
This study describes several interviews with reference librarians in two libraries of the University of North Carolina at Chapel Hill. The interviews were conducted to determine how the advancements of electronic media have changed the role of reference librarians in academic libraries. A series of questions were asked during each interview in order to learn the participants’ views on their role as reference librarian. Questions pertaining to the participants’ current role in their work setting and how they handle various needs of patrons were asked. Participants were also asked to provide opinionated statements pertaining to the historical progression of the field of reference librarianship in academic libraries and how or if electronic media has influenced it. Among other things, one significant finding was how reference librarians have now taken on more of a teacher role or that of an “information educator.”

Headings:

- Academic libraries – Reference Services
- College and university libraries – Reference Services
- College and university libraries – Staff
- Electronic reference services
- Reference librarians – Education
HOW HAS THE ROLE OF THE REFERENCE LIBRARIAN IN ACADEMIC LIBRARIES CHANGED DUE TO THE ADVANCEMENTS OF ELECTRONIC MEDIA?

by

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Introduction

Reference services are one of the most important aspects of an academic library. Throughout the years, the role of the reference librarian has changed due to technological advancements. With the invention of the online public access catalog, electronic databases and indexes, and the ever-popular World Wide Web, reference services have become even more essential to the academic library. The rapid growth of electronic media in reference services has placed reference librarians in a unique position. The question in response to this is how has the role of the reference librarian in academic libraries changed due to the advancements of electronic media?

Due to the recent advancements of electronic media, reference librarians are taking on the role of technology instructors or trainers. According to Bopp and Smith (2001), the primary task of a reference librarian is to help individuals who have reached barriers during the process of seeking information, find what they need using relevant sources. Keeping in line with the role of the reference librarian, the Reference and User Services Association (a division of American Library Association that is responsible for supporting the development of reference services for library users of all ages) has guidelines for the development and delivery of reference services. They are as follows: “information services in libraries take on a variety of forms including direct personal assistance, directories, signs, exchange of information culled from a reference source, readers’ advisory service, dissemination of information in anticipation of user needs or interests, and access to electronic information (Bopp and Smith, 2001).”
The role of the reference librarian has changed significantly throughout the years. In order to study the role of the reference librarian in an in depth manner, I have chosen to conduct interviews with reference librarians in academic libraries. This style of research was chosen in efforts to present a historical/comparative research study of how the role of the reference librarian in academic libraries has changed due to the advancements of electronic media. The literature review presents historical information on the development of the role of the reference librarian in academic libraries as well as recent changes in the field brought about by those advancements.

**Background**

This particular study took place on the campus of the University of North Carolina at Chapel Hill (UNC). There are a total of 20 libraries on this campus, which house at least 14 special collections. The university’s student body population exceeds 25,000 and it is also the nation’s first state university to open its doors and the only public university to award degrees in the 18th century. Two of the university’s largest libraries were used in this study, the Walter Royal Davis Library (graduate library) and R.B. House Undergraduate Library (UL), which provide the university with an abundance of print and electronic resources.

Davis Library is the largest library that the University of North Carolina at Chapel Hill has to offer and it is open 100 hours a week. In addition to measuring over 400,000 square feet, it accommodates seating for over 2,000 users and includes carrels for at least 1,000 readers. Davis Library has reached national standing because of its position as a major research facility. A few of the collections that are housed in this library include: the main general, humanities, and social sciences collections, government documents and
microforms. The chief reference and interlibrary borrowing services along with the administrative offices and central departments for the university libraries are located in Davis library as well.

Davis Library has been deemed as highly technologically advanced because of its extensive collection of public computers including those in the library’s very own computer and instructional labs. These computers provide access to a wide range of databases and other digital resources. An essential service provided by Davis involves the use of a collaboratory where library staff help faculty integrate digital resources into web-based teaching and research projects. The library also provides laptop computers that can be checked out by faculty and students for three-hour periods. There are over 2,3000 Internet connections and wireless communications available in Davis library.

