

NEWSPAPER JOURNALISTS' INFORMATION SEEKING BEHAVIOR
WITH ONLINE INFORMATION SOURCES

By
Ann Romine Poteet

A Master's paper submitted to the faculty
of the School of Information and Library Science
of the University of North Carolina at Chapel Hill
in partial fulfillment of the requirements
for the degree of Master of Science in Library Science.

Chapel Hill, North Carolina

April, 2000

Approved by:

Dr. Evelyn Daniel, Advisor

Ann Romine Poteet. Newspaper Journalists' Information Seeking Behavior with Online Information Sources. A Master's paper for the M.S. in L.S. degree. April, 2000. 41 pages. Advisor: Dr. Evelyn Daniel.

A questionnaire survey of newspaper journalists at the Charlotte Observer and the News & Observer of Raleigh was conducted to gather data regarding use of online information sources (including the Internet, commercial sources, and internally created sources) in the work process of newsgathering. Journalists surveyed use online information sources more often than respondents in nationwide 1999 studies. A majority believes that online sources are very important to information gathering in their work. More than 80 percent use email and the World Wide Web daily, although less than half search internal or commercial databases weekly. Most never use forums, such as listservs and newsgroups, or applications such as FTP and telnet. About 65 percent of respondents are somewhat satisfied with their online skills, and only about ten percent are very satisfied.

Headings:

Use studies – End-user searching

Newspapers – North Carolina

Newspaper – Libraries

Library schools –Theses–University of North Carolina at Chapel-Hill

MASTER'S PAPER DISTRIBUTION AGREEMENT

The author will supply two print copies of his/her master's paper to the School of Information and Library Science. Both copies will include all charts, drawings, and photographs. Additionally two copies of all supplementary materials not suitable for binding, such as oversize artwork, must be provided. A total of five copies of the abstract will also be submitted. Submit a **PDF version of paper, saved electronically as directed by the Director of Information Technology Services**, for possible inclusion in an electronic database.

The Library retains one print copy for its archival collection. The second print copy will be made available for Circulation and Interlibrary Loan.

The author retains all rights to publish and/or sell the master's paper by any means at any time.

The author hereby grants to the School of Information and Library Science Library the right to reproduce, and supply for cost, copies of the manuscript in **microfilm** and/or **photographic** reproduction.

Please circle your choice and initial: I grant/do not grant. _____
(initials)

The author hereby grants to the School of Information and Library Science Library the right to reproduce, and supply for cost, copies of the manuscript in electronic reproduction.

Please circle your choice and initial: I grant/do not grant. _____
(initials)

The author warrants that the manuscript does not and when published will not violate any copyright or other right of others. The author hereby will indemnify and hold harmless the University of North Carolina and its School of Information and Library Science Library and its employees and agents for any damages it or they may suffer if this warranty is breached.

Library, School of Information and
Library Science, The University of
North Carolina at Chapel Hill

Author's Signature

Title as it appears on title page:

Newspaper Journalists' Information Seeking Behavior with Online Information Sources

Library Use:
Date _____

Paper No. _____

Table of Contents

I. Introduction	1
II. Statement of the Problem	2
III. Literature Review	9
IV. Research Design	19
V. Research Findings	23
VI. Summary and Conclusions	30
VII. Cited References	32
VIII. Bibliography	37
Appendix A: Cover letter.....	38
Appendix B: Questionnaire	39

I. Introduction

Electronic information sources have transformed many areas of communication in the past three decades in both scholarly and professional realms. Similarly, online systems have dramatically changed the production processes of mass media, from automated design and layout to digital audio and video. An equally significant revolution in information gathering has impacted journalists as online information sources have become commonplace (Ciotta, 1996; Garrison, 1998; Koch, 1991; Reddick & King, 1997).

The information environment of journalists is changing rapidly as the influence of information technology changes the way people communicate and share data. The range of available technologies has expanded enormously, from searchable electronic archives of the newspaper to commercial online databases; individual and group communication through email; and World Wide Web sites with downloadable text, data, images, and audio. Public and private data sets, the large-scale gathering and storage of which computers made possible, are available for analysis and interpretation.

The capacity to search consumer web databases or download huge amounts of data quickly and easily from government sites is changing the expectations and abilities of information seekers and consumers. These services have raised expectations of the scope of information that should be available electronically and how information is delivered. With online sources, reporters and editors are gaining the skills to find more

information, at a higher level of value to their work, in more customizable formats, and at faster speeds (Simon, 1999).

The work process of journalists has traditionally centered on access. Beats and specialties, whether crime, sports, or education, were designed based on physical access. White House reporters had to work in Washington in order to get the story. With today's online information sources (and the right equipment), journalists across the country have the same access to Federal, regional and local data, regardless of location. They also have a greater opportunity for more interdisciplinary coverage (Koch, 1991; Reddick & King, 1997).

More and more newspaper journalists are gaining desktop access to online information sources that were not available to them just a few years ago. Which sources are journalists using, and for what purposes? How often do they use online sources, and why? What is the impact of online information sources on newspaper journalists' information-seeking patterns?

This paper explains a descriptive study of online information use as part of the broader information seeking activity of newspaper journalists at two metropolitan news organizations.

II. Statement of the Problem

A. Background

Online, or electronic, information sources include data stored and retrieved by use of magnetic or digital hardware and software. Information may be stored on PC hard

drives or servers and retrieved from local area network servers in the building or across the world through applications such as telnet, gopher, FTP, or the World Wide Web.

Online systems first appeared in the business world in the late 1960s and early 1970s. “Dumb” video display terminals with word processing capabilities and connections to central processing units were introduced in the 70s at most large news organizations. Paper clipping files began to come online in the 1970s and 1980s as electronic archives, and indexing and abstracting became more important to creating a searchable, retrospective database of stories.

At many newspapers, the conversion to PC-based systems began in the 1980s; however, a large number of papers made the switch to personal computers on every newsroom desk only in the last few years (Boyer, 1999). Depending on the size and resources of the organization, newspapers may have purchased just a few PC workstations that were shared by newsroom staff that knew how to operate them, while the masses continued to produce their stories on VDTs running on 1970s technology. Layout and press production systems were often upgraded before information gathering capabilities were expanded, and many journalists like those at the Baltimore Sun or Charlotte Observer were introduced to desktop online access in the last two years (Boyer, 1999).

With the advent of new technologies (and newfound access to it), information has become available to the news media (and information consumers) in much greater volume and format. At the same time, news librarians have become increasingly important to the process of journalism (Garrison, 1998). Traditional library skills of selecting, gathering, organizing, and disseminating information are now extremely

valuable in the world of online information, where databases, and their creation, acquisition, and management, have become the primary source of reliable and current information for daily work in a competitive news media industry.

The power of many of these sources lets journalists search in ways that only librarians once did. Journalists can get ready reference questions answered faster and are becoming more aware of what online information sources exist. Librarians have more time for in-depth searching, training staff in online systems, and managing sources. Still, many librarians and journalists worry that traditional accuracy/authority/coverage/currency/scope considerations may be shortchanged by less experienced newsroom users or deadline pressures.

The traditional roles of news librarians and reporters are evolving with the widespread use of online information sources. Librarians who provide news research and reference services are performing some tasks traditionally held by reporters, and reporters are performing more tasks traditionally held by librarians. Many reporters now have the research skills and information source awareness to search electronic story archives, phone number databases, government web sites, and “expert” directories. Both reporters and librarians are involved in identifying story sources, verifying facts, and gathering background information to provide context to a story or frame story direction (Garrison, 1998). Librarians may also compile chronologies, or even receive byline credit for their contributions to team efforts (Ward & Hansen, 1991).

