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A COMPARATIVE ANALYSIS OF STUDENT USE OF
THE NEW YORK TIMES PRINT AND DIGITAL FORMATS

by

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ABSTRACT OF THE DISSERTATION

A Comparative Analysis of Student Use of

The New York Times Print and Digital Formats

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This study compares how students use newspapers across digital and print formats and examines reader preferences. Studies have shown that when using online versions of newspapers, readers were less likely to follow “media cues” – aspects of a newspaper such as story placement, headline size, story size, or photographs, which cue readers that a story is important. This study compared use and preference of three formats of the New York Times – the traditional print version, online, and a “reader” program called the New York Times Reader. The researcher found that while students were more likely to follow media cues using the print version of the New York Times than they were using the online version, they were more likely to follow these cues using the NYT Reader than the online version. Participants showed a strong preference for using digital formats and overwhelmingly rejected the print version of the New York Times in comparison. The NYT Reader was the format most preferred by users even though they claimed the navigational experience was more similar to using a print paper than when they used the online version. This suggests the tactile nature of ink on paper and the student’s familiarity with computer interfaces are likely reasons the participants rejected the print paper but most preferred the digital format that replicated the print paper reading

experience. Previous research that revealed the loss of control of gatekeepers in online formats should revisit the topic using different formats to attempt to determine what is most likely to attract readers to newspapers in their various formats.

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CHAPTER 1 INTRODUCTION

Content delivery systems for news have undergone many transformations over the years. From the spoken word to the advent of electronic mass media, news dissemination has played an important historical role in shaping modern societies. Print news has been a particularly notable medium in the history and development of western democracies (Baldasty, 1992). When used to distribute information to a mass audience a newspaper can be an extremely powerful and effective tool for persuasion. In their seminal research on media coverage of the 1968 presidential campaign, McCombs and Shaw (1972) determined that the media were highly influential in setting the public agenda by choosing what stories to cover and deciding how prominently they were covered. The prominence given to a story includes how much space is allotted in a news program or newspaper to a particular topic. Since McCombs and Shaw published their research in 1972 there have been many articles and books on agenda setting that explored the correlation between the amount of media coverage a topic is given and the extent to which the public thought that topic had salience (Iyengar & Kinder, 1986; Kepplinger, Donsbach, Brosius, & Staab, 1989; Shaw, E., 1979; Weaver, 1977; Becker & McCombs, 1978; Weaver, Graber, McCombs & Eyal, 1981).

In the past decade some researchers have compared the agenda setting function of traditional print newspapers with online newspapers to see if any differences existed across formats (D'Haenens, Jankowski & Heuvalman, 2004; Tewksbury & Althaus, 2000; DeWaal, Schonbach & Lauf, 2005). These studies focused on media cues in the design of the papers, such as story size, headline size, and story placement. Tewksbury

and Athaus (2000) found that students reading online editions of the New York Times were less likely to access media-cued news stories than those reading the print version of the same paper. Their research concluded that students reading online newspapers were less likely than those reading the print version of a paper to read international, national, and political news. These stories were positioned near the front of the paper cueing the reader of their importance (Tewksbury & Althaus, 2000).

During this past decade the newspaper industry has also seen declining readership. Many of the most prominent newspapers in the country have experienced major declines in revenue resulting in layoffs. In this environment emerging technologies have been developed as alternatives to the traditional print newspapers. The New York Times, arguably the most influential newspaper in the United States, offers different digital versions of their newspaper. The New York Times Online, is their web solution. Digital Editions is a full scan of the paper accessible for download. This version of the paper is cumbersome to access on a computer but includes all of the content of the original print version (Fidler, 2009). The New York Times can also be accessed on a Kindle, an electronic ink (e-ink) technology that downloads content to a small screen device. According to Roger Fidler (2009), coordinator for the Digital Publishing Alliance, there are other e-ink solutions in development that may obviate the need for mass publication of news in the traditional print form. The New York Times Reader is a relatively new delivery option, which repurposes online content in a format that attempts to closely resemble the look of print version of the paper (Larson, 2009). As newspapers try to employ new delivery modes for content an important consideration will be user preferences. How readers choose to access news and the aspects of a

newspaper they prefer will be important data to gather. The youth audiences for newspapers will be particularly important if they hope to grow their subscriber base and acquire long-term users.

This dissertation will examine how youth audiences use digital delivery for newspapers and it will determine user preferences across different newspaper formats. This dissertation will also examine the differences in the agenda setting function of gatekeepers across these formats. Design factors controlled by gatekeepers, such as story size and placement, have been shown to be determining factors in what stories are most likely to be read (McCombs & Shaw, 1972; Graber, 1988; Tewksbury & Althaus, 2000). Emerging technologies may reduce the agenda setting capabilities of traditional gatekeepers, which could have an impact on what youth audiences will choose to read. User preferences will be a key factor in determining the role traditional, print newspapers will have in the future. If youth audiences prefer the digital formats it will be instructive to learn why and what effect this may have on the agenda setting function of the media. Fidler (1997) has written that a crucial element for the adoption of new technologies is that the new and old are related. This view was an extension of Everett Rogers's (2003) claim that compatibility is a key component to the adoption of new technologies. Navigating the online version of the New York Times is a very different experience from using the New York Times Reader. If the users familiar with print papers prefer the Reader over the New York Times Online, it may effect how quickly digital versions of the New York Times are adopted. However, this researcher is open to the possibility that participants in this study (college-aged students) may have had very little exposure to newspapers. This could mitigate Rogers' and Fidler's claim of importance placed on

relation and compatibility. Still, how youth audiences use these digital formats and that connection with agenda setting are timely areas for research.

Description of Digital Formats

A delivery format like the New York Times Reader, henceforth described as the NYT Reader, offers readers a different experience from both the print and online versions of the paper. The NYT Reader uses an interface that is easily navigated and provides an experience similar to navigating through a print newspaper. The pages in the NYT Reader arrow down for a continuous reading flow. This experience is similar to continuing a story from one paper page to the next in a traditional print newspaper. Story navigation is also different from an online newspaper. Using right and left arrows, users can easily shift from one story to the next. The hyperlinks of an online paper and the vertical and horizontal scrolling needed to access coverage are much more cumbersome than the navigational aspects of the NYT Reader. One of the features that most distinguishes the NYT Reader from an online newspaper is the Windows Presentation Format (WPF). WPF will “reflow” a story when users resize the viewer window or change presentation font size. It does this by automatically changing the number of columns. This is a very different experience from using a traditional newspaper website and navigating windows vertically and horizontally with scroll bars.

This research will examine the different ways in which young people use this technology and how it differs from their use of print and online newspapers. The limited research done in this area has usually compared print with online newspapers. Examining the NYT Reader as an emerging technology may give insight into how young consumers of news prefer to access material and how the design and interface of a

medium can effect these preferences. This research will analyze the likelihood that youth readers will access the same types of stories when using different delivery formats. Implications for agenda setting when comparing print and digital formats will be researched in this study.

The NYT Reader's interface offers a selection of topic links that are ordered in importance according to the editors. Upon arriving on the "Home" page, the next two topic choices are "World" and "U.S.". It is very common to find stories on these topics and politics on the front page of the print paper and the first page of the NYT Reader. Tewksbury and Althaus (2000) found that readers were more likely to access these news stories when reading a print paper when compared to an online paper. However, D'Hanenens, Jankowski, and Heuvelman (2004) found no evidence of disparity between access and retention of news delivered online or from a print newspaper. The next four sections of the paper are the New York Metro section, Business, Arts and Sports. These seven sections of the paper will be used to compare the stories accessed across the print and digital formats. Graber (1988) explains that "reader interest" is the best determining factor in what stories consumers will choose to read. Using the most prominent seven sections of the New York Times this research project will ascertain what stories the readers access and if they are more likely to access media-cued stories in digital or print formats.

The NYT Reader interface, as explained earlier, is different from the online version of the New York Times, henceforth described as NYT Online. Most students have used online browser interfaces while using the Internet so they are familiar with the basic navigation of web content. Accessing stories from an online newspaper is a very

different experience from using a print version of the New York Times. Hyperlinks provide opportunities to explore topics more deeply and to use multi-media. Video and audio components of the World Wide Web can present a story more dynamically than in a print paper. Constant updates give the news consumer a more topical experience that a print paper cannot replicate. Using a computer for newsgathering also presents possible differences in terms of the reader acquiring the news stories deemed important by the producers of the New York Times. Distractions such as hyperlinks, social networking sites, e-mail, synchronous chatting, and games may prevent the reader from concentrating enough to get the full experience intended by these producers. These distractions may prevent readers from accessing more stories, thus altering the agenda setting function of the media.

Statement of Problem

Most of the research in this area has focused on how college students read the news differently when comparing online newspapers with print newspapers (D'Haenens, Jankowski & Heuvalman, 2004; Tewksbury & Althaus, 2000; DeWaal, Schonbach & Lauf, 2005). According to Tewksbury and Althaus (2000), the standardization of newspaper formats contributes to the learning process when reading them. "News selection practices and procedures provide audiences with recognizable cues about the importance and meaning of news, thereby helping to guide the news consumption process for many people" (Tewksbury & Althaus, 2000, p. 457). News editors and other gatekeepers decide which stories receive prominence largely based on their positioning within their respective medium (McCombs, Shaw & Weaver, 1997). A story placed at the beginning of a newscast or printed on the front page of a newspaper, for example,

would cue the audience that the story is more important than stories which appeared later (Graber, 1988). Althaus and Tewksbury (2002) note two differences between online and print newspapers that may effect the agenda setting capabilities of the editors:

1. The flexibility of online newspapers with regard to information distribution
2. The presentation on a computer monitor must account for less space than a newspaper and therefore traditional media cues, such as length of story or size of headline, must be adjusted. This factor is gaining importance as electronic news reading devices with smaller monitors are gaining in popularity. (p. 183)

Research in the area of comparing text-based news consumption across different media is extremely limited and to this author's knowledge there has never been a study comparing usage and story access of a "Reader" program with that of the print version of the same paper and its online counterpart. As electronic news devices become more and more ubiquitous, understanding how readers are consuming news in this environment will be important. Newspaper companies will need to know the best ways to reach their audiences by understanding how they prefer to access news. If readers are less inclined to read media-cued stories online, perhaps a program like the NYT Reader can mitigate this. The problem for newspaper producers is two-fold. How do they attend to their customers so they don't go out of business? How do they effectively communicate the news of greatest public importance?

