and I am a doctoral candidate in the Department of Educational Psychology and Counseling at The University of Tennessee, Knoxville. For my dissertation, I am conducting a study to identify and examine current practices in the delivery of library resources and services to distance learners at member institutions of the Association of Research Libraries. Talking directly with academic librarians in the field is a significant aspect to my research in understanding how academic libraries are serving and meeting the needs of their distance learning patrons.

Participation entails an audio conference session. During this interview we will be discussing you and/or your academic libraries' experiences and perceptions in delivering library resources and services to distance learners at your institution. The interview should take no longer than one hour of your time. Your participation is voluntary and you have the option to end your participation at any time.

Once again, you are invited to participate in my research study. If you agree to take part, please read the attached informed consent form, sign it, and return a copy in a reply email to me. If you have questions, concerns, or comments about the interview, please do not hesitate to contact me at rsasso@utk.edu or (865) 974-7291.

Thank you in advance for your time and participation consideration.

Sincerely,

Rosie Sasso, M.A., M.Ed., Doctoral Candidate
Department of Educational Psychology and Counseling
The University of Tennessee, Knoxville

Appendix B

Informed Consent Statement

Academic Library Resources and Services for Online Distance Learners: An Exploratory Study

INTRODUCTION

You are being invited to take part in a research study. Before you agree, it is important that you read the following information to be sure you understand what is being asked of you.

PURPOSE OF STUDY

The purpose of this study is to identify and examine current practices in the delivery of library resources and services to distance learners at member institutions of the Association of Research Libraries.

PROCEDURES

If you agree to take part in this research study, you and the researcher will engage in an interview that should not take more than one hour of your time. The interview will take place using Zoom, an online-meeting software program, and will be audio-recorded. The audio recordings will be destroyed after they are transcribed.

RISKS

There are no foreseeable risks by taking part in this study.

BENEFITS

While there are no direct benefits to you if you take part in this research study, findings from this study will contribute to the larger body of research on distance education and academic library resources and services.

CONFIDENTIALITY

The information you provide in this research study will be kept confidential. Your information, including your signed informed consent form, will be stored securely, on a password protected data storage device in a locked drawer in the researcher's office located on the UTK campus, and will be made available only to the researcher and her advisor. No reference will be made in oral or written reports which could link you to the study.

CONTACT INFORMATION

If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of taking part in this study), you may contact the researcher, Rosie Sasso, at rsasso@utk.edu and (865) 974-7291 or her advisor, Dr. Lisa Yamagata-Lynch at lisayl@utk.edu and (865) 974-7712. If you have questions about your rights as a participant, you may contact the University of Tennessee IRB Compliance Officer at utkirb@utk.edu or (865) 974-7697.

PARTICIPATION

Your participation in this study is voluntary; you may decline to take part without penalty. If you decide to take part, you may withdraw from the study at anytime without penalty. If you withdraw from the study before data collection is completed your information will be destroyed.

CONSENT

I have read the above information. I have received a copy of this form. I agree to take part in this study.

Participant's Name (printed) _____

Participant's Signature _____ Date _____

Appendix C

Interview Guide

This interview is intended to gather information on distance learning library services as provided by academic libraries/librarians in targeted Association of Research Libraries member institutions.

- Contact Information:
 - Name
 - Institution
 - Email
 - Position
1. Could you describe how well you believe that the library meets the needs of distance education students?
 2. How does the library determine services to offer to distance education students and traditional students?
 3. In what ways has your web site changed as distance education offerings have grown?
 4. Have you looked at your distance learning library website as your distance learners will?
 5. How is the authority for web site development handled through the library? Distance education services?
 6. Does your library have a specialized department that is completely devoted to serving the needs of distance learners? If so, is there a specific budget that is allocated for distance learning services and outreach?
 7. How does your reference department provide research assistance for distance education students?
 8. What methods of marketing is your library using to inform all distance learners of the library services available to them?
 9. How do librarians find out what students want? How do you solicit feedback?
 10. Are there any types of library programs for distance education faculty? Outreach programs? How do you reach these faculty?
 11. Do you know of any problems or issues with your web site or services that are currently being looked into?
 12. Can you describe any challenges that have recently been solved?
 13. What is the library looking into for near-term changes?

14. What services have you wanted to add but haven't been able to?
15. Are there any issues impacting your libraries' implementation of new distance learning technologies?
16. Are there any related issues that have crossed your mind as we've talked that you would like to add?