Primary responsibilities of the news library or research center typically consist of ready reference and news research; text and photo archiving, including the indexing and enhancing of electronic files; and training journalists in the use of hardware, software,

and searching techniques. Additionally, some roles have increased in significance with the advent of widespread online information use. These include monitoring the information marketplace; informing users of what is available and how to evaluate and use sources; and serving as an advocate of information systems and sources in the organization. Today's news librarians are often leaders in implementing technology applications, such as the creation of internal databases from publicly available raw data (Garrison, 1998).

Newspaper libraries support access to online information, and journalists' skills in using these sources, in many ways. Librarians create and maintain online research guides, indexed and annotated collections of useful online sources, often organized into specific beat or subject categories. Located on the organizations' Intranet (web pages available only to employees), the guides may include the range of online sources, from internally created databases, to commercial databases, to free public and fee-based web sites (Noack, 1997).

Through library training and independent learning, users are becoming more aware of the best capabilities that sources have to offer: sophisticated searching of web databases; huge data sets from government sites; archives of retrospective information and indexes from commercial vendors; increased speed of delivery; and the broad scope of information available from a variety of sources including the Internet.

In the absence of training, many users may not be aware that more appropriate and efficient information sources for news research exist in addition to what they can find on the Internet. Users, even journalists whose training should include critical evaluation of information sources, often need additional skills and for judging value and

completeness online. Without input from the library, some management decision-makers may even accept the fallacy that because so much information is now available on the web, “free” for the taking, traditional information services and sources are no longer valuable.

The increase in delivery formats and options, the sophistication of many search interfaces, and increased speed of access (beyond what was available just a few years ago) all contribute to many journalists’ changing attitudes towards basic information gathering as well as computer-assisted reporting (CAR). Awareness of the online information use patterns and attitudes of journalists, the library’s primary clientele, is extremely important for library staff to provide services and education at the correct levels of need.

Newspaper journalists use online resources for finding human sources and identifying experts, gathering background information and providing context, finding facts and ready reference answers, accessing government and company information, and locating obscure information not readily available elsewhere. Communication with sources, peers and readers through email and discussion groups is significant (Garrison 1997, 1999a).

Computer-assisted reporting is a concept that describes a range of computer-based tools for information gathering, information processing, and analysis (Garrison, 1998). According to the Poynter Institute, a nonprofit journalism education organization, computer-assisted journalism (CAJ) is an umbrella term for the use of computers in newsgathering. Poynter divides CAJ into reporting (primary data examined with spreadsheets, statistical analysis software, database software, or mapping software),

research (secondary sources such as databases and studies), reference (fact checking, spelling, descriptive statistics), and rendezvous (virtual communities and their newsgroups, listservs, forums and chats) (Poynter, 1999).

The use of online information sources in newsgathering is widely promoted by journalism educators, practitioners, and news librarians. Benefits include faster speed for gathering information, broader scope, greater depth, access to context and patterns from the sheer volume of information, and increased interpersonal communication options (Garrison, 1998; Reddick & King, 1997; Simon, 1999).

From a business perspective, journalists save time and money, and produce more relevant, better quality stories with the help of online information tools. This is meaningful in an era when mass media audiences are becoming increasingly fractured and the industry more competitive.

As with any information sources, there are inherent drawbacks to Internet sources. Many sites have unreliable information, verification problems, and lack of accountability. Journalism educators underscore the fact that online information sources should be evaluated by the same standards as traditional sources. The dynamic, fluid nature of the Internet's structure, and simple information overload are enough to discourage some. So are short deadlines and a lack of training in how to search (Garrison 1999a; Ruggiero, 1998).

B. Problem Statement

Due to recent implementation of online access on journalists' desktops, as well as evolving online information sources, journalists' online information use has not been fully documented.

Because information-seeking patterns may be changing rapidly in response to changing technologies and information products, research is needed to investigate the role of online sources in the journalistic work process.

This research study will contribute to the body of knowledge of journalists' information-seeking behavior with regard to online information. Findings have practical application for newspaper librarians and research specialists, whose mission it is to anticipate and support the information needs of reporters.

In order to best support the information needs of newspaper journalists, news librarians must better understand the online information-seeking patterns of journalists as representing a variety of specific information needs and searching processes. One way these specific needs may be grouped is by work role and assignment subject area, or beat.

“Journalists, like their counterparts in business, industry, and the research fields, demonstrate a wide diversity of information need across the population as well as within their own specialty areas” (Herron, 1986). Information seeking and gathering is basic to the primary work role of journalists, unlike engineers, doctors, nurses, lawyers, or other professionals. This primary work role is significantly different from other professionals so that existing information seeking models do not fully describe journalists.

C. Purpose of the Study

The purpose of this survey is to gather descriptive data regarding:

- Online information sources newspaper journalists routinely use in their work;
- Frequency of online information source use;
- Attitudes toward online information sources that may influence use patterns;

- Demographic variables that may influence use patterns, such as work role, subject specialty, age, or amount of training.

This data will be compared and contrasted to existing studies of online information use by newspaper journalists, and examined for correlations between variables and use patterns.

III. Literature Review

Information seeking is a complex process involving personal construction of question-definition, meaning, and relevance judgment. Information seekers may approach an information system (library catalog, database, or information intermediary) with an ambiguous sense of what they need (Belkin, 1980) and inability to express that need as a system-ready question (Taylor, 1968). Dervin's sense-making model presents information as subjective, cognitive, and situational. Information is defined as something that is in part constructed by the information seeker (Dervin & Nilan, 1986). Once information is found in response to a query, relevance judgments are necessarily subjective and may change with the cognitive changes of the information seeker (Saracevic, 1975).

Sonnenwald (1999) presents a model of information behavior in which the situation and context of an individual help determine the information need. The social network (connections and communication among individuals) shapes recognition of information need, the decision to seek information, and the selection of an information resource and access strategy.

Studies on information seeking of general populations show that people tend to use interpersonal sources first, people like themselves, when seeking information to solve a problem. Formal and institutional sources are used as a last resort (Harris & Dewdney, 1994).

A. Information seeking of professionals

Leckie, Pettigrew, and Sylvain (1996) examined published models of information-seeking behavior of engineers, health care providers, and lawyers. The authors analyzed and interpreted existing research and models of information seeking published from the 1960s to 1990s, including Orr's time-allocation model of communication behavior (weighing likelihood of success against time and cost), a systems approach (relationships between environmental structures), a project- or problem-based model, a cost-benefit model, and the clinic reasoning process (hypothesis generation and revision).

Information seeking of all groups considered is highly dependent on professional roles and tasks associated with them, as well as other contextual and personal variables. For instance, roles of health care professionals include patient care, continuing education, practice administration, teaching, and research. Roles of engineers include research and development, design, testing, manufacturing, and construction.

The Leckie model is a comprehensive one for information seeking that is potentially applicable to all professionals. Its six components are:

- Work roles (such as service provider, administrator/manager, researcher, educator and student).
- Associated tasks (assessment, counseling, supervising, report writing).

- Characteristics of information needs (based on individual demographics, context, frequency, predictability, importance, complexity).
- Awareness of various information sources (and variables of accessibility, trustworthiness, timeliness, ease of use, format, and cost).
- Sources (formal/informal, internal/external, oral/written, personal knowledge and experience).
- Outcomes (completion of task or goal, or initiation of new process).