Purpose of the Study and Research Questions

The purpose of this study was to determine if students accessed stories in print and digital versions of a newspaper differently and if the agenda setting function of the

media was diminished as a result. Part of determining this was learning about user preferences for newspapers.

Research Questions:

RQ1: Will readers of the New York Times access more media-cued stories when using the New York Times print version, New York Times Online, or the New York Times Reader?

Rationale: Tewksbury & Althaus (2000) showed that readers of online newspapers were less likely than those reading print newspapers to acquire information about national, international, and political events that were deemed prominent by editors. To this extent the agenda setting capabilities of the press were diminished by electronic technologies that gave the reader more flexibility in choosing which stories he or she read. Some scholars, journalists and activists have connected emerging technologies with a democratization of media by changing the dynamic of production and distribution of information (Negroponte 1995; Dertouzos 1997; Gillmor 2004). This may change the effect that gatekeepers have, thus altering the agenda setting capabilities of the press. Tewksbury and Althaus (2000) concluded that these findings were problematic when considering a free and democratic society. Because using online newspapers decreased reader exposure to international, national, and political news stories they felt the public was not well served by using computers in place of a newspapers. So little research exists in this area that more needs to be done to determine if digital papers are used differently from print and if so, to what effect.

RQ2: To what extent do digital formats replicate the print paper reading experience?

RQ2a: To what extent does the Times Reader replicate the print paper reading experience?

RQ2b: To what extent does the New York Times Online replicate the print paper reading experience?

Rationale: According to Fidler (1997), an important consideration for the adoption of new forms of media is the degree to which they are related to earlier forms. The makers of the NYT Reader attempt to combine aesthetic of the print paper with the flexibility and functionality of the online paper (Larson, 2009). If this design better replicates the print version of the paper, users may more easily adopted it. If the NYT Online is determined by users to be a drastic departure from the print version it may impede adoption.

RQ3: What formats do readers prefer for digital newspapers?

Rationale: Newspapers across the country have been losing readers and revenue. In order to attract a young demographic these organizations may need to adopt new business models and new modes of content delivery. The inefficient medium of ink-on-paper may need to be re-thought if news organizations hope to survive. A free press and an informed electorate are vital elements of a democracy. Newspapers have been a part of that tradition and researching way to let them deliver important information effectively is an important reason to research this question.

Significance of Study

This study is an exploration of how young adults use modern text-based news delivery technologies and which features they prefer. Relative literature has shown that

readers use other media differently from how they use newspapers when retrieving information (DeWaal, Schonbach & Lauf, 2005; Allen & Izcaray, 1988).

The enormous impact that news dissemination through print has had on the entire world since Guttenberg cannot be understated. Therefore, the steady decline in newspaper readership and the possible ramifications of such a trend is an important area of inquiry for media scholars. As newspaper producers work to maintain market share they must look to new technologies and emerging patterns of user preferences. How citizens choose to receive news will be integral to this process. Youth audiences are of particular importance, as they will constitute the next generation of news consumers. Thus, researching young adults' use of new print technologies is an important and timely endeavor. Current traditional college students have been referred to as "Generation D" because of their familiarity with digital technologies. How they gather information from using traditional newspapers as compared with new digital news delivery systems will be the focus of this dissertation.

Delimitations

Delimitation is the way to narrow the scope of a study. The following are the delimitations for this study:

1. Digital formats in this study are limited to the NYT Reader and NYT Online. Both of these formats were experienced by participants on 17" LCD monitors connected to desktop computers.

2. Students enrolled in five sections of four different Communication & Journalism courses in the Fall of 2008 were selected for this study.
3. The researcher conducted all data gathering by himself, thus the sections had to be at different times during the day.

Summary

This section is an overview of this study about how students use digital formats of newspapers as compared to their print counterparts. It includes the background, purpose, research questions, and delimitations of the study. Agenda Setting Theory is the framework from which these questions will be researched. I will be researching the impact that different digital formats have on the agenda setting capabilities of the gatekeepers who produce the New York Times. User preferences will be an important aspect of this study. How these preferences are related to the articles chosen by the reader across formats will inform the researcher on the impact digital formats will have on agenda setting.

CHAPTER II

REVIEW OF THE LITERATURE

Theoretical Perspectives

The rapidly and relentlessly changing world of electronic text-based news is best examined from its relatively short, yet dynamic history. Text-based electronic news delivery systems, implemented in the early 1970's, were the starting point for the sophisticated digital news formats that exist today. Examining these technologies from the theoretical perspective of McCombs and Shaw's agenda setting function of the media, we can begin to see a shift in the power relations between consumer and producer. Boczkowski explains that an online newsroom is, "best understood as a sociomaterial space" (2004, p. 76). His research shows that, "online tools were largely used to reproduce print journalism" (2004, p. 76). Boczkowski interprets this fact as a rejection of technological determinism. The sociological factors of a newsroom are much more important variables in how news is produced than any specific technology. Further, how readers construct meaning and make use of news may dictate how they choose to consume it more than any particular technology.

Part of the power of agenda setting is imbued in the editor's ability to structure and design newspapers as they see fit. Most news consumers have been "trained" in how to effectively use traditional media. A newspaper design is familiar to readers and its structure is every bit a part of the mediated experience as the news printed in it. Doris Graber's *Processing The News* (1988) illustrated the ways in which the design and structure of media were important variables in how people used them. Graber referred to production decisions such as story prominence, size of headline, length of story and

frequency of publication or broadcast as “media cues”. However, using attention arousal as the primary factor in whether people would or would not read a story Graber found that media cues were less likely to determine if a story was read than reader interest (Graber, 1988). Participants in her research were able to determine for themselves what they thought was important. Graber’s (2000) study found:

They did not read stories merely because the media deemed them important. Rather, the power of media cues lay in the assumption that stories selected for prominence were likely to contain information that would be useful and interesting for the reader. (p. 98)

These findings showed that media cues played a role in story selection by readers but that other factors needed to be considered beyond the agenda-setting function of the gatekeepers in the media.

The Early Days of Electronic Text-based News

The internet revolution and the use of other “new media” have presented a rich and unique opportunity for research in the area of how news consumers use digital media. News delivered via electronic text on a mass scale dates back to 1970 with the inception of the *Teletext* system. David Carlson provides a detailed history of the Teletext system and its evolution in his chapter entitled “The History of Online Journalism” from the book *Digital Journalism* (Carlson in Kawamoto, 2003). Teletext is a non-interactive system that broadcasts text news stories to be viewed on televisions. The television must be equipped to receive Teletext so that the viewer can choose from a list of news topics such as sports. The text signals are sent in loops so there is no interactivity. The user simply chooses a topic and waits for that portion of the looped signal to appear (Carlson, 2003). This technology may sound archaic by today’s standards but Carlson noted in 2003 that it was still popular in Europe (Carlson, 2003).

Shortly after Teletext was invented, *Videotext* was developed in England as well (Tyler, 1979; Campbell & Thomas, 1981). Videotext differed greatly from teletext because it was truly interactive. According to Boczkowski, newspapers took videotext more seriously as a viable alternative to print news during the 1980's (2004). Carlson (2003) defined Videotext as such:

Videotext systems are interactive, computer-based systems that electronically deliver text, numbers, and graphics for display on a television set, video monitor, or personal computer. The data travels over telephone lines, two-way cable, computer networks, wireless data networks, or any combination of the four. (p. 35)

Boczkowski (2004) noted that newspapers, spurred on by “technologically deterministic rhetoric” (p. 23) invested millions in the promise of Videotext systems only to see them fail to build audiences or generate revenue. High costs, technological limitations, and poor customer service led to a rapid demise of this highly regarded technology (Carlson, 2003, p. 41-42).

After the Videotext debacle, newspapers were faced with the oncoming information superhighway and the introduction of news delivery via the World Wide Web. The popularity of the Internet and the ubiquity of personal computers fostered an environment much more conducive to electronic text-based news delivery. In this new environment consumers did not have to buy special equipment to access electronic news. Using a standard web browser on the Internet, readers were able to access online versions of newspapers. Toward the late 90's and into the new millennium there was a rise in research that examined the differences between print and online version of newspapers (D'Haenens, Jankowski & Heuvalman, 2004; Tewskbury & Althaus, 2000; DeWaal, Schonbach & Lauf, 2005). This is understandable given the failure following the

excitement and hyper-investment in Videotext as the next great revolution in news content delivery during the 80's and 90's.

The rapid failure of Videotext in contrast to the long “shelf life” of Teletext provides insight into how technology that may seem advanced isn't necessarily preferred by users. There are many factors to consider, but there is no doubt that Videotext is a system that is vastly superior to Teletext from a technological standpoint. Yet, the “better” technology failed. It is in this context that the World Wide Web begins to emerge as an alternative to print newspapers.

Online Newspapers

Boczkowski's (2004) *Digitizing the News: Innovation in Online Newspapers* underscored “...the heuristic value of looking at history, locality, and process in the emergence of a new medium” (p. 4). The new medium he researched was the online newspaper. While Boczkowski (2004) focused largely on the production end of the news process, he noted that producers related to how audiences for news products were conceived.

Some research has focused on how college students read the news differently when comparing online newspapers with print newspapers (D'Haenens, Jankowski & Heuvalman, 2004; Tewksbury & Althaus, 2000; DeWaal, Schonbach & Lauf, 2005). According to Tewksbury and Althaus (2000), as stated in the opening of this study, the standardization of newspaper formats contributes to the learning process when reading them. “News selection practices and procedures provide audiences with recognizable cues about the importance and meaning of news, thereby helping to guide the news consumption process for many people” (Tewksbury & Althaus, 2000, p. 457).