The R.B. House Undergraduate Library opened in 1968 and was designed to cater to the undergraduate student body’s needs. House has been renovated recently and is equipped with new furnishings, equipment, as well as an improved building infrastructure. This particular library houses a core book collection aimed at undergraduates and services such as reserves, media, reference, and instruction. Both Davis and the Undergraduate Library provide access to the online catalog, which lists the majority of both libraries holdings. The only items that are not listed are a number of CD-ROMs, government documents, maps, microforms, and older monographs. Access to these resources is through a card catalog, special files, and printed guides in the reference and microform collections.

The University of North Carolina at Chapel Hill along with 60 American and two Canadian campuses is a member of the Association of American Universities. There are
a total of 69 bachelor, 111 master’s, and 75 doctoral degree offerings at UNC as well as professional degrees in such fields as dentistry, medicine, pharmacy, and law. As of fall 2002, UNC’s student body included nearly 26,000 students mainly from North Carolina and the rest other states and countries. The 15,961 undergraduate students, who make up the majority of the university’s student body is instructed by a 3,000 strong faculty membership.

**Literature Review**

Reference services in academic libraries have historically been a primary aspect of academic institutions. Reference librarianship originated in the second half of the nineteenth century due to the widespread interest in education. The abundance of high school educated individuals caused an increase in the development of universities and the expansion of their libraries. In order to provide users with the skills they needed to maneuver through the library and its resources, a mediator was developed, hence the invention of the reference librarian. During this time period students at academic institutions often sought guidance and instruction in carrying out assignments by using encyclopedias, indexes, and other book resources. Once students were unable to find information on their own, the reference librarian would then render their services (Bopp and Smith, 2001).

The twentieth century brought about a change in the role of the reference librarian. One unique change in academic libraries occurred during the 1930’s when separate units were created to serve faculty and students in specific subject departments. This soon developed into the establishment of special libraries, whose role was to provide service to employees of academic institutions instead of just housing collections. It was
during this time period that the reference librarian evolved from face-to-face interaction with patrons at the desk to using the telephone or mailing system to address patron requests from outside of the library. Now, reference librarians are carrying out classroom and in-house (the library) instruction to provide students with the skills they need to maneuver through today’s academic library (Bopp and Smith, 2001).

An interesting quote appears in Barbara Moran’s book, “Academic Libraries (1984),” and it reads: “Academic libraries must search for a way to superimpose modern information services upon their traditional functions while they make the transition into the information age.” It is because of the technological advancements in academic libraries that more sophisticated librarians are required. According to Moran (1984), the role of the academic librarian would be to provide more effective service such as instruction in library and information skills to library users. Over time, the reference librarian has primarily adopted this role.

It was during the 1960’s that a widespread interest in the application of computers in libraries occurred. Computers were popularized because of the level of assistance they provided in data processing, which decreased workloads of librarians at that time. Because most universities had no access to time-sharing systems until the late 1960’s, all of the systems required the use of a mainframe computer. These computers were designed to automate acquisitions, circulation, and cataloging. Library automation grew during the 1970’s and interest in them increased due to commercial firms selling complete packaged systems with software, installation, training, and continuing support for the system. Library automation tremendously decreased the workload of reference librarians and academic library staff in general (Moran, 1984).
Many studies have proven that the role of the reference librarian is a lot more advanced than it was in the past. In a study entitled “Reference Services in the New Millennium (2001),” Tenopir, and Ennis found that most of the rapid growth and change in university reference services could be accredited to the development of the Internet. This particular study focused on the change of reference services within a ten year time period (1991-2001). The study showed that the range of electronic options in the academic library included, but are not limited to: the CD-ROM, loading databases on a local computer, intermediary online, end-user online, and the World Wide Web.