As compared to academic searchers, professionals are concerned mostly with currency of information, speed of delivery, and searching by subject instead of by bibliographic detail. Comprehensiveness of information is not a primary goal as it often is with academics (Nicholas, 1996).

Pineda, Lerner, Miller, and Phillips (1999) conclude that small business managers tend to rely on internal, interpersonal information sources (personal judgment, friends and co-workers) for decision-making as opposed to sources outside their organizations. As the relative importance placed on a particular decision increases, so does information search activity; however, decision-makers are more likely to use more accessible sources even if the source quality is known to be less than other available sources.

B. Information Seeking Context of Newspaper Journalists

Much research on information seeking of journalists is outdated because the world of online information sources has changed so much in the last decade. It remains interesting as historical data, and is useful as a starting point to examine more current research.

Information needs of newspaper journalists are well established: reporters need large volumes of information, current and authoritative, and have a shortage of time to gather this information (Nicholas & Martin, 1997). Fabritius (1999) describes contextual factors that influence reporters' information-seeking patterns as concentric rings of a circle such as a bull's eye (see Figure 1). The outer ring represents the broadest factor, and the inner ring represents the most specific.

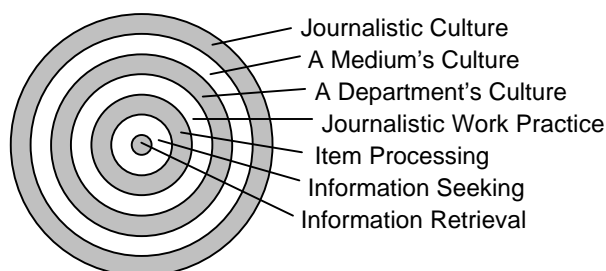


Figure 1: Targeting Journalistic Searching Behaviour (Fabritius, 1999)

Hansen, Ward, Connors, and Neuzil (1994) found that newspaper journalists use electronic archives of newspaper content to check facts and identify sources, but for few other purposes. Content analysis of seven stories showed that the reporters relied on traditional social and power structures in gathering information, a pattern that follows classic news making studies. However, investigative and project reporters, whose scope often includes qualitative and/or quantitative data analysis, used information technology heavily. In the majority of stories dealing with traditional news beats, experts and officials were the “fact” providers, with no contextual background material provided. Source statements were not questioned, examined, or judged by the reporter. Instead, in accordance with the classic news model, objectivity is assumed to have been achieved if sources from different points of view are quoted.

Vreekamp (1995) found that online databases in the newsrooms were used by reporters mainly for fact checking and not for analytical backgrounding or framing of stories. “For journalists, information technology points to more text and images, not to new qualitative abilities and new skills” (Vreekamp, p. 50). He also found no conclusive relationship between journalists’ level of education and intensive use of online databases (or news libraries); and no relationship between education and satisfaction with online source use.

In a study of online searching behavior of British newspaper journalists and politicians over a 1985-1994 period, Nicholas (1996) found that people in these groups (end users) created simpler search statements, used fewer commands, and created more searches that produced no results as compared to librarians (expert searchers) in the organizations. Although users reported poor access and little training in the online systems, they were able to perform quick searches, attributed by Nicholas to the urgency of information need and lack of time to find more in-depth answers. Work role and subject specialty influenced searching behavior. Financial journalists used online sources the most, because they had urgent and regular need for updated financial information. Sports reporters used online sources the least of all subject groups.

When asked why they did not delegate their searches to information professionals, many reporters stated that because they were not exactly sure what they were looking for, they were not ready to be specific with their questions. Robert Taylor’s hierarchy of question identification comes to mind; these reporters were at Q1, just beginning to identify an information need (Taylor, 1968). Their tendency to browse is a strong argument for continuing to train journalists to become more competent, experienced

searchers. If journalists are more aware of various online information sources and search strategies, they may be able to explore potential answers more effectively (Nicholas & Martin, 1994).

From the same 1985-1994 study, Nicholas & Williams (1999) created seven categories that characterize newspaper journalists' varying use patterns and attitudes toward the Internet. Their categories, in order of most use to least, are:

- net worshippers;
- the economically driven;
- the pragmatists;
- the occasional dippers;
- enthusiastic novices;
- the non-believers;
- the resentful dinosaurs.

During this time period, fewer than one in five journalists used the Internet.

Factors influencing use were:

- Seniority/job security and work flexibility. Young reporters typically had much heavier workloads, which precluded spending time searching online sources.
- Ease of access. Nearly one-third of journalists had no access to the Internet.
- Experience in searching. Older, veteran journalists had more online searching experience, which led them to feel more comfortable searching.
- Training. One academic source was quoted as saying that new technologies were not taught in journalism schools (as of 1997).
- Gender. All but one journalist participant in the study was male, but in general, male employees in the study outnumbered women three to one.

Specific categories of information sought by reporters using the Internet were: news services/wires; media sites for stories not picked up by wire services; government or university research sites; obscure, offbeat information unavailable through other channels; entertainment sites; directories (most mentioned by librarians and researchers); and newsgroups (used by only 20 percent of respondents, often specialists or freelancers).

C. Current Studies of Journalists' Online Information Use

Bruce Garrison, a University of Miami journalism professor, has conducted an annual survey of U.S. newspapers and their online information use since 1994. His study is intended to be a census of all daily papers with Sunday circulation greater than 20,000 (about 500 papers). Response rates have ranged from a low of 37.1 percent (n=185) in 1998 to a high of 56.5 percent (n=287) in 1995.

Surveys were addressed to only one individual in each organization (typically the general editor), who was meant to answer for all other staff members. The unit of analysis is the newspaper rather than the individual. Although there is no guarantee that results truly represent the range of users and depth of use, the data show trends and attitudes that are worthy of consideration.

In 1994, just 57.2 percent of newspapers used online sources in newsgathering. General usage climbed to 89.8 percent in 1997, 95.1 percent in 1998, and 92 percent in 1999. Use of online sources on a daily basis started at 27.4 percent in 1994 and rose to 63.1 percent in 1999. Papers that used online sources at least weekly made up another 25.4 percent of the total in 1998, and 22.7 percent in 1999. Another 7.4 percent of respondents in 1999 indicated that they never used online resources or did not answer (Garrison, 1999a, 2000a).

In 1999, newspaper organizations that used the Internet/World Wide Web represented 93.2 percent of the total; papers that used local government information online represented 71.6 percent (up from 54.1 percent in 1998); and papers that used Lexis/Nexis commercial database product represented 36.9 percent. Other sources mentioned were America Online (23.3 percent), PACER (25.6 percent), Autotrack/DBT (30.1 percent), FedWorld (21.6 percent), Usenet newsgroups (17.0 percent), bulletin board systems (19.3 percent), and other subscription data services. Some of these numbers may seem low, especially considering that 89.2 percent of these newspapers had their own web site in 1999. Apparently some newspapers still do not have access to (or choose not to use) online information sources that others now consider basic tools (Garrison, 2000a).

Respondents in the 1998 survey cited such common problems using web sites as no verification (54.1 percent), unreliable information (44.9 percent), badly sourced information (44.3 percent), lack of site credibility (43.8 percent), URL or site hard to find (24.3 percent), truthfulness (18.4 percent), and other problems (11.9 percent). (Garrison, 1999a)

Successes for respondents using online information in 1998 involved gathering background information (15.3 percent), finding difficult-to-find facts (9.2 percent), finding sources (8.2 percent), extending government coverage (8.2 percent), fully integrating online information into the newsroom (8.2 percent), and getting news fast (6.1 percent) (Garrison, 1999a).