News editors and other gatekeepers decide which stories receive prominence largely based on their positioning within their respective medium (McCombs, Shaw & Weaver, 1997). A story placed at the beginning of a newscast or printed on the front page of a newspaper, for example, would cue the audience that the story is more important than stories which appeared later (Graber, 1988). As stated earlier, Tewksbury and Althaus note two differences between online and print newspapers that may effect the agenda setting capabilities of the editors. The flexibility of online newspapers with regard to information distribution and the presentation on a computer monitor must account for less space than a newspaper and therefore traditional media cues, such as length of story or size of headline, must be adjusted (Tewksbury and Althaus, p. 183, 2002).

Monitor size, dimension, and resolution are becoming even more important when considering preferences for newspapers. As small, electronic, handheld devices proliferate, it is reasonable to assume people will use them for acquiring news. Wearden, Fidler, Schierborn and Schierborn (1999) explain that typical text-based documents are presented to readers in a portrait-oriented format - taller than it is wider (p. 50). For example, a standard 8.5 x 11 inch piece of paper printed on from top to bottom is typically portrait-oriented. Fidler (1999) explains that when Xerox was designing the first computer for non-technical people they made portrait-oriented monitors because they assumed document creation would be a primary use. When IBM created their first PC in 1981 they used a landscape-oriented monitor, which became standard (Wearden, et al., p. 50, 1999). Fidler in Wearden, et al., explains the rationale for IBM choosing landscape over portrait orientation:

The use of landscape monitors actually dates back to the 1960's when computer engineers began connecting modified TV picture tubes with keyboards to mainframe computers. Because the operators used the monitors only for displaying computer codes and data, landscape monitors, which would accommodate lines of code and text of 80 to 120 characters, seemed appropriate for the task. (p. 51, 1999)

Tewksbury and Althaus' (2000) research supported their hypotheses that readers of print newspapers would access and recall more international, national and political news than readers of online newspapers. D'Haenens, Jankowski and Heuvalman (2004), however, conducted similar research and found no significant difference in these categories between readers of online and print versions of newspapers.

The role gatekeepers will have in the online news environment may change as audiences of these news formats use them differently from traditional print papers. Some research found that online newspapers have much stronger local news orientations than their print counterparts (Singer, 2001). Singer (2001) suggests this may indicate that news producers are adapting to their roles as agenda setters in a new media environment. Her research findings related to the findings of Tewksbury and Althaus. She too concluded that the lack of international, national, or political news access when using online newspapers as compared to print papers could have deleterious effects on the population. Singer (2001) noted:

We do not exist in isolation, and we do not exist only through our personal interests. We exist as members of a real community that extends well beyond our newspaper's primary circulation area. We always have relied on our paper to remind us of that. If the newspaper no longer does so, it will have relinquished one of its most vital roles: connecting its readers to the broader world. (p. 78)

The work of these authors will guide my research in this dissertation as I explore the ways in which news consumers use different information delivery formats and user preferences for contemporary newspapers.

Agenda Setting

The research in this dissertation will examine the question of what control agenda-setters can have over what readers determine is important and worthy of consumption. The research will explore whether or not this control, or lack thereof, has an impact on user preferences for newspapers. McCombs' and Shaw's (1972) seminal research on the 1968 Presidential election exemplified the notion of media control by agenda setting. They found that a correlation existed between the amount of media coverage given a story and the amount of importance people placed on the story (McCombs & Shaw, 1972). When researching emerging mass media technologies the agenda-setting function of the media is an important topic to consider. In this dissertation the researcher will examine if the agenda setting function of newspaper editors is diminished when readers access the content using an online or "reader" version of the paper instead of the traditional print variation.

Though very little published literature exists on research comparing digital papers with traditional print, the agenda setting function of gatekeepers has been researched using other kinds of media. Iyengar and Kinder (1987) used a series of data from the early 1980's that attempted to reveal the degree to which television news influenced public opinion. Measuring television news viewers' interests against the amount of time dedicated to specific topics these researchers found, "Our experimental results suggest that television newscasts shape and intensify viewers' sense of which national problems are important and which are not" (Iyengar & Kinder, 1987, p. 26).

Factors regarding a specific newspaper can effect which stories gatekeepers select for publication. For example, research has shown that gatekeepers at smaller newspapers are more prone to choose stories based on commercial constraints (Donohue, Olien, & Tichenor, 1989). Small newspapers can lower spending by using wire reports instead of paying staff reporters to cover local stories. These decisions do not always depend on what stories should be printed based on an editor's determination of story importance. These gatekeeping decisions are made to keep local papers solvent (Donohue, Olien, & Tichenor, 1989). Connecting the financial success of a paper to the stories it chooses to print is something media organizations must do as a practical matter of survival (Boczkowski, 2004).

Some researchers have shown using digital newspapers may be preferred, but not necessarily in the best interest of the reader. Schonbach, de Waal, and Lauf (2005) conducted research that showed that a change in the agenda-setting function of the media when comparing online and print papers was significant with the highest educated groups of society. Tewksbury and Althaus (2000) conducted research that showed students reacted differently when reading an online paper compared to those reading print versions of the paper. Their conclusions were that students were less likely to read the gatekeeper-designated important stories if they used an online paper instead of the print version. They concluded that online newspapers could have a deleterious effect on how people gathered news if the technology allowed them to more easily bypass stories the editors determined to be important (Tewksbury & Althaus, 2000). Accepting the premise that an informed electorate is essential for a democracy, these authors found that users were less informed about national, international, and political news stories when using online

newspapers as opposed to their print counterparts. Others researchers found no effect on story acquisition when comparing online with print papers (D’Haenens, Jankowski, & Heuvalman, 2004).

“Mobilizing Information” is defined as information found in news that aids people to act on attitudes they already hold (Lemert, et al., p. 60, 1977). According to Hoffman (2006), the ubiquity of online content may expose more people to mobilizing information who otherwise might not have been. Even as newspaper readership is declining, this could account for a rise in exposure to mobilizing information (Hoffman, 2006). This could expose more people to more news, which could be construed as a positive aspect of online news. However, if online news consumption serves to reinforce already held beliefs or attitudes it could deter readers from accessing media-cued stories that run counter to their belief systems. This could separate or segment people into smaller groups of news seekers of specific topics. The effect of this could be to “Balkanize” news consumers instead of uniting people on the core stories determined to be of the greatest value. A 2004 Pew research study showed that news audiences were becoming increasingly polarized and that their choices in media outlets were largely made along political and ideological lines.

Other researchers have determined that receiving online information will not have negative impacts on social and civic education. Some researchers feel the dynamic environment of the World Wide Web can ultimately serve to better a democratic society.

Ivry in Dennis & Snyder wrote as far back as 1998:

Fears that on-line media will render obsolete traditional forms of communication are unrealistic. Computers are not taking over. Rather... computer-based media will complement traditional forms of communication to improve democracy and

create a system of political communication that engages all sectors of society. (p. 165)

User preferences and how they actively choose to acquire news should also be considered. To this point, Blumler and Katz' research on Uses & Gratifications is another theoretical perspective to be considered in this dissertation.

Uses and Gratifications

Uses and gratifications theory suggests that people are active participants in choosing and using media (Blumler & Katz, 1974). Part of this dissertation will be to examine if students are less inclined to follow cues by gatekeepers to access particular stories. Uses and gratifications theory is applicable in determining if these students are more active in choosing their stories in different mediated conditions. Since the rise of Internet usage, the tension between activity and passivity in "new media" use and the possible ramifications has been the subject of research articles (Althaus & Tewksbury, 2000; Papacharissi & Rubin, 2000; Flavian & Gurrea, 2007). Ruggerio (2000) claims uses and gratifications is a necessary theoretical perspective for researchers to understand evolving modes of computer-mediated communication:

... uses and gratifications has always provided a cutting-edge theoretical approach in the initial stages of each new mass communications medium: newspapers, radio and television, and now the Internet. Although scientists are likely to continue using traditional tools and typologies to answer questions about media use, we must also be prepared to expand our current theoretical models of uses and gratifications. Contemporary and future models must include concepts such as interactivity, demassification, hypertextuality, and asynchronicity. Researchers must also be willing to explore interpersonal and qualitative aspects of mediated communication in a more holistic methodology. (p. 3)

The comparison between formats will include the NYT Online, which is rich with interconnectedness through hyperlinks. Although the NYT Reader does include links it has many fewer than the NYT Online. How these links effect users when comparing the

print version, which has no hyperlinks, may give insight into why users prefer one version of the paper to another. One might assume that youth readers would prefer the interactive nature of the digital versions of the New York Times. Their early exposure and familiarity with online navigation would seem to suggest an appreciation for the more dynamic, hyper-mediated experiences of online newspapers over the experiences of using a traditional print newspaper. However, a pilot-study for this dissertation revealed that some users preferred the print paper to the NYT Reader because they could focus more on the stories in print. “Distractibility”, was described by several participants as a negative response to the computer-based NYT Reader paper even though they much preferred NYT Reader to the print version of the paper overall.

Because the World Wide Web presents so many choices for its users, one might conclude that news consumers online would be exposed to a wider array of stories and information than they would in a traditional print environment. LaRose and Eastin (2004), however, proposed a theory of media attendance that suggests when given a large body of information to choose from, users resort to habitual gratification needs that narrow their acquisition of more information (p. 194).

Adoption of New Technologies

Another major theory of Mass Communication, which appears to be relevant to the questions in this study, is Everett Roger’s Diffusion of Innovation Theory, which has been used to describe how new technologies are adopted (Rogers, 2003). The adoption of new media formats is what drives the third research question – What formats do readers prefer for digital newspapers? Rogers (2003) describes “compatibility” as an important characteristic for innovation. The compatibility of an innovation refers to its

ability to be consistent with existing values and past experiences of a user. Roger Fidler added that an important consideration for the adoption of new forms of media is the degree to which they are related to earlier forms (Fidler, 1997). Most research in this area compares online newspapers to their print counterparts. This study will explore how readers use a technology that attempts to replicate the newspaper reading experience more closely than the online version of the newspaper does. Fidler's view that there exists a relation between emerging formats of a medium and their adoption will be examined in this dissertation.