The results of the Tenopir and Ennis (2001) study showed that while CD-ROMS are being phased out little by little, online services in universities are increasing. The growth in subscriptions to databases for student and faculty are one of the most rapid developments. The universities are also emphasizing self-service online sources for reference questions. The development of such services pose challenges in helping users navigate through the sources. It is here where the reference librarian has to overcome barriers of providing increased services with little staff and training where they must take on the role of “teacher/trainer (Tenopir, 1998).”

Research performed in 1990 by Havener, showed that certain ready reference questions are answered quicker using online sources. Online sources have become so popular with students that they often expect to find everything they are looking for through online searches. Because there is a lack of skill in how to use certain databases or online indexes, reference librarians have been drafted as the main source of instruction in this area. According to Tenopir (1998), situations such as these have presented reference librarians with more complex questions from students. Instead of students
asking where they must look to find information on an assignment, they are now asking, “how do I use this database or which database do I use?”

In 1992, Tenopir and Neufang performed interviews with librarians from several academic libraries in efforts to discover the impact of electronic reference sources on reference librarians. They found that the academic work environment has undergone change due to the increased reference desk activity and time spent on manual tasks such as hardware troubleshooting. This sudden change in the work environment stemmed from the growth in patrons’ use of electronic reference options. The researchers also learned the opinions of the reference librarians in regards to how the work environment, formal instruction of users, and fundamental nature of reference work has changed (or not changed) in their jobs as electronic options have been added.

Tenopir and Neufang (1992) discovered in their interview with reference librarians that the reference area has become busier. For example, the introduction of the CD-ROM made the area busier to the point where the reference librarian sometimes spends additional time learning how to use the software while teaching it. There have been similar findings in a number of Tenopir and Neufang’s studies related to the topic at hand. For instance, in a study performed together in 1995, both researchers found that the impact of electronics on reference services could be grouped into five main categories:

1. Interplay of options (how one electronic reference option impacts another)
2. Changes in instruction duties or methods
3. Impact on the workload and tasks of library staff
4. Changes in attitudes of library staff and patrons
5. Integration of services (Ex. Computer work stations replacing card catalog)

During their 1992 study, Tenopir and Neufang also found that most of the interviewed librarians felt that electronic sources have had an impact on their formal library instruction programs. Print is mentioned during instruction, but topics related to electronic resources take up the majority of these type sessions. New instructional techniques became the norm because of the inclusion of electronic resources. Much of the instruction was individualized so that the librarians could cater to the students’ needs in the given moment.

Although the advancements of electronic media in academic libraries have caused reference librarians to encounter increased workloads, there is a sense of satisfaction that has derived from the change. The reference librarian who has to take on the role of teacher/trainer is learning the skills that they need to provide appropriate assistance to today’s students. Learning how to use specific databases or electronic media may present a challenge at first, but with practice and further instruction, reference librarians will be able to deal with higher patron expectations (Ex. complexity of questions asked by students and the notion that reference librarians should have all of the answers). Tenopir, 1998).

Methodology

During November 2003, interviews were conducted with reference librarians employed in two libraries on the campus of the University of North Carolina at Chapel Hill (UNC). A total of three participants were interviewed for an average of twenty minutes each. Participants were selected by recommendation of a professor in the School
of Information and Library Science at UNC. The professor who recommended the reference librarians as participants was very familiar with their levels of resourcefulness and current work positions. Reference librarians were chosen from Davis Library and The R.B. House Undergraduate library due to their status as being the largest and most resourceful libraries on the university’s campus.

Each librarian participated in a face-to-face interview with this researcher in the comfort of his or her personal offices. The interview consisted of twelve questions pertaining to each participant’s current role at work and their personal views on specific role changes (if any) within their job that may be due to the advancements of electronic media. The interviews were conducted within 24 hours. Each librarian was interviewed once and his or her responses were recorded on a laptop computer in order to easily make corrections and add additional statements during the course of the interview. Participants were also given the option whether or not to respond to any question. Consent was secured from each librarian prior to the interviews.