Appendix D

Permission Request and Approval to Adapt Interview Guide

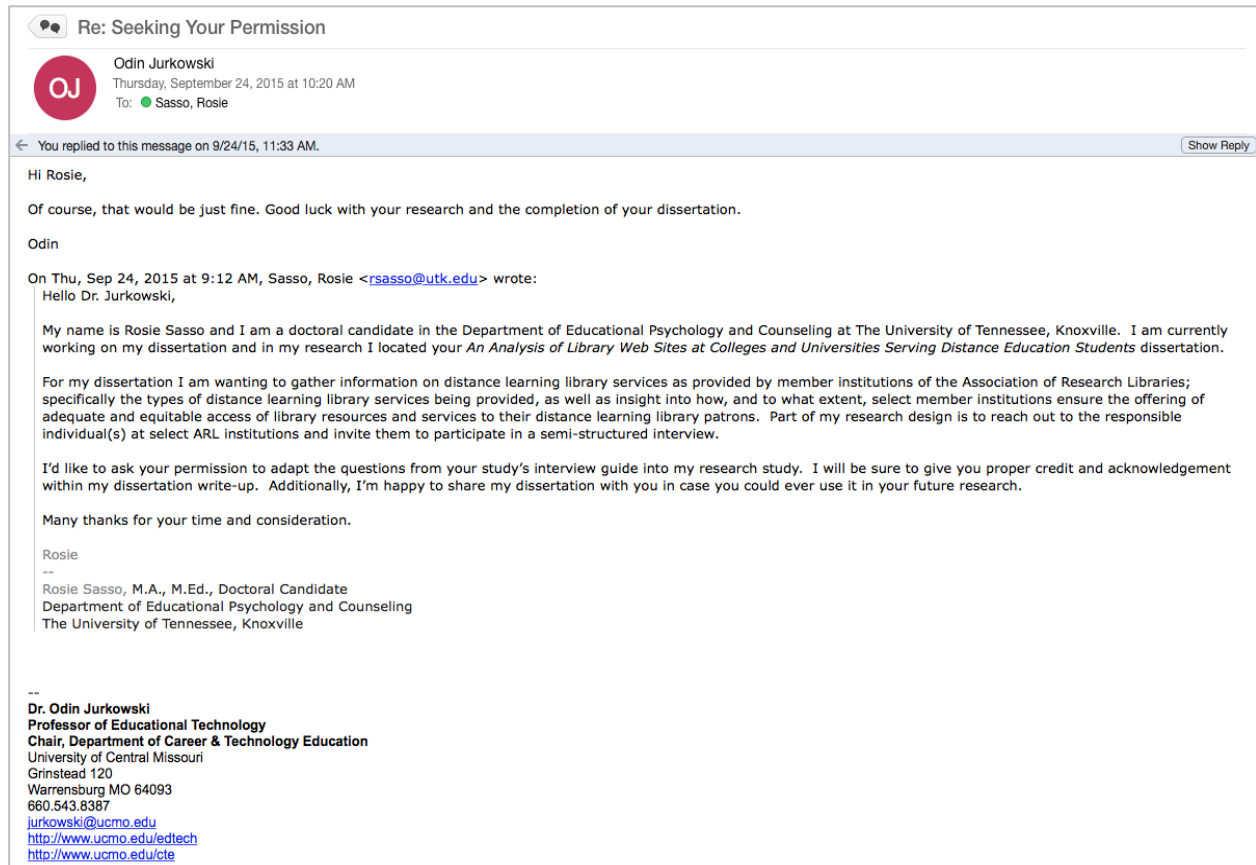


Figure 2. Permission Request and Approval to Adapt Interview Guide. This figure illustrates the email communication requesting and obtaining approval to adapt an interview guide.

Vita

Roseanne Michele Sasso was born in Cedar Grove, New Jersey on November 3, 1974. She is the youngest child born to Leonard and Rose Sasso. She has four older siblings; three brothers and one sister. The family moved to South Florida when she was four years old.

She grew up in Coral Springs, Florida and after graduating from J. P. Taravella High School, she attended The University of Florida in Gainesville. In June 1996, she earned a Bachelor of Science degree in Mathematics. After earning her undergraduate degree, she moved to Tampa, Florida where she attended graduate school at The University of South Florida. From August 1996 to May 2001, Rosie worked in technology and library related graduate assistantship positions while completing course work to achieve two master's degrees; a Master of Education in Instructional Technology, and a Master of Arts in Library and Information Science. After graduation, and for the next seven years, Rosie lived and worked in the Tampa Bay area as a school library media specialist in a PK-12, independent, college preparatory school, as well as in a public charter high school.

In July 2008, she moved to Knoxville, Tennessee with her life partner Kathy, and since October 2008 has been working at The University of Tennessee, Knoxville for the Office of Information Technology. As an *Instructional Technology and Research Support Specialist*, she provides instructional and technical support for faculty, staff, and students utilizing the university's online academic learning environments. During her time with the university, Rosie has assisted with the design, development, delivery, and evaluation of numerous online courses and training materials. In addition, she has been able to provide pedagogical best practices for online and distance instruction through the facilitation of group workshops, individual consultations, and professional conference presentations.

She was accepted into The University of Tennessee, Knoxville's graduate school as a Ph.D. student in the Department of Educational Psychology and Counseling. She began her course work in August 2009 and upon acceptance of this dissertation will receive her Doctor of Philosophy degree in Instructional Technology in December 2016.