Some researchers have examined the substitutability of digital and traditional newspapers. Flavian and Gurree (2007) found that newspaper users accepted different levels of substitutability between formats depending on why they were using the paper. They identified five key motivations for reading a newspaper:

1. Knowledge of current news
2. Search for specific information
3. Search for updated news
4. Leisure
5. Habit

They hypothesized that when seeking knowledge of current news, reading for leisure, or reading from habit, users would accept either digital or print papers as substitutes for one another. They also hypothesized that when users were searching for specific information or for updated news they would not find the substitutability acceptable (Flavian & Gurree, 2007). Only their hypothesis regarding searching for news about leisure was rejected (Flavian & Gurree, 2007, p. 806). Flavian and Gurree showed that the question

of whether users prefer print or digital newspapers does not necessarily have an “either/or” answer.

Constructivism

Constructivism is an epistemological philosophy that views all knowledge as constructed. As a learning theory, constructivists’ pedagogies develop around the notion that students learn from their experiences. Learning is an active rather than a passive endeavor where students use their existing knowledge and life experience to construct unique meanings. The work of Piaget on early childhood development and genetic epistemology is often credited for the rise of this philosophy in 20th century education. There are gradations of the application of this theory one can apply to a learning environment. Constructivists believe that students learn by engaging in material in a way that makes it relative to their lives, not simply by having information transmitted to them by a teacher (Collins, 1991). John Dewey believed individuals learn by doing (Dewey, 1916). First warning against using physical classroom activities as “agreeable diversions”, Dewey (1916) stated:

Study of mental life has made evident the fundamental worth of native tendencies to explore, to manipulate tools and materials, to construct, to give expression to joyous emotion, etc. The grounds for assigning to play and active work a definite place in the curriculum are intellectual and social, not matters of temporary expediency and momentary agreeableness. (p. 194)

This statement, by one of the leading progressive education philosophers of the 19th and 20th centuries, responds to the critical interpretation by some that constructivism is an anarchic philosophy that allows students to “run wild” and pays no attention to learning outcomes. Piaget, Dewey and most of the other progressive education theorists believed that students should be guided or assisted in the construction of knowledge (Harel, 2002).

They rejected the behavioral approach pejoratively labeled as “drill and kill” - rote learning that involved practice and memorization. They endorsed knowledge acquisition through activity with the student. It was Dewey who said, “We can have facts without thinking, but we cannot have thinking without facts” (Dewey, 1916, p. 139). Learners are not given knowledge. They construct knowledge from their experiences in the context of their lives.

College-aged students are immersed in a culture in which Internet access and electronic communication devices are ubiquitous. The ways in which they choose to use electronic forms of communication via cell phone, instant messenger, e-mail or the many other options including social networking, relates back to their designation as “Generation D” (the digital generation). Their life experiences from early adolescence have always included using computers to retrieve information. The steady decline in tradition newspaper readership may be related to how members of this cohort construct knowledge in their hyper-mediated experiences. To this end the constructivist theory of learning is applicable to how youth audiences use modern forms of text-based news delivery and how they use digital media to construct knowledge.

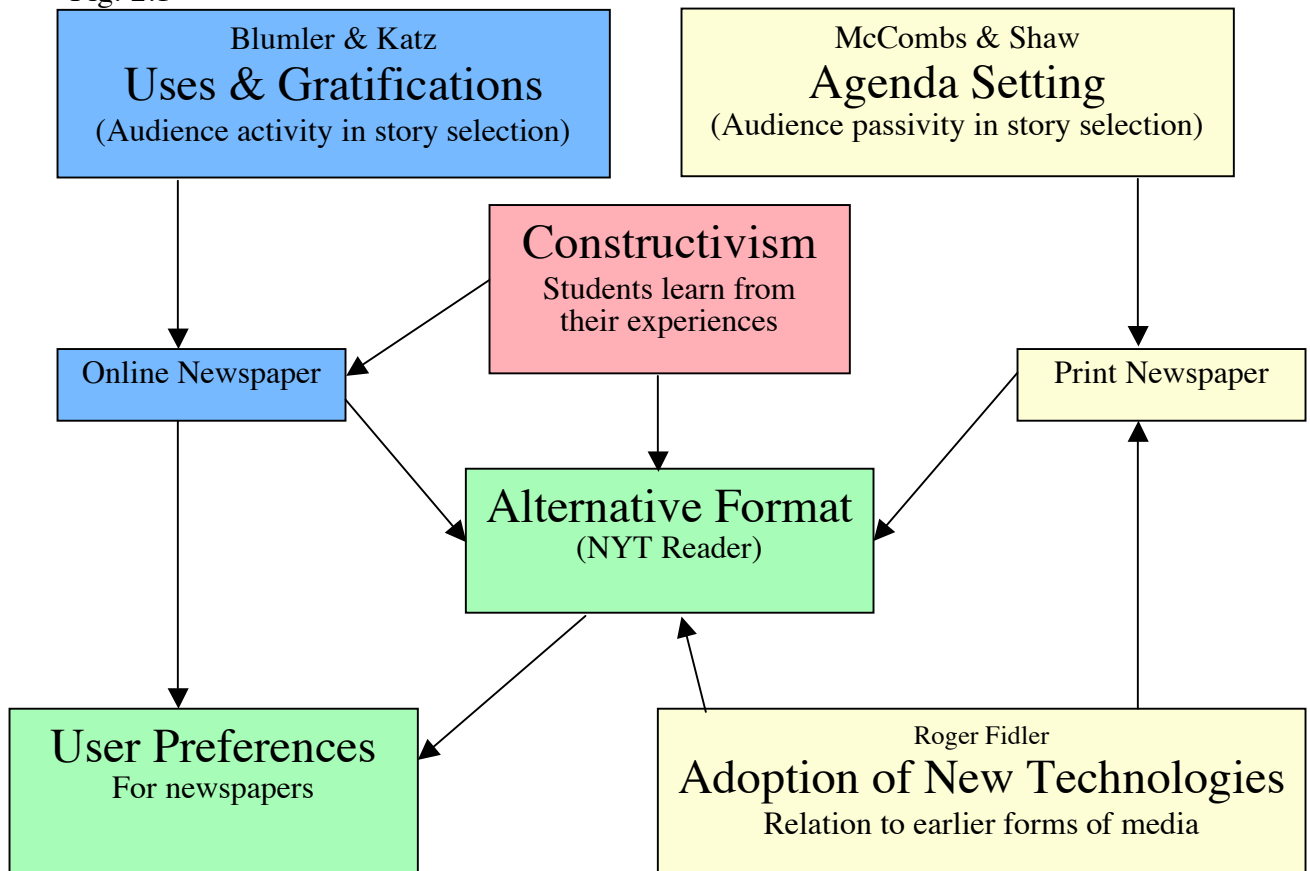
Pavlik (2001) proposes that the new media can provide higher levels of interactivity than traditional forms of media by involving non-linear writing (using hyperlinks). Pavlik (2001) states that this change “offers possibilities for extraordinary customization and heightened audience involvement” (p. 1). Youth readers may prefer non-linear story telling as a function of their mediated experiences online. This non-sequential information processing may permeate many areas of their lives that involve information transfer. Researching youth user preferences for digital and print newspapers

may shed some light on if they construct meaning differently from previous generations who were not reared using online environments. From a constructivist perspective, students will use their life experiences with computer-based newsgathering in other facets of learning.

The theoretical model shows the dividing and uniting features of digital and print newspapers. An alternative format that takes advantage of the technological innovations embraced by young users and incorporates familiar typography, may offer a highly preferred newspaper solution for the current generation of readers.

Theoretical Model

Fig: 2.1



According to Uses and Gratifications Theory, audiences are active participants with media (Blumler & Katz, 1974). It is reasonable to determine that the active nature of using a digital, computer-based interface would be more conducive to an active environment for story selection than using a print newspaper would be. Tewksbury and Althaus (2000) found this to be the case when comparing online to print papers.

Tewksbury and Althaus (2000) also found that students using print newspapers were more likely than those using the online versions to read the stories following media

cues – such as story placement. McCombs’ and Shaw’s work on the agenda setting function of the media explains that gatekeepers, such as newspaper editors, decide which stories are of greatest importance by choosing to publish them and by positioning them where they are most likely to be read (Graber, 1988).

This theoretical model illustrates how the active and passive elements of different formats of media are related and how an alternative to print and online newspapers might shape user preferences for young readers. Fidler’s theory that the adoption of new technologies is dependent upon the extent to which they are related to earlier forms is included in the model connecting to “print newspaper”, and “alternative format”. The print paper is the traditional format for newspapers. The alternative format, in this study the NYT Reader, presents a newspaper reading experience that is typographically similar to the print version but has some of the dynamic features associated with using a newspaper on a computer. There are links, but they are very limited. The NYT Reader is designed to replicate the reading experience of its print counterpart (Larson, 2009).

The model also includes Constructivism as a learning theory. As stated earlier in this chapter, constructivists believe that students learn by engaging in material in a way that makes it relative to their lives, not simply by having information transmitted to them (Collins, 1991). Student familiarity with computer interfaces and online content navigation make Constructivism Theory relative to this study. In the model, constructivism is not linked to “print newspaper” as very few of the participants in this study use this format consistently. The basic standards for print newspaper layout have endured for many decades. Given the long-standing success of the print newspaper as a

dominant medium one can suggest the layout has evolved into one that readers have come to prefer.

Value of the Proposed Project

Studies comparing digital newspapers with print papers are still relatively few. Most of these studies compare print papers with their online counterparts. Within this small canon findings differ on the outcomes of using the different conditions for obtaining news. While some have suggested digital delivery formats offer an alternative to the status quo, which make the media more democratic (Negroponte 1995; Dertouzos 1997; Gillmor 2004), others have determined the lack of structure in reader use is detrimental to the way citizens are informed in a democratic society (Tewskbury & Althaus, 2000).