Although participants rendered short responses for some of the questions, they were allowed to take as much time as needed to present a clear response. If a response was unclear to the researcher, the participant was asked to be more specific or to repeat their response. Copies of the interview questions were given to each librarian at the beginning of the session to allow them to pace themselves and remain abreast on the questions. At the end of the interview participants were allowed to keep a copy of the questions.

Code numbers were randomly selected and assigned to each participant in order to ensure their rights of privacy. Participants were fully cooperative during each interview
session to the point where none of the questions were left unanswered. During data analysis, responses from interview questions were printed out and marked with various symbols in order to analyze the data. Each question was revisited and the responses of the three librarians, compared. All similar and key point responses amongst the librarians were noted as that. On a separate document each response was later listed beneath the question they coincided with. Short responses to questions pertaining to the participant’s years of experience, hours of work, time of day spent at reference desk, and busiest hours of the day, were set up in table format to present a clearer representation for data analysis.

Analysis

Data gathered throughout the course of each interview confirmed that the role of the reference librarian in academic libraries has changed in a number of ways due to the advancements of electronic media. The extent of this change was dependent upon the librarian’s specific duties and their level of performance in carrying them out. After reviewing the details of each interview, I found that the role of the reference librarian in academic libraries has changed in that they are taking on more of a teacher role or “information educator,” as one participant put it. This role involves training and guiding patrons (faculty, staff, and students) through the use of electronic media to retrieve information. It also involves introducing patrons to various types of electronic media, (ex. databases, chat resources and search engines) and training them in operational skills. The majority of such interaction involves assisting users in accessing and maneuvering through the library website’s online resources such as databases and electronic indexes for journal articles and other forms of literary documents.
The following is an analysis of each participant’s response to the questions. The question will be presented followed by the response and analysis of each librarian’s response. Short answered questions pertaining to the participant’s work hours including time of day spent at reference desk, busiest hours of the day, and years of employment are presented in the table below.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Librarian A</th>
<th>Librarian B</th>
<th>Librarian C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.2 How many hours do you work per day?</td>
<td>8-9</td>
<td>Between 8 and 10</td>
<td>Averages about 8 hours, has had 12 and 11 hour days</td>
</tr>
<tr>
<td>Q.3 During what times of the day are you working at the reference desk?</td>
<td>Mon. 1-3 Tues. 5-10, 10-noon and 2-3, Thurs. at desk 9-11 and 3-5 and a couple of Sundays a semester, probably 3 from 1-5</td>
<td>Afternoons</td>
<td>I’ve worked pretty much all times, this semester, afternoons, Thurs. night 6-10, rotate on weekends, typically afternoons</td>
</tr>
<tr>
<td>Q.4 Which hours of the day would you say are busiest at the reference desk?</td>
<td>Morning is generally busier than afternoon</td>
<td>Wouldn’t say hours of the day because it varies more during the time of year…sometimes the morning, afternoon, just all depends.</td>
<td>The late morning and afternoon hours (11-3 here at Davis),</td>
</tr>
<tr>
<td>Q.5 How long have you worked as a reference librarian?</td>
<td>Since July of 2002 (librarian), as a grad student and undergrad, worked as a reference assistant (desk attendant)</td>
<td>A little over 3 years</td>
<td>I’ve had 7 years of professional experience and before that worked as a student at the reference desk for about a year.</td>
</tr>
</tbody>
</table>

Table 1: Responses of reference librarians to interview questions

Analysis of Interview Questions

Participants were asked a series of twelve questions in which four of them involved short responses pertaining to each librarian specifically, as presented in the table above. The other eight questions involved more detailed responses. The first question (Q.1) asked of each participant allowed them to describe their work in an academic
library. Each librarian’s role is very unique, yet all shared one similar quality, which was manning the reference desk.

Librarian A claimed to do a little of everything from reference works at the desk to supervising field experience students. Along with training some of the School of Information and Library Science students in the skill of reference librarianship they also handled management issues. Working on special projects and serving as coordinator of the English composition program for freshmen and the library’s instruction program served as additional roles.