The largest source of failure involving online information in 1998 involved not taking advantage of online sources (30.4 percent). Other problems included lack of access

(15.7 percent), not enough training for use (5.9 percent), trouble with government data (4.9 percent), and editors who don't support it (4.9 percent) (Garrison, 1999a).

In a similar effort, Ross and Middleberg (1999) have conducted annual studies of print media in the U.S. since 1993. Questionnaires were sent to managing editors at 1,509 daily newspapers and a response rate of nine percent was achieved. Magazine editors were also surveyed but only newspaper responses are discussed here.

The great majority of respondents (80 percent) report using the Internet at least once a day, and 13 percent use the Internet two to three times per week. Eighty-nine percent use the Internet for article research and finding reference material; 83 percent use it for email communication; and 65 percent use it for reading publications online. Other uses include finding new sources and experts (57 percent), gathering story ideas (50 percent), downloading data tables (36 percent), and newsgroup communication (16 percent). Almost one-third (27 percent) use email to communicate with readers at least weekly. Interestingly, 45 percent of respondents would choose to communicate with new or unknown sources in person, 33 percent would choose to meet over the phone, and 14 percent would choose to interact via email. Once a source is known, the telephone becomes the first choice for 45 percent, face-to-face is the first choice for 29 percent, and email is preferred for 20 percent (Ross & Middleberg, 1999).

In 1997, Nicholas, Williams, Martin, and Cole (1997) found little evidence that online information sources were displacing traditional sources for British newspaper journalists. Data were gathered through open-ended interviews from more than 200 newspaper journalists at multiple organizations. "Most" journalists did not have access to the Internet at work; the use of the Internet as a change factor was slow and uneven

among individuals. “New media lab” journalists (those who publishing online used online sources almost exclusively) were the exception. Most of the Internet users were found to be accomplished users of all available online sources and systems, with no correlation between age and usage levels. For the group as a whole, use of internally created databases was more common than direct Internet use.

Differences in attitudes and general usage patterns of journalists toward online sources presented by Garrison and Middleberg/Ross as compared to those presented by Nicholas may spring from the researchers’ different methodologies (organizational surveys versus open-ended interviews) as well as from variations in American and British news cultures.

D. Summary of the Literature

Use of online information sources by journalists started out slowly but has grown substantially over the past few years to a level where a majority uses online sources for newsgathering on a regular basis. World Wide Web use is widespread, but specialized functions such as participating in newsgroups and searching commercial databases are still limited.

Despite solid models of work role and task defining the information seeking behavior of professionals, varying online information use patterns have not been documented for traditional journalistic roles such as reporter, editor, columnist, and others.

IV. Research Design

A. Research Questions

The purpose of this study is to gather descriptive data to identify A) patterns of information-seeking by newspaper journalists in regard to online sources; and B) variables that may affect these patterns, such as individual attitudes toward electronic information sources and training in their use. The two goals of the study are to compare and contrast the data to the results of similar studies, and to identify differences in information-seeking patterns based on the variations among work roles and specialties of journalists.

The survey was designed to create a picture of use and attitudes based on individual responses representing a variety of work roles. Surveying individual journalists is important because prior research in the U.S. at least has gathered data based on the responses of news organization representatives. Garrison's annual surveys are directed to a single individual per newspaper who reports online information use for his/her entire newsroom staff, and the Middleberg/Ross study queries managing editors only.

B. Assumptions

The Charlotte Observer (Observer) had a Sunday circulation of 301,654 in 1998 (Editor & Publisher, 1999). The Observer implemented a searchable electronic archive of its paper and other Knight Ridder-owned papers in 1985, accessible from terminals on staff desktops. Beginning in 1995, personal computer stations were introduced into the newsroom as shared stations with Internet access and dial up connections to Nexis "Quick Check," a forms-based end-user product. Library and technical staff gave

introductory training courses to the Internet. By 1996, newsroom staff shared about eight PC stations. In 1998, Quick Check became Nexis Universe, similar to Academic Universe, to which many colleges and universities subscribe. In 1998, PCs were added to about 20 percent of user desktops, and by mid-1999, all newsroom journalists had PCs and were making the switch to PC-based word processing applications.

The News & Observer of Raleigh (N&O) had a Sunday circulation of 205,994 in 1998 (Editor & Publisher, 1999). The N&O was an early adopter of information technologies (Moeller, 1995; Semonche, 1993). An electronic archive was first introduced in 1990, searchable from staff desktops via dedicated terminals connected to the editorial system. By early 1991, the N&O had a small LAN (local area network) with three “diskless workstations” and two PCs set up in the newsroom. By 1993, there were about eight shared PCs in the newsroom, and Macintosh computers with Internet access were installed on each desk.

C. Selection of Respondents

Formal approval to survey journalists was obtained from both organizations involved. Anonymous questionnaires were distributed to 422 newspaper journalists at the Observer and the N&O, the two largest North Carolina metropolitan newspapers (see appendices for copies of the cover letter and survey). Questionnaires were distributed and collected at each site during the month of February 2000. Participation by journalists was totally voluntary, with the only incentive being to further the knowledge of the field.

With assistance from the news research managers at each site, questionnaires were placed in the mail slots of reporters and editors. Extra questionnaires were made available in paper and on a web site. Newsroom administrators, photographers, graphic

designers, customer service staff, technology support, and other roles were not included in the distribution. For instance, if a photographer completed and returned the questionnaire, it was identified through a question that asked for work role, and not included in the data set.

Respondents were asked to seal completed surveys in an attached envelope and drop them in a return box near their work area. The envelopes were pre-addressed so that respondents had the option to return them through the mail. Envelopes were not stamped, except for those distributed to the bureau staff of the N&O. Bureau staff members of the Observer were directed to return responses through internal mail to the news research manager, who then dropped them in the return box.

An SPSS statistical analysis program was used to summarize and describe the data.

D. Questionnaire Development

The questionnaire consists of an informational cover letter and 16 numbered questions on three pages. Questions were modeled on and adapted from Hansen, et al., 1994; Garrison, 1999a; Integrated Management Resources, 1999; and the Georgia Tech Research Corporation, 1994-1998, all tested instruments.

Questions focused on online information use patterns, variety of system tools used, attitudes towards online information in the context of work, type of training in online systems, and demographic information such as years of professional experience, work role (editor, reporter, columnist, etc.), and beat or subject focus of regular story assignments. All questions were multiple-choice in format. Five used a Likert scale, four were multiple response questions (with instructions to check all that apply), and others

required categorical choices. Four of the questions included “Other (please list)” as a response choice. The last item, “Please add any comments here,” allowed respondents to add anything that they couldn’t express through the closed questions.

E. Limitations of the Survey

The self-completed questionnaire methodology was chosen because of numerous advantages. Self-reporting is the best way to measure individual beliefs and attitudes (Robson, 1993). The questionnaires are an efficient means to gather the amount of information desired in the brief time period available. Closed questions are much simpler to analyze than open-ended ones. The short length of the questionnaire (16 questions on three pages) and the return envelope/drop box encouraged the relatively small effort it took to participate. To increase the response rate, the questionnaire asked journalists who were pressed for time to answer the first two questions only rather than not responding at all. No respondents chose this option and instead most completed at least the first two pages.