The NYT Reader, using Windows Presentation Format, is a news option that works very differently from the NYT Online and presents more like a print version of the paper than the online version does. With this study the researcher will be able to focus on how students use media in a familiar digital environment that is very similar in layout to a print paper. The navigation in the three conditions presents the readers with a different set of choices, which are observable. This research will determine if the readers choose stories based on the traditional perspective of agenda setting. Within this theoretical framework, media cues designated by reporters and editors of the medium will direct the readers to stories deemed important by these gatekeepers. If, as Graber found, media cues are not as predictable for choosing a story as reader interest, digital technologies such as the NYT Reader may present a shift in the power relations between producers and consumers of news. Because the digital versions of the New York Times are less

linear than their print counterpart they may present a reading experience that limits the agenda setting function of their producers.

CHAPTER III

METHOD

Introduction

Computers and other electronic devices are being used more frequently to obtain news. A computer-based newspaper can provide a dynamic experience for readers (Pavlik, 2001). However, distractions associated with electronic news consumption, such as e-mail and social networking, can also interfere with the newspaper reading experience. Students in college, typically 18-22 years old, can be expected to be much more comfortable obtaining news on a computer. This is a unique cohort as a large portion of this generation grew up using computers. They are roughly the first generation that cannot remember when computers were not standard household items. This study explored how members of this cohort accessed information using the print version of the New York Times, The New York Times online, and the New York Times Reader. This chapter will restate the research questions and will present the research design, population and sampling.

Research Questions

The research questions were listed in the introduction. They are listed here again for easy reference.

RQ1: Will readers of the New York Times access more media-cued stories when using the New York Times print version, New York Times Online, or the New York Times Reader?

RQ2: To what extent do digital formats replicate the print paper reading experience?

RQ2a: To what extent does the Times Reader replicate the print paper reading experience?

RQ2b: To what extent does the New York Times Online replicate the print paper reading experience?

RQ3: What formats do readers prefer for digital newspapers?

Research Design

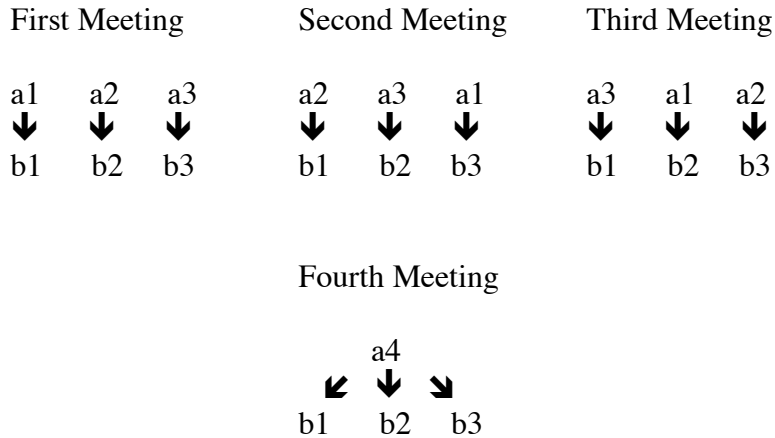
This study explored how college students used the New York Times in its various formats. The researcher used a variation on the Tewksbury/Althaus design for comparing media formats. This was a quasi-experimental design that used a sample of college students. As stated earlier, the declining newspaper readership among youth is a serious industry concern. The relationship between a democratic society and its free press make declining youth readership an important area of research.

The cohort of students that participated in the study were randomly split into three groups according to the media condition in which they were placed on a given day. One third of the participants used the New York Times print version of the newspaper, another third used the NYT Reader, and another third of the group used the NYT Online. Each group met for four data gathering sessions with the researcher. Three of those days consisted of the participants using the different formats of the New York Times. For the first three days of data gathering the groups switched the format they were using so that each group experienced using each format. The participants were asked to refrain from using any other news sources during the span of this data gathering, a technique used by other media researchers (Iyengar & Kinder, 1987). Participants met for thirty minutes a day for three days in their groups as they used the different formats of the New York

Times. They were asked to use their assigned medium for a half an hour during each of these meetings. During each session the user documented which stories he or she read and created a log of all the stories read over the first three days of using the different formats of the newspaper. These log sheets were used to determine the stories the users read in the different formats so they could be compared.

Bogden and Biklen (1998) wrote that a researcher could be brought into the subjects world by conducting interviews. During the fourth meeting the students in this study took part in a focus group interview. They were asked about their user experiences and to determine what they preferred and didn't prefer about the three different formats of the New York Times. The researcher attempted to gain insight into what participants' preferences were for text-based electronic news delivery and how electronic formats compare with the print version of a newspaper. During these interviews the researcher discussed media cues and whether they had played a role in how the NYT Reader was used by participants. The group discussed the changing landscape of media and the researcher attempted to draw from the participants their impressions about these changes and how digital media shift or don't shift power relations between producers and consumers. Part of this discussion was about the value college-age students place on digital media and the role they determine gatekeepers have in contemporary media.

The following figure is the hierarchy of the research design:



a1 = New York Times Print Version

a2 = New York Times Online

a3 = New York Times Reader

a4 = Focus Group Interview

b1 to b3 = Group 1 to Group 3

Figure 3.1: Research Design in Hierarchical Format

Each group used a different format on a particular day. Therefore, comparisons could be made between stories accessed by different groups on the same day using different formats. Comparisons could also be made between groups using the same formats on different days. Comparisons could also be made between formats used by the same groups on different days.

The groups met twice prior to formal data collecting so that participants would have a chance to use the New York Times Reader and to have its functionality explained. Since none of the participants had used the NYT Reader before this study it was

important that they know how it works. These meetings were also used to mitigate any novelty effect that might exist from participants using the NYT Reader for the first time.

Students were selected from a small, private university in the northeast. The participants were invited to volunteer and were told that their involvement would be anonymous. Students were told repeatedly throughout the data gathering sessions that they were welcome to discontinue participation without any explanation.

After two days of using the NYT Reader and NYT online, participants met for three days and logged the stories they read. Participants were instructed to log any story in which they read past the first paragraph. Other studies have invested participant time to measure how much of the story they read (Tewskbury & Althaus, 2000; D'Haenens, et al., 2004). These studies focused partly on recall and retention of facts from a story. The focus of this study was to examine whether importance cues played the same role in digital and print versions of a paper. Therefore, measuring the exact amount of the articles the students read was less important than what stories they accessed. Participants logged what stories they read but every time they stopped to write this information their reading experience was less natural. The researcher determined that logging information as specific as how much time participants spent with an article and how many lines they read would further draw them out of the natural reading experience. Since recall was not being observed in this study students were asked to log any story they read past the opening paragraph. Participants kept their packets until they had a chance to experience all three formats of the New York Times. All of the participants were anonymous so the researcher had to wait until all of the formats were used by each of the students before he

collected the packets. This was necessary to compare the stories individuals accessed in the different formats.

The print version of the New York Times was used as the guide for stories that were cued for reading. Tewsbury and Althaus (2000) showed that the NYT Online listed articles using indices (news by category). Although the NYT Online has advanced considerably since the data was gathered for that study, the digital versions of the paper still strips out media cues such as headline size, article length and visuals. This may reduce the agenda setting capability of the gatekeepers who have traditionally signified which stories are most important using these cues. Based on their design, the print version of the paper will determine which stories are cued for reading by position – more specifically, their location on the front page. Research in this area has shown that reader interest is the factor most likely to induce readers to access stories. This study will observe what stories participants access in the different sections of the paper. For example, once inside the sports section of the paper, the stories on the front page will be designated as those cued for reading by the editors. A comparison between formats will show if readers access the same stories cued for reading in the print version that they access in the digital versions.

Tewksbury and Athaus (2000) describe the indices of the online paper they used in their study as such:

While the index format provides readers with a clear set of choices about news content, it also severely mutes the effect of editorial presentation decisions. These indices include few of the traditional cues regarding story importance (e.g., headline size, article length, or visuals) that may guide readers' choices. (p. 461)

While indices are still used in the modern digital versions, the use of multimedia as importance cues is more sophisticated than at the time of the Tewksbury and Althaus

study. This dissertation also examines the NYT Reader as a new digital format. The look of this format and the navigational qualities differ from the NYT Online, however, the media cues are still not as pronounced as they are in the print version of the New York Times. Comparing these two digital formats against the media-cued print version should give insight into whether or not the role of gatekeepers as agenda setters will diminish in the virtual environment of digital newspapers.

Denzin (1989) describes the usefulness of interviewing to provide “thick description”. Contextualizing the mediated environment in which young readers have existed will be valuable for understanding their preferences for newspaper design and usage. Denzin (1989) noted:

A thick description ... does more than record what a person is doing. It goes beyond mere fact and surface appearances. It presents detail, context, emotion, and the webs of social relationships that join persons to one another. Thick description evokes emotionality and self-feelings. It inserts history into experience. It establishes the significance of an experience, or the sequence of events, for the person or persons in question. In thick description, the voices, feelings, actions, and meanings of interacting individuals are heard. (p. 83)

For the final meetings, the researcher met with all of the groups separately for focus group discussions. Students were asked about user preferences across the formats and about their experiences with the three conditions in this study. Broad, open-ended questions were presented to the participants to gather information that would contextualize and augment the quantitative data that was gathered using the story logging packets.

During the final meeting each student also filled out a questionnaire that was attached to his or her packet to gather demographic information about the participants.

This questionnaire was attached to the packet so that information about the individual could be matched with their story selections as logged on the sheets in the packet.

The dates the participants logged the stories they read were November 17th and 19th and December 1st of the fall semester of 2008. The two “training” days where the participants used the NYT Reader and NYT online occurred earlier in the semester. It was obvious from these training sessions that many of the media-cued stories focused on the historical presidential election involving Barack Obama, the first African-American nominee of a major party in the United States. By October of 2008 Senator Obama appeared to have the advantage in the campaign and it appeared very likely he would be the first African-American President of the United States. Discussions with participants also revealed that they were experiencing higher than normal interest in national political news stories. To control for these intervening variables the researcher delayed the data gathering until two weeks after the election. This strategy appears to have been sound as the name “Obama” appears in only one above-the-fold headline in all three editions of the New York Times used in this study.