The role for Librarian B entailed that of instructional services for all of the university’s libraries, undergraduates, and graduate students. The interesting thing about this respondent was that they do not do a lot of reference work. Their duties involved manning the reference desk, teaching classes, managing the collaboratory (small lab), and doing lots of usability studies. Most of their work is behind the scenes and it also involves tutorials and web designing for the library based on results of usability studies.

Electronic Services Reference Librarian is the official job title of Librarian C. This participant stated that they do “a little less instruction than most reference librarians.” This is the person who hears about all of the technical problems and performs trouble-shooting for CD-ROMS. Librarian C also participates in library search committees and is in charge of the email and chat reference services. In their own words, this librarian stated that they “do more behind the scenes reference work.”

It was indeed apparent that the role of the reference librarian in academic libraries has become more instructional like that of a teacher or trainer. Interestingly enough, a number of the interview questions yielded similar answers from participants. For
instance, when asked whether or not they believed that the role of the reference librarian has changed in comparison to 10 years ago, each participant answered yes (Q.6). Another similarity was found in how two of the librarians had to refer to sources other than their work experience to answer the question. This was because neither of them served as a librarian for 10 years. Having not been in the field yet, they had no real frame of reference for this question. Reference to past readings and their years of being in school pulled them through this question.

One librarian felt that the role of the reference librarian in academic libraries has become more of a teacher role, which often entails showing patrons how to retrieve information on their own hence adopting the instructional aspect of reference librarianship. Another librarian felt that a dramatic change has occurred in the role of reference librarians in academic libraries today in that they have become an “information educator.” This too serves as an instructional role. For example, this librarian felt that they spent a lot of time trying to explain to students how to use the online catalog and assisting them in the selection and use of databases. Another constant duty is training patrons on how to navigate the electronic tools and Internet.

When asked whether or not their role as reference librarian in an academic library has changed due to the advancements of electronic media an additional similarity was found amongst the librarians (Q.7). All participants answered yes to this question. The major findings again supported the idea of reference librarians in academic libraries becoming teachers. One librarian went as far as to say that the electronic advancements have made them “more teachers than answer givers.” This same librarian provided an example of how frustrating it is to direct students towards using better research tools such
as online databases and catalogs instead of search engines like Google. An even deeper expressed concern referred to the time spent in explaining to students why they need scholarly material.

It is important to note that while electronic advancements have been welcomed in most academic settings, it poses somewhat of a challenge to reference librarians. An interesting comment was made by one of the librarians who stated that although “we think technology makes things easier, it makes research more confusing and complex for librarians and teachers.” Staying along the lines of the previous comment, another librarian felt that change has definitely occurred and that “the more technology changes, the more we’ll have to adapt to it.” Although all participants agreed that change has occurred, one librarian felt that the change was somewhat small or neutral. Because their focus has always been on electronics, this librarian found themselves primarily steering patrons toward proper search tools so that they can retrieve data that is not a full-text database. Again we see the common denominator is that reference librarians in academic libraries have taken on the role of teachers or information educators.

During the interview, participants were asked to share the types of needs, including the most common that patrons have when they approach the reference desk (Q.8). Below is a list of those responses:

A. “I have to find an article on my topic and where can I find it?”
B. Technical Questions: how to scan, save images, laptop questions
C. Complaints about copiers, printers, Tar Heel tellers
D. Assistance with navigating the library’s website
E. Accessing article databases
The most common response shared by all of the participants pertained to patrons asking technical questions. There was a general agreement that students needed assistance with navigating through the library’s website which holds the online catalog and electronic indexes and databases. Again, it was mentioned that a large amount of training is involved during these sessions in order to provide the student with enough know-how in manipulating the tool. Students had to be directed to and trained in how to access the online information for present and future references.

Accessing information for class assignments was a strong second in naming the common needs. The Reference librarians expressed the notion of spending time daily in training students on how to access more reliable and valid information through the use of the library’s online catalog and electronic indexes and databases. We see in this case another instance of reference librarians taking on the role of information educator. The third commonality appeared to be directing students to proper officials when it comes to the malfunctions of personal laptop computers or the campus teller machines (specifically for UNC students, faculty, and staff) just to name a few.