Closed survey questions are less expansive than open-ended, and are structured by the questionnaire designer. The few opportunities to write in comments were meant to avoid missing any important issues that were not mentioned in the questions, but these comments were more often anecdotal rather than comprehensive. Responses dealing with behavior patterns are only as accurate as the respondents’ memories; the assumption is that respondents answered questions honestly and seriously. A potential flaw is over-reporting of online information use because respondents perceive it to be an important or expected activity.

With an overall response rate of 41.5 percent, this study provides results that are reasonably representative of online information-seeking patterns at these two organizations, but not generalizable (or only cautiously) to other regions and organizations in the U.S.

V. Research Findings

A. Description of the Population

One hundred seventy five valid questionnaires were returned from a group of 422 potential respondents, for a response rate of 41.5 percent. Respondents were split fairly evenly between genders; females represented 51.2 percent, and males 48.8 percent.

The two sites surveyed represent an experienced group of journalists. More than 62 percent have 12 or more years of work experience in journalism (see Figure 2). College graduates represent 75.6 percent of the group, and those with a master's degree represent 18.6 percent. Data for the two organizations has been reported as an aggregate in most cases where results were close (within 5 percentage points).

	% of Study Group	
How many years of work experience in journalism do you have?	Between 0-3	8.0
	Between 4-7	14.3
	Between 8-11	13.1
	Between 12-20	25.1
	20 or more	37.1
	Missing	2.3
Total		100.0

Figure 2: Work Experience in Journalism by Years

Beat reporters represent 41.7 percent of respondents; editors represent 21.1 percent; copy editors represent 17.7 percent; and columnists represent 7.4 percent. The

remaining 10.8 percent represent the roles of investigative reporter, national desk, op-ed writer, and “other” (see Figure 3).

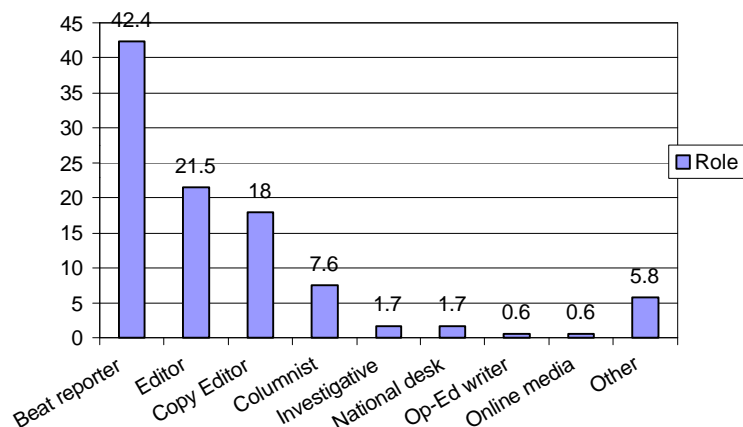


Figure 3: Role in Newsroom, by percent

The largest group of respondents (26.2 percent) routinely cover public affairs and crime; 15.9 percent cover sports; 15.0 percent cover living (including home/food/religion); 10.3 percent cover business and finance; 6.5 percent cover entertainment; 1.9 percent cover technology; and 24.3 percent cover other subjects (see Figure 4).

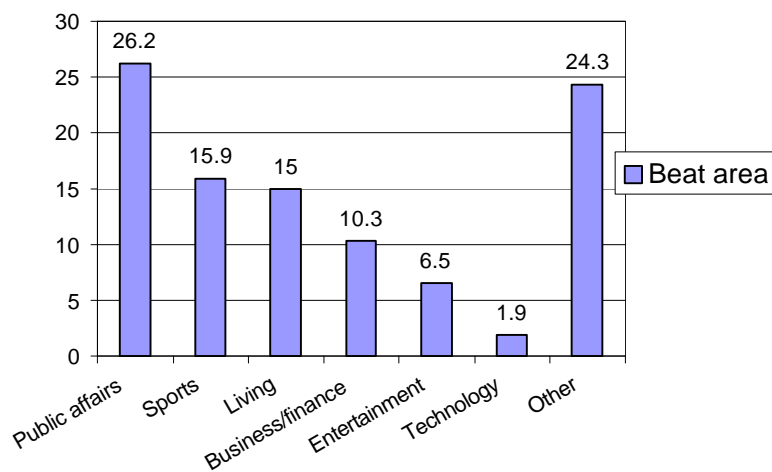


Figure 4: Beat Assignment, by percent

Overall, 33.7 percent of journalists have used the Internet between one and three years; almost half (48.8 percent) have used it between four and six years; and 13.4 percent have used it for seven years or more. Respondents at the N&O have been using the Internet longer: 81.3 percent have been using the Internet for four years or more, compared to 45.7 at the Observer (see Figure 5).

		% within organization		% of Total Study Group
		Observer	N&O	
How long have you been using the Internet?	6-12 months	7.6		4.1
	1-3 years	46.7	18.8	33.7
	4-6 years	33.7	66.3	48.8
	7 years or more	12.0	15.0	13.4
Total		53.5	46.5	100.0

Figure 5: Internet Use by Time

59 percent of journalists feel very comfortable using computers in general, and 34 percent feel somewhat comfortable. 60 percent feel very comfortable using the Internet (including using email, WWW, or other Internet applications such as FTP). 33 percent feel somewhat comfortable. 3 percent feel neither comfortable nor uncomfortable, and 3 percent feel somewhat uncomfortable (see Figure 6).

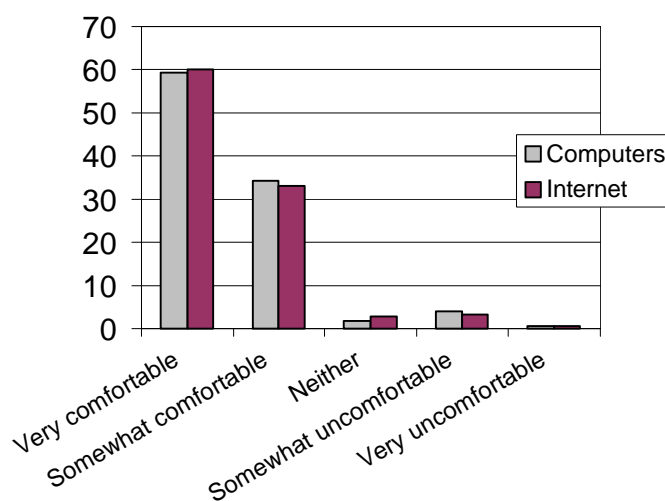


Figure 6: Comfort with computers and the Internet, by percent

Online sources are very important for information gathering in the work of 65.5 percent of journalists, and somewhat important to 31.0 percent. There is a small difference between journalists at the two sites: at the Observer, 61.3 percent feel that online sources are very important compared to 70.4 percent at the N&O. 34.4 percent feel online sources are somewhat important at the Observer compared to 27.2 percent at the N&O. This slight difference may be explained by the fact that N&O journalists have had desktop access to online sources for a longer period and have come to rely on them more in their work (see Figure 7).