Population and Sampling

The population in this study was college students from a small, private institution of higher learning in the northeast. Students from the school were invited to participate in a flyer distributed to them by faculty and staff members at the university. The flyer stated that participants would receive free lunch. All human subjects forms from the participating institution were submitted and returned to the researcher. The participating institution’s human subjects review board accepted the study and approved it to be conducted. The participants were randomly assigned a medium condition (New York

Times print, NYT Reader or NYT Online) and each participant experienced each condition. Because the comparison across formats was integral to the study, only participants who used, and logged stories from all three conditions were included in the study. Of the 88 students who used the NYT Reader and NYT Online in the early meetings before data collection began, 72 finished all three logs, the survey, and the focus group interview (N=72).

Description of Group Tasks

Three groups in this study met for 30 minutes on three separate days and logged the stories they read in the New York Times. Tewksbury and Althaus (2000) set a minimum time limit of 30 minutes and a maximum limit of 60 minutes of exposure to the papers and recorded an average of about 40 minutes use by participants (p. 464).

D'Haenens, Jankowski, and Heuvelman set a maximum exposure limit at 30 minutes per session. Based on the pilot study this researcher chose a 30-minute exposure period. In the pilot study the limit was set for 60 minutes but all of the participants claimed they would not typically read a paper for that amount of time in one sitting. Most claimed they lost total interest after the first 30 minutes.

On the first day of data gathering (November 17th) group 1 met in a computer lab where the members used the New York Times Reader. Group 2 met in a computer lab and used the New York Times Online. Group 3 met in a classroom and used the New York Times print version. At the second meeting (November 19th) group 1 used the print version, group 2 used the NYT Reader, and group 3 used NYT Online. At the third meeting (December 1st) group 1 used the NYT Online, group 2 used the print version, and group 3 used the NYT Reader. Participants in each group were asked to log on a sheet

given to them all of the stories in which they read more than the first paragraph. Each student kept the packet with logging sheets for each of the three meetings, which spanned 15 days. The packet also contained an Informed Consent form. Participants were asked to keep the packet and to return it on the last meeting. They were also asked to refrain from reading any newspapers for the duration of the study and to limit their general news consumption.

When the participant reporting was completed the researcher tabulated two sets of data from the logs. First, the total amount of stories read. The second set of data gathered was the total amount of cued-stories read. The cued-stories constituted the stories that populated the front pages of the seven major sections of the New York Times – Front Section, International News, National News, New York/Metro, Business, Arts, and Sports. This data was used to compare how likely students were to access stories that were deemed by the editors of the newspaper to have a high level of importance. The design attempted to mitigate “reader interest” as the most important media-cue by including each of these sections of the paper. Comparisons were made by averaging the amount of media-cued stories that were accessed on different days with different participants to determine if they chose the same stories in digital and print environments.

The researcher learned from his pilot study the importance of making sure the NYT Reader and the NYT Online were used very closely to one another, time wise, during the day. The updates on the NYT Online were unable to be controlled. On the NYT Reader, however, the automatic update control could be switched off so that the paper never updated until after the group used it. This was important for tracking the

stories the students accessed and for observing the role of the media cues, such as story placement, in what stories the participants read.

On the day the groups used the digital newspapers the researcher and a computer technician arrived at the computer labs at 4am. It was necessary to make sure the Times reader was up to date on each of the eighteen workstations. This was essential before the first meeting. The NYT Reader provides a seven-day archive of the newspaper. When downloading this to nineteen workstations over a single network it can take a few hours for the paper to be loaded completely. During the pilot study the researcher realized that the NYT Reader loads the front page first. Upon navigating through he found that pages deep into the paper were not updated. This needed to be remedied before collecting data on which stories the users accessed. Working with the computer technician, the researcher scheduled updates far enough in advance that the network could load all of the data for the NYT Reader before the first group, which arrived at 8am.

A group using the NYT Online or NYT Reader sat at computer workstations, which were situated in a pod formation that had three computers per pod. This design gave the users a degree of privacy as each computer faced inward at its pod, which made users sit back-to-back. The computers used were 17-inch screen Macintosh iMac computers. Screen size is a consideration when observing the effect media cues may have on the agenda setting capabilities of publishers of a newspaper. According to the World Wide Web Consortium (W3), the most common LCD monitor at the time of this writing was a 17 inch, 1024x768 resolution screen (<http://www.w3.org/TR/WCAG20-TECHS/G176.html>). This is the monitor size and resolution the participants used in this study. Though it goes beyond the scope of this study, the proliferation of small, hand

held devices, which can receive text-based news is an important area for further research. Althaus and Tewksbury (2002) explain that screen size is an important variable that distinguishes using a print paper from using a computer-based newspaper (p. 183).

The final meetings with the participant groups were used for focus group interviews. As stated earlier, they were asked about their user experiences and to determine what they preferred and didn't prefer about these three different formats of the New York Times. Here the researcher attempted to gain insight into what the youth user preferences were for text-based electronic news delivery and how an electronic format compared with the print version of a newspaper. All of the focus group interviews were audio recorded and participants were reminded that they were free to leave at any time during the discussion. On average, the discussions lasted approximately twenty minutes a piece.

The print newspapers from the three news days on which the participants used the different conditions were saved. The NYT Online was saved as a series of archived files. This made it possible for the researcher to access the stories using links the same way the participants would have. The NYT Reader was saved as a series of screen shots so that the researcher could examine story placement, size, position, and other media cues.

The newspaper stories were observed using their media cues as described by Graber (1988). The position of the story was the key media cue focused on for this study. Data were collected by breaking down the stories into a dichotomous choice for the readers. Examining the three print versions used in this study, the researcher identified articles as being either on the front page, or not in the seven sections of the paper. Researchers have shown that "reader interest" is the primary factor in why a reader

chooses a story (Graber, 1988; Tewksbury & Althaus, 2000), thus it was important to observe the pattern of story selection once the reader had entered a section of the newspaper. For example, a student with high interest in sports is likely to access the sports section of the newspaper. Once in the section of interest, the participant logs revealed if users were drawn to stories on the front page, as Graber's (1988) research found they would be. This study examined differences in digital and print newspapers so the purpose of this section was to determine if users differed with regards to story access when using different formats.

After participants were done logging stories at the third meeting, they were administered a questionnaire. The questionnaire gathered demographic information and information about general news consumption. Here the researcher was also able to have the participants answer questions about which of the formats used in this study were most appealing to them. One of the questions asked participants to list the formats in order of preference from one to three. The participants were told they could use the same number for different formats. That is, if someone liked the Times Reader and the Times Online equally, they could mark them both with a one.

Another question asks the participants to explain why they made the choices they did in reporting which formats they preferred. This question allowed the researcher to get a deeper, more contextualized sense of why users preferred the formats they did. Using mixed methods allowed the researcher to determine if patterns of preferences existed and then to explore why by asking the participants.

Another question asked participants to choose their overall satisfaction with each format using a ten-point Likert item. Here the participants could choose from 1 (totally

unsatisfied) to 10 (totally satisfied). The researcher could match these data with the ranking of formats to explore user preferences for newspapers. During the focus group interviews participants were asked about their satisfaction levels with the different formats. This Likert item was used to attain a more concrete measure of how satisfied users were with the three formats used.

The questionnaire also asked the participants about their expectations of paying for news. In their hyper-mediated lives, students may expect news information to be free. If students are predisposed to thinking that news should be free, they may be more inclined to prefer digital news in one form or another.

Summary

This chapter explained the methods used to try and address the research questions put forth in this dissertation. The researcher used mixed methods to come to a better understanding of what youth-oriented audiences for newspapers prefer and what they reject. Having the readers log what stories they read across the three formats used in this study provided evidence of the declining role that media professionals will have as gatekeepers. Focus group interviews helped the researcher provide a “thick description” of what this audience prefers for text-based news delivery, and why. Using a mixture of the qualitative interview data that was augmented by some of the quantitative findings, the author can now report his findings.

CHAPTER IV

RESULTS

Introduction

This study is an exploration of how young adults use modern text-based news delivery technologies and which features they prefer. This chapter provides the results of participants log sheets for what stories they reported reading. It also provides information collected from transcribed digital recordings of focus group interviews conducted after three days of logging stories. The first section of this chapter will report the results of the pilot study used to help design this dissertation. As this dissertation involved mixing highly technical, computer-based settings and settings that were paper-based, this pilot study was very helpful.

Pilot Study

This is a pilot study for a larger piece of research that will examine user patterns of digital and print newspapers. The study compares two groups using different delivery formats for the New York Times. One of the formats is the traditional print version of the New York Times and the other is a fairly new software program called the Times Reader. The Times Reader allows users to download up to seven days of archived New York Times content. Using the Windows Presentation Format (WPF), the Times Reader dynamically alters page layout according to text size. The format may more closely recreate the experience of reading a print newspaper than a traditional online version of a paper. As newspaper readership continues to decline and news companies must reorder themselves to survive the changing media landscape, user preferences for digitally delivered content will be an important area of research.

Research comparing print and digital versions of newspapers has primarily focused on the differences and similarities between online newspapers and their print counterparts (D’Haenens, Jankowski & Heuvalman, 2004; Tewksbury & Althaus, 2000; DeWaal, Schonbach & Lauf, 2005). To this author’s knowledge no published study has ever compared the usage of a print newspaper to that of a “reader” version of the same paper. Determining how effective new formats are to readers in the evolving digital media environment may shape the direction of text-based news delivery as print papers become more anachronistic.

Tewksbury and Althaus (2000) conducted a study in the late nineties as the production of online newspapers became more common. Their research showed that users of online newspapers were less likely than those using print newspapers to read national, international, and political news stories that were deemed important by editors. They concluded the pattern of online readers ignoring media-cued stories to be problematic because the readers, in their estimation, were missing stories of greater importance (Tewksbury & Althaus, 2000). D’Haenens, Jankowski and Heuvalman (2004) conducted a similar study and found no significant difference in what stories students were more likely to read based on what format they were using – print paper or online.

Story selection preference has been linked to “media cues” (Graber, 1984). In Graber’s *Processing the News* she determined that production decisions such as story prominence, size of headline, length of story and frequency of publication or broadcast were arousal cues for a reader. However, a reader’s interest in a story was shown to be the factor most correlated with the story chosen by the reader (Graber, 1984).