The next two interview questions pertained to time spent addressing a patron’s need (Q.9) and whether or not needs are addressed within a shorter time span when electronic media is involved (Q.10). These questions were asked in order to get a general idea of whether or not electronic media can increase or hinder the process of assisting a patron. A unique finding was that the personality of the patron plays a factor in the process. One librarian felt that if the patron was in a hurry during the time of assistance, then a quick answer would often be given, but if the patron is more patient, approximately ten minutes will be spared.
Another librarian felt that “anywhere from a minute to twenty” can be spent on addressing a need, but “it depends on how advanced or in depth the question is.” The third librarian felt that some of the questions asked are hard but about five minutes or less is spent in answering questions. Questions pertaining to the whereabouts of copiers, restroom or other needs may take around ten or fifteen minutes. A commonality was found amongst two of the librarians in their reference to chat sessions. Patrons often ask questions through the use of the library’s online chat reference. These sessions can take up to an hour depending on the type of need.

A variety of responses were given for the question pertaining to whether or not needs are addressed within a shorter time span when electronic media is involved (Q.10 contd.). A specific problem was pointed out by one of the reference librarians regarding the problem with electronic resources. They felt that a lot of the students only want electronic resources not realizing that it is probably easier to access it in print. Other times, technical problems can just make the process take longer.

Another librarian did not feel that electronic media assisted in addressing needs in a shorter time-span. They went on to mention that it can in some ways take up more time especially when students choose to use the Instant Messenger chat service to ask a series of questions instead of coming to the reference desk. Additional time is spent in having to answer one question immediately followed by another, all via Instant Messenger. In reference to the previously mentioned question, the librarian who primarily deals with electronics shared that needs can sometimes, but not always, be addressed in a shorter length of time. This is dependent upon whether or not the patron’s question “really fits in well with a particular database.” In this case, “things will be fast,” but more detailed
questions pertaining to accessing information for a specific topic “would be easier to address with books.”

Addressing the needs of students, faculty, and staff play a vital role in the area of reference librarianship. Because of this, the librarians were asked if the advancements in electronic media have caused an increase or decrease in the amount of questions and assistance presented to them by patrons (Q.11). Once again, a similarity was found in that all agreed to there being an increase in the amount of questions asked and assistance provided. One librarian felt that as you get more online resources, more people would use them and eventually, have questions about them.

There were a number of comments made during the discussion of this question that supported the idea of the role shift of the reference librarian changing to an information educator. Because a lot of the new online reference sources are accessible via patron’s homes, the librarians shared that questions pertaining to this have increased. For example, one librarian stated that patrons ask, “why isn’t the proxy working and why don’t I get any results?” One librarian’s response to this was that “just because you can access the library’s online resources at home, it doesn’t mean that you will not have questions about it.” Another situation involved students often using electronic media to post questions that they are embarrassed to ask in person at the reference desk. This presents additional question/answer sessions for the librarians to engage in.

The final question presented to the participants and their responses to it are as follows:

Q.12: Are you satisfied or dissatisfied with the changes that electronic media advancements have presented in your role as reference librarian in an academic library? Explain.
Librarian A—For the most part, I am satisfied b/c they really do respond to what users and undergraduate students want, interfaces that are easier for students to use, as librarian, it’s our job to make things easier for students to use…the more advanced the better. Only disadvantage, is that just b/c a new electronic media device comes out, doesn’t mean that you will embrace it immediately, so getting on the bandwagon is a no-no…. Having so many web resources allows you to reach out to more assistance, there is so much help available on the website of the library that it should help people do research. “How Do I” guides (read a book, read a call number, guides to finding film reviews, tutorials) media is satisfying b/c you’re making life easier for the patron (hopefully).