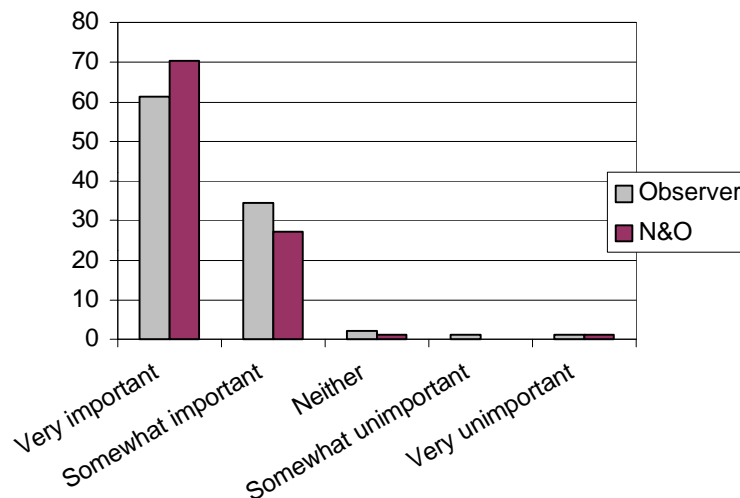


Figure 7: Satisfaction with Online Skills

Only 10.9 percent of respondents feel very satisfied with their current skills for using online information sources. Another 64.9 percent feel somewhat satisfied, 12.6 percent feel somewhat unsatisfied with their skills, and another 9.8 percent feel neither satisfied nor unsatisfied (see Figure 8).

		% within organization		% of Total Study Group
		Observer	N&O	
How satisfied are you with your current skills?	Very satisfied	12.9	8.6	10.9
	Somewhat satisfied	61.3	69.1	64.9
	Neither satisfied nor unsatisfied	10.8	8.6	9.8
	Somewhat unsatisfied	14.0	11.1	12.6
	Very unsatisfied	1.1	2.5	1.7
Total		53.5	46.5	100.0

Figure 8: Satisfaction with Online Skills

Respondents learned about online sources and how to use them primarily from skilled colleagues at work (74.4 percent), in-house training classes (51.7 percent), and the library/research department (51.2 percent). Many have learned independently by reading books or articles (36.0 percent) or using online tutorials (24.4 percent), and less than one-fifth have learned through formal college or university programs (see Figure 9).

		% of Total Study Group
How have you learned about online sources and how to use them?	Asked skilled colleagues at work	74.4
	In-house training classes	51.7
	In-house library/research department	51.2
	Read books or articles	36.0
	Used online tutorial or information	24.4
	College or university programs	16.3
	Other	19.8

Figure 9: Learning about Online Sources

B. Description of Online Information Use

A full 98.8 percent of journalists use email at least once a day. The World Wide Web is used by 83.2 percent at least once a day. In-house databases (such as driver licenses) are used at least once a week by close to one-third of respondents (28.5 percent). Another 22.4 percent use them once a month. Commercial databases (such as Nexis) are used at least once a week by more than one-third of respondents (39.4

percent). Listservs and newsgroups are used very rarely or never by about two-thirds of respondents, and telnet, FTP, or gopher are used very rarely or never by (see Figure 10).

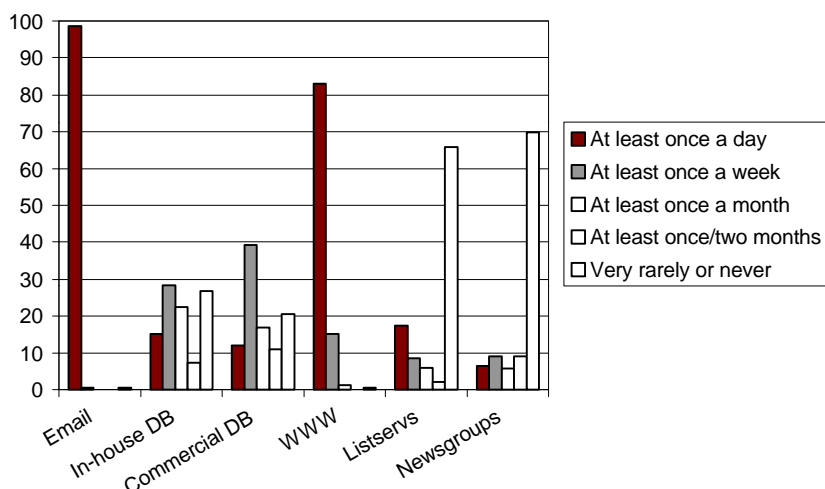


Figure 10: Use of Online Information Sources, by percent

Respondents find many uses for online information sources. More than 90 percent use them to find background or contextual information as well as facts, data, or statistics. Other popular uses are reading other news media or news wires, finding experts, and identifying sources. Only 34 percent use online information tools for getting story ideas (see Figure 11).

	% of Total Study Group
What do you use online information tools for?	
Finding background or contextual information	91.4
Finding facts, data, or statistics	90.3
Reading other news media or news wires	84.6
Finding experts	51.4
Identifying sources	50.9
Getting story ideas	34.3
Other	5.7

Figure 11: Uses of Online Sources

More than 80 percent of respondents use the World Wide Web for information gathering because of its speed of access to information and the scope of information

available. More than half use it for availability of offbeat or obscure information. More than one-third uses it because of the depth of information available and because it is a good source for browsing when questions are not fully formulated (see Figure 12).

	% of Total Study Group	
Why do you use the web for information gathering?	Speed of access to information	85.8
	Scope of information available	81.7
	Access to offbeat or obscure information	60.9
	Depth of information available	39.1
	Because I'm not always sure what I'm looking for, it's helpful to browse	36.7
	Other	4.1

Figure 12: Strengths of the Web for Information Gathering

Information overload is the biggest barrier to online source use for almost 60 percent of respondents. The questionable authority or credibility of information online is a barrier for more than half of respondents, and technical problems such as broken links and long, slow download times discourage another 47 percent. About 40 percent say that they do not have enough time to search. Only 11.8 percent feel that traditional information sources are sufficient (see Figure 13).

	% of Total Study Group	
Why don't you use the web for information gathering?	Information overload (too much to sift through)	58.1
	Difficult to determine authority or credibility	54.4
	Technical problems (broken links, time to download)	47.8
	Not enough time to search	40.4
	Information is not current	20.6
	Sites change too fast	16.9
	Traditional sources are sufficient	11.8
	Other	6.6

Figure 13: Weaknesses of the Web for Information Gathering

VI. Summary and Conclusions

Environmental and situational variability appears to influence online information use, in accordance with reviewed information seeking models. Online information source usage has changed dramatically over the past five years, primarily because widespread desktop access is now common and because the sources themselves have changed. Graphical user interfaces have made the Internet and its many applications easier and more effective to use. In addition, the volume and scope of information available on the Web has grown exponentially. Commercial database vendors such as Lexis-Nexis have also created more user-friendly graphical interfaces. Authority, scope, timeliness, reliability, and ease of use of online sources are involved in source selection and use.

Training provided to journalists by news librarians and technical staff, skilled colleagues, and online training tools has also contributed to increased awareness and ease of use. Because almost 90 percent of respondents have more than 4 years work experience in journalism, this non-institutional learning is critical to take advantage of technological changes that occur frequently and rapidly.

The respondents in this study represent the high end of online source usage as compared to respondents in both the Garrison and Middleberg/Ross 1999 studies. Although N&O journalists have been using the Internet for a longer period than those at the Observer, there is little difference between levels of comfort in using the Internet or computers in general. The majority of both groups feel that online sources are very important to information gathering in their work.

A majority of journalists use email and the World Wide Web daily, but less than half search internal or commercial databases at least once a week. Most never use forums

such as listservs and newsgroups or applications such as FTP and telnet. About 65 percent of respondents are somewhat satisfied with their online skills, and only about ten percent are very satisfied and can do most of the things they'd like.