As newspaper companies explore alternative delivery formats they will have to determine what their readers prefer in a medium. Boczkowski (2004), who studied newsroom culture and sociology, found that “online tools were largely used to reproduce print journalism” (p. 76). Boczkowski found that sociological factors in a newsroom were much more important factors than any technology.

Using this literature the researcher will explore whether the Times Reader more readily presents readers with options to access stories in which they will have greater interest or if media cues, such as story size and length are primary factors for story selection.

The research questions for this pilot study are:

RQ1 = Will readers of the print version of the New York Times access more media-cued stories than users of the New York Times Reader?

RQ2 = Does the Times Reader replicate the print paper reading experience?

There are two theoretical frameworks from which these questions can be addressed. The first is McCombs and Shaw’s *Agenda Setting Theory*. This is the theory that media messages are controlled by gatekeepers who determine, to some extent, the level of importance placed on them (McCombs & Shaw, 1972). This research operationalizes “level of importance” as where stories are placed in newspapers. Editors choose how important stories are and place them in areas of prominence so they are most likely to be read. For example, the reader is cued that a story is important if it is placed prominently on the front page.

Roger Fidler’s addition to Diffusion of Innovations Theory is also relevant to this study. Fidler (1997) adds to Everett Rogers’ list of critical attributes for successful

adoption of technologies. Fidler's (1997) critical attribute is the degree to which new forms of media are related to earlier forms. This theory is directly related to the second research question, which will be explored by interviewing students who use the Times Reader digital version of the New York Times.

Pilot Study Methodology

This research took place in the spring of 2008 with a group of seventeen college seniors at a small, private university in the northeast. The students were split into two condition groups. The first group consisted of four males with one minority and five females with two minorities. This group used the Times Reader as the delivery medium for the New York Times. The second group consisted of four males with one minority and four females with no minorities. This group used the tradition print version of the New York Times.

Each group met for one hour on two separate days and used the medium they were assigned. The students were asked to avoid other forms of news for the duration of the study, which was three days. When the students arrived the first day they were told that they would simply read the newspaper or Times Reader for 1 hour. The students of group one were given a laptop with an updated copy of the Times Reader. The students of group two were given a New York Times print paper. After the 1-hour time period the students were dismissed and again asked to refrain from watching the news on TV or reading any newspapers until we met again. Two days later we met and repeated the same exercise with each students remaining in their initial groups. Upon completion of the second reading session the students were administered a short recall questionnaire that asked what stories they remembered reading from the past two sessions. After they

finished the questionnaire a focus group discussion was administered and answers were recorded. After the discussion the students were briefed on the intent of the experiment and then dismissed.

Pilot Study Findings

New York Times print condition

The surveys coupled with the focus group discussion indicate clearly that the primary factor for choosing a story is “reader interest”. As Doris Graber (1988) determined in *Processing the News*, the readers are most likely to read stories based on personal interest, as opposed to media cues such as story placement or size. Of the four males in the print paper condition three chose to read first and primarily sports. None of the three were New York Times readers and were surprised by how poor the sports section was by their own analysis. The fourth male was a regular New York Times reader and he exclusively read the front page, international, national and political news. While “story interest” was the leading indicator of what stories they would read there was also some evidence of agenda setting through media cues. All four males remembered the above-the-fold pictures on the front page from both days. The placement and size of the photographs would have classified them as “media-cued” for the reader. The photographs were also printed in color which made them stand out more than if they were printed in black and white. They all remembered the first picture which was a wide shot of Hillary Clinton on her cell phone about twenty yards from her secret service agents. All four males referred to the other picture as either a funeral or a mass. Only one of the males actually knew the story related to the pictures. In our discussion the researcher asked the males what order they read the stories and they tended to read the stories in

order of appearance. This would support Agenda Setting theory on the basis of stories being chosen because of their positioning in the paper – a classic “media cue”.

The story selection of the four females in this group was more diverse. All of them visited at least three sections of the paper including the styles, art, and metro sections as well as the classified and sports sections. One of the four females read primarily the national/international and political stories. According to her this was a function of reader interest. Interestingly this student remembered the Hillary Clinton picture on the front page but not the picture from the other edition. None of the other three females remembered either of the pictures.

Based on their story selection and the stories they recalled, it appears that when using a traditional print paper, females may be less susceptible to media cues. They were likely to remember stories that were not placed first or even early in a section. The males were much more likely to choose a section of the paper based on interest but then to read the stories in order of appearance.

Times Reader condition

Based on the surveys and group discussions there does not appear to be significant difference in recall of stories read but the pattern in which stories are read differ somewhat. Reader interest is still the most predictable variable of what stories the participants will choose. Once in those sections, like in the print condition group, there is a tendency with females to be less inclined to use early positioning of a story as a selection factor. What appears to differ in the Times Reader condition is how the males choose stories once they are in the section they chose. Again, reader interest is the

primary factor for getting them to a section in the paper. However, unlike the print condition, these males were less likely to read the stories according to their positioning in the paper.

Although not an independent variable for this study, it appears gender may be an important factor to examine in the next stage of this research. The difference between the way males select stories from print and digital versions of the paper is relevant to the first research question in this pilot study:

RQ1: Will readers of the print version of the New York Times access more media-cued stories than users of the New York Times Reader?

It appears that male readers are less likely to access media-cued stories when using the Times Reader as compared to the print version of the New York Times. Females are less likely than males across both conditions to read media-cued stories.

Interviews with participants who used the Times Reader indicate that they generally liked the program. One student commented, “It definitely has a good flow. It’s almost as easy as using a real newspaper.” When asked how the Times Reader compared to using a traditional paper, another participant commented, “It still isn’t as convenient as a regular newspaper because you can’t fold it or even write on it, but I have to admit, I don’t think I’ve ever gotten through that much of the New York Times before.”

It is interesting that during the focus group discussion so many students who used the Times Reader commented that one of the biggest problems was the distractibility of reading a newspaper on a computer. All nine participants who used the Times Reader checked their e-mail at least twice during the two hours they were supposed to be reading the paper. Eight of these checked Facebook on each day they were in the study and seven

of them chatted on AOL Instant Messenger during their participation in the study. Said one participant, “It is easier to focus when reading a newspaper (print version) because nobody can IM you or e-mail you to the paper.” Another student who used the Times Reader said, “I did like the way the Reader worked. It was very user friendly. Whenever I’m on a laptop I have to check Facebook and e-mail so it is harder to pay attention to the story or remember what stories I read.” Still another participant of the study who was in the Times Reader condition explained, “I’m just the kind of guy who is easy distracted, like an ADD kind of personality. By the time you told us we could go, in all honesty, I had played solitaire a couple of times.”

This “distractibility” factor was not something the researcher considered going into the pilot study. When I design the larger study this knowledge will be helpful. The Times Reader must be used on a computer so stripping out the distractions would be designing a false environment that would not give an accurate reflection of how it is used. However, there are new technologies, such as EPD’s (Electronic Paper Displays), which are designed for downloading Reader software to flexible membranes that work very much like paper. The user can download material to the EPD and update it regularly but it only contains the reading material. This technology may satisfy user preferences better than a laptop considering the distractibility factor. For the follow up study the researcher will attempt to speak to producers of these newer technologies to get some information about their potential.

Future Research

This pilot study will help in the design of a more comprehensive study on this topic. While the number of days of exposure to each condition will be increased, the

researcher will probably lower the amount of time during each meeting. After thirty minutes students began to look bored and appeared to be forcing themselves to read for the sake of the experiment. For future research perhaps the students should be given the papers and told to read for a half an hour and then as much as they wanted. This might give a truer reflection of the stories they would access outside of the quasi-experimental environment in which this data was collected. To this point, the researcher would concentrate on the first four to six stories they would access across conditions. After reader interest is accounted for, those early stories accessed could give the researcher a good sense of whether or not media cues and agenda setting played a role in what stories participants read.

The Times Reader is dynamic and updates intermittently throughout the day. The researcher learned it is important to make sure the laptops are all “synced” no later than 5 minutes before the start of the subject’s time with it. On the first day some students had to wait while the Times Reader updated. This may have given the user a negative attitude about the program. Once they are synced the “auto-sync” function needs to be disengaged so that the paper does not automatically update the news. If this were to happen, the group would be looking at different stories with different media-cues.

The researcher also learned that it is very important to have all of the workstations updated with the seven-day history of the NYT Reader. It is a slow update and when going over a network to eighteen different work-stations it can take a few hours until everything is downloaded and updated.

Pilot Study Conclusion

The changing formats and emerging technologies can appear to be very alluring. However, the history of digital newspapers is strewn with stories of failed devices. It is arguable that the technologies themselves were not always the problem, rather sociological factors played a bigger role. How people use newspapers and how and why producers make the decisions they do are important factors in whether or not a new form of media is adopted (Fidler, 1997).

Further research in this area should examine the role gender plays in susceptibility to agenda setting. This pilot study showed there might be a difference in how males and females access news across different media conditions.

The preferences readers have for accessing news in digital formats will continue to be an important topic for producers to consider when designing new delivery formats for the news. With the steady decline of newspaper circulation at even the most prestigious news organizations, this area of research deserves much more attention. New alternatives to current digital technologies like the Times Reader or an online newspaper may also play an important role in the future of digital news delivery. Electronic Paper, for example, may combine the most preferred aspects of paper and digital news delivery. Some of these technologies are already on the open market and should be part of any discussion about the future of newspapers and the digitization of news.

Description of Study

The purpose of this study was to compare student use of the New York Times across print and digital formats to see if they would access stories differently depending on the

format. This study also sought to determine what user preferences were across different mediated conditions. Three groups used the New York Times print edition, the New York Times Reader, and the New York Times online and they logged which stories they read. The stories were compared across the formats to see if there was any relation to the type of paper the participant read and how likely they were to access media-cued stories.

Demographics of Study Sample

48 participants were female. The females averaged 19.95 years of age and their average GPA was 3.289. 21 females classified themselves as democrats, 14 as republicans, 8 as independents, and 5 as “other”. 5 female participants considered their political philosophy to be conservative, 22 classified themselves as liberal, 19 as moderates, and 2 as “other”.