Librarian B—I am satisfied, I like the advancements and it’s changing the profession significantly, but I want more change, I’m still pushing for more to happen. More access to more people, more systems to provide assistance, but I want it to be much easier, definitely room for improvement, but we’re on a good track.

Librarian C—I am very satisfied with the changes, having such a broad range of tools available to patrons is great, it makes it an intellectually challenging job….working at a reference desk is like working in the emergency room without the extras, but you never know what a patron is going to need help with. I like the changes that have occurred in the electronic area b/c it keeps everything fresh and challenging.

A commonality found in each librarian’s response is that there is a decent level of satisfaction with the changes that electronic media has presented in their roles as reference librarians. Only one librarian presented a drawback by sharing that “electronic media is not always embraced when it first comes out.” Another librarian’s distinct comment expressed their desire for more change with an emphasis on the systems being much easier for patrons to use. The fact that the electronic changes made things challenging to the job increased one librarian’s sense of satisfaction. All of the librarians in response to this question, felt that electronic media has made information more readily accessible to patrons.

The level of satisfaction displayed by the librarians presented a sense of hope that the advancements in electronic media will improve the patron’s process of obtaining information by making it easier. One participant shared a valuable comment and stated
that, “As librarian, it’s our job to make things easier for students to use.” This statement is a perfect example of a teacher showing concern for a pupil at their mercy and helping to educate that student. The underlying commonality found after reviewing the interview comments was that the reference librarian in an academic library eventually adopted a teaching role and/or that of an information educator. The interviewed librarians proved that the advancements in electronic media change the role of the reference librarian in academic libraries in a variety of ways.

Discussion

The interviews conducted for the study presented an honest perspective of how reference work in academic libraries has become increasingly active. It is in the academic setting that technology, particularly electronic media has had a major effect on the operation of libraries. The librarians in the study readily met the challenges of taking on such roles as information educator or teacher. This enabled the librarians to meet the needs of their patrons in such areas as training and/or guiding users in the manipulation of new electronic resources.

Individuals now live in an age where libraries are not just buildings that house collections. They are open avenues to an array of information and resources. The increase in electronic media resources has placed reference librarians in various roles other than what they are accustomed to. Reference librarians are aiming to become fluent in assisting individuals with finding information through electronic media as they are in finding things in print. With more training, reference librarians will become more efficient in answering even the most complex questions that are presented to them by
patrons. The role of the reference librarian in the academic library is increasingly changing and patrons need to know that there is still help available to them if they are faced with barriers due to electronic advancements.

For this particular study, the opinions of three reference librarians who work in academic libraries at one university were considered. While this was deemed appropriate for the study, there is always room for further exploration of any given research. For example, a larger pool of participants coming from more than one university would have provided a more comprehensive view of how academic librarians in a particular area or around the country feel about their role has due to the advancements in electronic media. An additional question pertaining to how patrons have adjusted to the new forms of electronic media after receiving training could have been asked during the interview. This information would possibly assist in a better understanding of whether or not the role change is beneficial to both reference librarians in academic libraries and their patrons. These suggestions should be taken into consideration during further analysis of the subject at hand.

**Conclusion**

The role of the reference librarian in academic libraries has undergone a significant amount of change due to the advancements of electronic media. The increased workload in general is an important example of how the role of reference librarians has been affected as well. Early research provides a historical view of the evolution of the role of reference librarianship in academic libraries. With the many advancements of technology, electronic media has taken on many forms in the academic
library. The invention of the CD-ROM, online databases and indexes, and the World Wide Web has resulted in reference librarians taking on the role of teacher and/or information educator.

Reference librarians are training themselves to become better instructors in the area of electronic media due to the complexity of questions presented by students who use the sources. Many reference librarians feel that the development of skills associated with operating electronic media in the academic library are an asset to their position. Users of the academic library have definitely benefited from the changes in the role of the reference librarian. The services rendered by reference librarians in today’s academic libraries provide patrons with assistance and training in how to use electronic media to find information.