Areas for further exploration include the process of integrating computer-assisted reporting into daily work routines; variations in information seeking behavior across work roles in the newsroom; and impact of online sources on news content.

VII. Cited References

Belkin, N. (1980). Anomalous states of knowledge as a basis for information retrieval.

Canadian Journal of Information Science, 5 (May), 133-143.

Boyer, T. (1999). Playing catch-up. *American Journalism Review*, 21 (6), 46-51.

Ciotta, R. (1996). Baby you should drive this CAR. *American Journalism Review*, 18 (2), 34-39.

Dervin, B. & M. Nilan. (1986). Information needs and uses. *Annual Review of Information Science and Technology*, 21, 3-33.

Editor & Publisher International Year Book. New York: Editor & Publisher Co., 1999.

Fabritius, H. (1999). Triangulation as a multi-perspective strategy in a qualitative study of information seeking behaviour of journalists. In (Wilson, T. & Allen, D.) *Exploring the contexts of information behaviour, proceedings of the second international conference on research in information needs, seeking and use in different contexts*, 13/15 August 1998, Sheffield, UK. London: Taylor Graham Publishers, 406-419.

Garrison, B. (1997). Online services, Internet in 1995 newsrooms. *Newspaper Research Journal*, 18 (3/4), 79-93.

Garrison, B. (1998). *Computer-assisted reporting*, 2nd ed. Mahwah, NJ: Lawrence Erlbaum Assoc.

Garrison, B. (1999a). *Journalists' perceptions of online information-gathering problems*.

A paper presented to the Newspaper Division of the Association for Education in Journalism and Mass Communication, New Orleans, August 4-7, 1999. [Online] Available at <http://www.miami.edu/com/car/neworleans1.htm>. Last viewed April 15, 2000.

Garrison, B. (2000a). *Journalists' newsroom roles and their World Wide Web search*

habits. A paper presented to the Newspaper Division, Southeast Colloquium, Association for Education in Journalism and Mass Communication, Chapel Hill, NC, March 17-18, 2000. [Online] Available at <http://www.miami.edu/com/car/chapelhill00.htm>. Last viewed April 15, 2000.

Graphic, Visualization, & Usability Center, Georgia Institute of Technology. (1998).

GVU's 10th WWW User Survey. [Online] Available at http://www.gvu.gatech.edu/user_surveys/survey-1998-10/. Last viewed April 15, 2000.

Hansen, K., J. Ward, J. Conners, & M. Neuzil. (1994). Local breaking news – sources, technology, and news routines. *Journalism Quarterly*, 71 (3), 561-572.

Harris R., & P. Dewdney. (1994). *Barriers to information: how formal help systems fail battered women*. Westport, CT: Greenwood Press.

Herron, N.L. (1986). Information-seeking behavior and the perceptions of information channels by journalists of two daily metropolitan newspapers. (Doctoral dissertation, University of Pittsburgh, 1986). *Dissertation Abstracts International*, 47 (10A), 3599-3771.

Integrated Management Resources, Inc. (1999). *Internet Working Skills Survey*. [Online] Available at <http://www.imr.on.ca/internetworkingskillssurvey.htm>. Last viewed April 15, 2000.

Koch, T. (1991). *Journalism for the 21st century: online information, electronic databases, and the news*. New York: Greenwood Press.

Leckie, G., K. Pettigrew, & C. Sylvain. (1996). Modeling the information seeking of professionals: a general model derived from research on engineers, health care professionals, and lawyers. *Library Quarterly*, 66 (2), 161-193.

Moeller, P. (1995). The digitized newsroom. *American Journalism Review*, 17 (1), 42-47.

Nicholas, D. (1996). An assessment of the online searching behaviour of practitioner end users. *The Journal of Documentation*, 52 (3), 227-251.

Nicholas, D., & H. Martin. (1994). Should journalists search themselves? (and what happens when they do?) *Online & CD-ROM Review*, 18 (1), 49.

Nicholas, D., & H. Martin. (1997). Assessing information needs: a case study of journalists. *Aslib Proceedings*, 49 (2), 43-52.

Nicholas, D., & P. Williams. (1999). The changing information environment: the impact of the Internet on information seeking behaviour in the media. In (Wilson, T. & Allen, D.) *Exploring the contexts of information behaviour, proceedings of the second international conference on research in information needs, seeking and use in different contexts*, 13/15 August 1998, Sheffield, UK. London: Taylor Graham Publishers, 451-462.

Nicholas D., P. Williams, H. Martin, & P. Cole. (1997). The Internet: it's early days, but there are some surprises. *Aslib Proceedings*, 49 (8), 214-216.

- Noack, D. (1997). Newsroom intranets. *Editor & Publisher*, 130 (24), s22-s25.
- Pineda, R., L. Lerner, M. Miller, & S. Phillips. (1998). An investigation of factors affecting the information-search activities of small business managers. *Journal of Small Business Management*, 36 (1), 60-71.
- Poynter Institute. (1999). *The four Rs of CAJ*. [Online] Available at <http://poynter.org/research/newcar/car1a.htm>. Last viewed April 15, 2000.
- Reddick, R., & E. King. (1997). *The online journalist: using the internet and other electronic resources*, 2nd ed. Fort Worth, TX: Harcourt Brace College.
- Robson, C. (1993). *Real world research*. Oxford, U.K.: Blackwell Publishers.
- Ross, S. & D. Middleberg. (1999). *Sixth annual Middleberg/Ross print media in cyberspace study*. New York: Middleberg & Assoc. [Online] Available at <http://www.middleberg.com/studies/print/execsummary.cfm>. Last viewed April 16, 2000.
- Ruggiero, T. (1998). *Perceptions of traditional American journalists toward the Internet as a news source: a critical approach*. A paper presented to the Mass Communication & Society Division, Association for Education in Journalism and Mass Communication, 1998. [Online] Available at <http://list.msu.edu/cgi-bin/wa?A2=ind9812d&L=aejmc&F=&S=&P=2702>. Last viewed April 16, 2000.
- Saracevic, T. (1975). Relevance: a review of and a framework for the thinking on the notion in information science. *Journal of the American Society for Information Science*, 26 (6), 321-343.
- Semonche, B. (Ed.) (1993). *News media libraries: a management handbook*. Westport, CT: Greenwood Press.

- Simon, J. & C. Napolitano. (1999). We're all nerds now. *Columbia Journalism Review*, 37 (6), 19.
- Sonnenwald, D. (1999). Evolving perspectives of human information behaviour: contexts, situations, social networks and information horizons. In (Wilson, T. & Allen, D.) *Exploring the contexts of information behaviour*, proceedings of the second international conference on research in information needs, seeking and use in different contexts, 13/15 August 1998, Sheffield, UK. London: Taylor Graham Publishers, 176-190.
- Taylor, R. (1968). Question-negotiation and information seeking in libraries. *College and Research Libraries*, 29 (3), 178-194.
- Vreekamp H. (1995). The Information-seeking attitudes of non-metropolitan journalists – a qualitative study of two communities and their primary and secondary sources. *Electronic Library*, 13 (1), 43-51.
- Ward, J., & K. Hansen. (1991). Journalist and librarian roles, information technologies and newsmaking. *Journalism Quarterly*, 68 (3), 491-498.