Continuous research and observations will yield further results pertaining to how much the role of the reference librarian in academic libraries has changed. Time has truly shown the results of advancements in technology and how these accomplishments have enabled academic libraries to become the playhouse for consumers of education. History predicts that people will continue to pursue degrees of higher education and as long as this continues, there will always be a need for reference librarians in academic libraries. The needs of patrons will increase as will the formats of electronic media they will use. For this reason, the role of the reference librarian in academic libraries will continue to experience changes for years to come.
References


Appendix A

**How has the role of the reference librarian in academic libraries changed due to the advancement of electronic media?**

**Interview Guide for Reference Librarians**

**Title:** How has the role of the reference librarian in academic libraries changed due to the advancement of electronic media?

- How would you describe your work as reference librarian in an academic library?

- How many hours do you work per day?

- During what times of the day are you working at the reference desk?

- Which hours of the day would you say are busiest at the reference desk?

- How long have you worked as a reference librarian?

- Do you believe that the role of the reference librarian has changed in comparison to 10 years ago? If so, how much and why? Explain.

- Do you think that your role as reference librarian in an academic library has changed due to the advancements of electronic media? Explain why or why not. Please be specific.

- What types of needs do patrons have when they approach the reference desk and which are most common?

- How much time do you spend on average addressing a patron’s need?

- Are needs addressed within a shorter time span when electronic media is involved?

- In your opinion, have the advancements in electronic media caused an increase or decrease in the amount of questions, assistance, etc. presented to you by patrons? Explain.

- Are you satisfied or dissatisfied with the changes that electronic media advancements have presented in your role as reference librarian in an academic library? Explain.
Appendix B

Consent Form

Introduction to the study:

An invitation has been extended to you to participate in a research study of reference librarians in academic libraries at the University of North Carolina at Chapel Hill. This study looks at how the advancements of electronic media have influenced the position of the reference librarian in academic libraries. Carla V. Edwards, a graduate student of the University of North Carolina at Chapel Hill is doing this study.

Purpose:

The purpose of this study is to discover how the role of the reference librarian in academic libraries has changed due to the advancements of electronic media. I hope to use what is learned from this study to better understand the historical changes of the role of reference librarians in academic libraries.

What Will Happen During the Study:

This is what will happen during the study (which will take place in the comfort of your office or work area):

You will serve as a participant in an approximately half-hour interview where you will be asked to answer a series of questions. Your response to each question will be typed into a Microsoft Word Document on the interviewer’s laptop computer. The interview questions pertain to your role as reference librarian in an academic library. There are no right or wrong answers for the questions and they will be used solely for the purpose of the study. If you have any questions or concerns about being in this study, you should contact Carla V. Edwards at (919)-914-5659 or at edwac@email.unc.edu. You may also contact her faculty advisor Dr. Claudia J. Gollop at (919) 962-8362 or at gollop@ils.unc.edu.

Your Privacy is Important:

- Every effort will be made to protect your privacy.
- Your name will not be used in any of the information gathered for this study.
- Information gathered from the study will be recorded with a code number that will let Carla V. Edwards know who you are.
• Assigned code numbers and all responses to interview questions will be destroyed upon completion of this study.

**Risks and Discomforts:**

There are none.

**Your Rights:**

• It is your decision as to whether or not you want to participate in this study.
• If you choose to participate in this study, it is your right to end participation at any time.
• You may skip any questions you choose not to answer.

**Institutional Review Board Approval:**

• The Academic Affairs Institutional Review Board (AA-IRB) at the University of North Carolina at Chapel Hill has approved this study.

• If you have any concerns about your rights as a participant in this study, you may contact the AA-IRB Chair, Dr. Barbara Goldman at 962-7761 or at aa-irb@unc.edu.

I have been given the opportunity to ask any questions I have about this study, and they have been answered for me.

I have read the information in this consent form, and I agree to be in the study. There are two copies of this form. I will keep one copy and return the other to the investigator.

__________________________________  _______________________
(Signature of Participant)            (DATE)