VIII. Bibliography

- Garrison, B. (1999b). Newspaper size as factor in use of computers for newsgathering. *Newspaper Research Journal*, 20 (3), 72-85.
- Garrison, B. (2000b). *Online information use in newsrooms: a longitudinal diffusion study*. A paper presented to the “Media in the New Millennium: Technology, Images, Issues” Conference, Communication Technology & Policy Division, Media Management & Economics Division, and Visual Communication Division, AEJMC, Denver, February 25-26, 2000. [Online] Available at <http://www.miami.edu/com/car/denver00.htm>. Last viewed April 15, 2000.
- Hansen, K. (1986). The effect of presearch experience on the success of naive (end-user) searches. *Journal of the American Society for Information Science*, 37 (5), 315-318.
- Hansen, K. & J. Ward. (1991). Information technology changes in large newspaper libraries. *Special Libraries*, 82 (4), 267-273.
- Johnson, J.T. (1994). Journalism education in the information age. *Social Science Computer Review*, 12 (3), 405-413.
- Leonard, T. (1992). Databases in the newsroom – computer assisted reporting. *Online*, 16 (3), 62-65.
- Martin, H. (1999). The changing information environment in the media: case study The Guardian/Observer. *Aslib Proceedings*, 51 (3), 91-96.

February 2000

Dear *News & Observer* Newsroom Member:

As a former journalism student and news research intern, I am conducting a research project as part of requirements for a master's degree in Library Science from the University of North Carolina at Chapel Hill. The objective of this research is to understand how newspaper journalists use online sources to gather information.

Following this letter is a brief questionnaire that asks a variety of questions about your use of online information sources and your attitudes toward them in your work. I hope you will take a few minutes to complete it today. ***If you only have time to answer two questions, please answer the first two.***

Your participation is completely voluntary and anonymous. All responses will be summarized. No effort will be made to identify you personally. This survey will be distributed in the newsrooms at the *News & Observer* of Raleigh and *Charlotte Observer*, to a total of approximately 350 journalists.

You may contact the UNC-CH Academic Affairs Institutional Review Board or my faculty advisor, listed below, at any time during this study if you have questions or concerns about your rights as a research subject.

Academic Affairs Institutional Review Board
David A. Eckerman, Chair
CB# 4100, 201 Bynum Hall
University of North Carolina at Chapel Hill
Chapel Hill, NC 27599-4100
(919) 962-7761
email: aa-irb@unc.edu

Dr. Evelyn Daniel, Professor
School of Information and Library Science
CB #3360, 100 Manning Hall
University of North Carolina at Chapel Hill
Chapel Hill, NC 27599-3360
(919) 962-8062
email: daniel@ils.unc.edu

Results of this study will be incorporated into a master's paper that will be available at UNC-Chapel Hill.

Please take a few minutes in the next few days to complete the questionnaire, and drop it in either of the return boxes located in news research or by Ann Lee's desk. You may keep this cover letter for your information.

Thank you very much for your time.

Ann Romine Poteet
Graduate Student, School of Library and Information Science
University of North Carolina at Chapel Hill
(919) 942-6583
romia@ils.unc.edu

Journalists' Online Information Use Survey

Ann Romine Poteet, Graduate Student
School of Library and Information Science, UNC-CH
(919) 942-6583 romia@ils.unc.edu

*Questions with an asterisk: Copyright 1994-1998
Georgia Tech Research Corporation. All rights Reserved.
Source: GVU's WWW User Survey
www.gvu.gatech.edu/user_surveys/

If you only have time to answer two questions, please answer the first two.

1. Overall, how important are online (electronic) sources for information gathering in your work?
 - Very important
 - somewhat important
 - Neither important nor unimportant
 - Somewhat unimportant
 - Very unimportant

2. What do you use online information tools for? Please check all that apply.
 - Identifying sources
 - Finding experts
 - Finding background or contextual information
 - Finding facts, data, or statistics
 - Getting story ideas
 - Reading other news media or news wires
 - Other (please list):

3. Which of the following represent reasons you don't use the World Wide Web for information gathering? Please check all that apply.
 - Difficult to determine authority or credibility of information.
 - Information is not current.
 - Too much to sift through (information overload).
 - Not enough time to search.
 - It's hard to find what I'm looking for; sites change too fast.
 - Traditional sources are sufficient.
 - Lack of support from management or the profession.
 - Annoying technical problems (links that don't work, takes too long to download, etc.).
 - Other (please list):

4. Which of the following represent reasons you do use the World Wide Web for information gathering? Please check all that apply.
 - Speed of access to information.
 - Scope of information available.
 - Depth of information available.
 - Access to offbeat or obscure information.
 - Because I'm not always sure exactly what I'm looking for, it's helpful to browse.
 - Other (please list):

5. At work, how often do you use the following online information tools?

	At least once a day	At least once a week	At least once a month	At least once every two months	Very rarely or never
a. Email					
b. In-house databases (i.e., driver licenses)					
c. Commercial databases (i.e., Nexis Universe)					
d. World Wide Web					
e. Listservs					
f. Newsgroups / discussion groups					
g. Telnet, FTP, or gopher					

6. How have you learned about online information sources, both what information is available and how to access it? Please check all that apply.

- Asked skilled colleagues at work for help
- Read books or articles on the topic
- Used online tutorial or online information
- In-house training classes
- In-house library or research department
- College or university education programs
- Other (please list):

*7. How satisfied are you with your current skills for using online information sources?

- Very satisfied: I can do everything that I want to do
- Somewhat satisfied: I can do most things I want to do
- Neither satisfied nor unsatisfied
- Somewhat unsatisfied: I can't do many things I would like to do
- Very unsatisfied: I can't do most things I would like to do

*8. How comfortable do you feel using computers, in general?

- Very comfortable
- Somewhat comfortable
- Neither comfortable nor uncomfortable
- Somewhat uncomfortable
- Very uncomfortable

*9. How comfortable do you feel using the Internet (this includes using email, World Wide Web, or FTP)?

- Very comfortable
- Somewhat comfortable
- Neither comfortable nor uncomfortable
- Somewhat uncomfortable
- Very uncomfortable

- *10. How long have you been using the Internet (this includes using email, World Wide Web, or FTP)?
- Less than 6 months
 - 6 to 12 months
 - 1 to 3 years
 - 4 to 6 years
 - 7 years or more
11. Which of the following best describes your role in the newsroom? Please check only one.
- Beat Reporter
 - Investigative reporter
 - National desk
 - Editor
 - Op-Ed Writer
 - Columnist
 - Copy Editor
 - Online Media
 - Other (list):
12. If you routinely cover a specific beat or area, please choose the one that best represents your work:
- Public Affairs/Crime
 - Business/Finance
 - Sports
 - Living (including Home/Food/Religion)
 - Entertainment
 - Technology
 - Other
13. How many years of work experience in journalism do you have?
- Between 0 and 3 years
 - Between 4 and 7 years
 - Between 8 and 11 years
 - Between 12 and 20 years
 - 20 or more years
- *14. What is your sex?
- Female
 - Male
15. What is your age?
- 25 or under
 - 26 - 35
 - 36 - 45
 - 46 - 55
 - 56 - 65
 - 65 or over
- *16. Please indicate the highest level of education completed.
- Grammar School
 - High School or equivalent
 - Vocational/Technical School (2 year)
 - Some College
 - College Graduate (4 year)
 - Master's Degree (MS)
 - Additional Degrees

Please add any comments here or on the back of this sheet.

Please put your questionnaire in the envelope and put it in the drop box in the mailroom today.
Thank you for participating in this research project!