24 participants were male. Males averaged 20.6 years of age and their average GPA was 3.034. 8 males classified themselves as democrats, 2 as republicans, 9 as independent and 3 as “other”. 2 male participants considered their political philosophy to be conservative, 5 classified themselves as liberal, 11 as moderates, and 5 as “other”.

Results of the Research Questions

This section describes the findings of what stories students were accessed across the different mediated conditions. Using mixed methods the researcher attempted to determine if the type of newspaper a participant used (digital or print) had an impact on which stories they would access. Focus groups were interviewed to explore which formats users preferred and why.

RQ1: Will readers of the New York Times access more media-cued stories when using the New York Times print version, New York Times online, or the New York Times Reader?

Findings in the literature in this area are conflicting (D’Haenens, Jankowski & Heuvalman, 2004; Tewksbury & Althaus, 2000; DeWaal, Schonbach & Lauf, 2005). For this dissertation the researcher wanted to determine if the participants would access stories differently across digital and print formats. If the users do access less media-cued stories in digital environments, as Tewksbury and Althaus (2000) found, there might be a connection between limited agenda setting capabilities and user preference. The users may prefer a reading experience that lets them more easily “chart their own course”.

The researcher attempted to answer this question by having the participants of the study log each of the stories they read using each format of the New York Times (print version, NYT Reader and NYT Online). Media cues can vary quite substantially over three different days (the length of time data was gathered). In the time frame in which these data were gathered, the New York Times used color photography, large font headlines, subheadings, and other cues to attract readers to specific stories. Graber (1988) found that the most overwhelming factor in what compels a reader to access a story is “reader interest”. As the data were gathered in this section of the study, the researcher focused on which stories the readers accessed in the different sections of the newspaper. For example, a sports fan might follow Graber’s rule and access the sports section of the paper first because of interest in the subject matter. The researcher separated the logged stories by section and then determined the position of the story. The position of a story in a newspaper is one of the most important media cues for

determining if readers will access it (Graber, 1988). Once the participants were in one of the seven main sections of the paper, the stories they chose were observed to determine which front-page stories they read. Participants used their version of the New York Times for a maximum of thirty minutes and were instructed to log stories that they read past the first paragraph.

As explained in the Methods section of this study, the print version of the New York Times was used as the measuring point for stories that were cued for reading by the editors. The design of the NYT Online and NYT Reader versions make use of indices that mute media cues (Tewsbury & Althaus, 2000). The researcher will examine if participants access stories in the digital versions of the New York Times that were cued for reading in the print version.

Description of Paper Sections

The seven primary sections of the print version were the areas of the paper examined. Those sections are *Front Section*, *International*, *National*, *New York*, *Business*, *Arts*, and *Sports*.

The front section of the paper was five pages long on each day the participants used it. According to Graber's (1988) research on media cues, the stories most prominently placed on the front page of this section should be the stories that are most likely to be read by users. The following is a description of the first page of the front section of the New York Times to help the reader understand the importance of these media cues.

On the first day of data gathering the date was November 17th, 2008. The front page of the front section of the paper had a large color photograph of Iraqi policemen

dancing after a security pact was approved by their government. The photograph measured $7\frac{1}{2}$ inches horizontally and 5 inches vertically. The New York Times print version measures 12 inches across and roughly $11\frac{1}{2}$ inches from the top of the paper to the fold. The text for the story was situated to the right of the picture and ran in a single $1\frac{3}{4}$ inch column that extended past the fold. The size of picture, the placement of the text above the fold on the front page, and the length of the story are all cues to the reader that this story is of high importance.

The first story on the cover of the paper was headlined, *Facing Deficits, States Get Out Sharper Knives*. The story was situated on the left side of the paper and the font of the headline was the same size as the story about the Iraqi pact. However, there was no accompanying picture with the story. The story ran in a single $1\frac{3}{4}$ inch column that also extended past the fold. Again, the placement of the story above the fold and its visible length cues readers that it is important and should be read.

In the middle of the page directly above the fold there was a $2\frac{1}{2} \times 1\frac{3}{4}$ inch color picture of former U.S. Senator Phil Gramm. The headline read, *A Deregulator Looks Back, Unswayed*. The section of the story measures $5\frac{1}{2} \times 6\frac{1}{2}$ inches and starts above the fold. After the headline there is a 3-line italicized quote from Senator Gramm about the efficacy of deregulation of financial markets that was dated December 15th, 2000. At the time of this study, eight years later, the U.S. and the world were experiencing one of the worst economies in many years – many experts at this time fault deregulation for the financial troubles. This quote, therefore, is an “attention grabber” and acts as a cue to the reader.

Directly to the right of the Gramm story is another single 1¾ inch column story headlined, *Clinton Vetting Includes Look At Mr. Clinton*. It is the last of four stories that start above the fold.

Each of the other seven sections of the print version of the New York Times that are observed in this study have similarly media-cued stories on their front pages.

Tewksbury and Althaus determined in 2000 that readers of online papers were less likely to access the stories that were determined, by way of their media cues, to be important according to the editors who applied these cues. They concluded that this would have a deleterious effect on society as readers would be less informed about the critical national, international, and political stories of the day (Tewksbury & Althaus, 2000). This conclusion works under the assumption that gatekeepers in the media know what stories their readers most need to access. The framing of their stories and other subjective measures of how they produce news could present an argument for lessening their control over setting the agenda. Knowing if there is a difference in how young readers access news differently from varying formats of a newspaper is important information for researchers who accept either of these points of view.

On November 17th, 2008, the front page of the seven sections described consisted of these headlines:

Front Section

1. Pact approved in Iraq, sets time for U.S. pullout
2. Facing Deficits states get out sharper knives
3. A deregulator looks back unswayed
4. Clinton vetting includes look at Mr. Clinton
5. For more of Mexicans wealthy cost of living includes guards
6. If Detroit falls, foreign makers could be buffer
7. Tibetan exiles to meet about homelands future

International

1. Russia's high-tech sector reels
2. Amid brickbats from China's government, Tibetans will ponder a new strategy

National

1. A time of hope marred by an Act of Horror
2. For community in California, wildfires inflict devastation
3. Congress meets for one last fight and to look ahead

New York

1. Paterson and top 2 legislators fail to agree on cuts
2. It's a hit: breakfast in the classroom

Business Day

1. Seeking aid, automakers have a friend in U.A.W.
2. A studio, a star, a fateful bet
3. Jettisoning top talent to cut costs
4. No bonuses for 7 senior executives at Goldman
5. Rather's lawsuit shows role of G.O.P. in inquiry
6. At National Review, a threat to its reputation for erudition

The Arts

1. The Vampire of the mall
2. In faltering economy, auction houses crash back to Earth
3. No mystery: ratings heat up for NCIS
4. Wallace Shawn on "Gossip Girl"? It's not inconceivable
5. Six lives ebb and flow, interconnected and alone

Sports

1. Nothing is unmovable for unstoppable Giants
2. Flawless 10-0 for Titans; blemishes for Jaguars
3. Recession is relative term in baseball
4. Knicks falter in overtime
5. On verge of M.L.S. Title

There were 30 headlines across the 7 sections of the paper used in this study. On this date 25 participants (group 1) used the print version of the New York Times as their assigned media condition. There were 750 possibilities (25 readers times 30 media-cued stories) for readers to access front-page stories that were designated, using media cues, to be the most important stories. This group read 83 of the front page cued stories or 11.06% of those available.

The other group (group 2) from November 17th, 2008, consisted of 21 participants. They used the NYT Online as their media condition. There were 630 possibilities (21 readers times 30 media-cued stories) for readers to access front-page stories that were designated to be the most important by the editors of the New York Times. This group read 20 of the front page cued stories or 3.17% of those available.

On this date the final 26 participants (group 3) used the New York Times Reader as their assigned media condition. There were 780 possibilities for these readers to access media cued stories (26 participants times 30 media-cued stories). This group read 69 of the front page cued stories or 8.84% of those available. This figure illustrates the rapid decline in access of media-cued stories when comparing the print version or the Times Reader with the NYT Online.

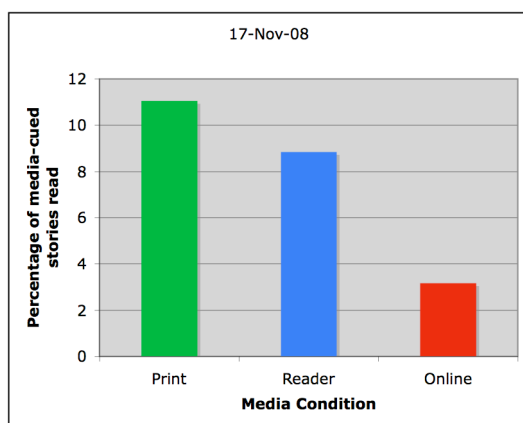


Fig. 4.1

On November 19th, 2008, the front page of the seven sections used in this study consisted of these headlines:

Front Page

1. Detroit chiefs plead for aid, to little avail
2. Britain grapples with role for Islamic justice
3. Aide to Obama seen as choice for justice post
4. Democrats gain as Stevens loses his Senate race
5. A family reunited in Congo
6. Fouled in the act of grunting
7. Murder suspect has a witness that doesn't lie: his metro card

International

1. The dead tell a tale China doesn't care to listen to
2. As fighting ebbs, confusion and desperation reign on Congo's blurry front line

National

1. Homeless in a flash, hundreds in Texas now wait for relief
2. AARP orders investigation concerning its marketing
3. California Universities will cut enrollment unless state increases money

New York

1. Albany fails to reach deal on budget deficit
2. M.T.A. said to plan 23% increase in fare and toll revenue
3. Published daily, but few notice

Business Day

1. A sea of unwanted imports
2. Piling up monuments of waste
3. Treasury denounced over bailout
4. Now comes the hard part as yahoo wrestles with a question of direction
5. Advantage of corporate bankruptcy shrinks

The Arts

1. Legal tangles of "Project Runway" keep it frozen on the catwalk
2. Tragedy tomorrow, economic woes tonight
3. Brothers in flimflammy on a continental sojourn
4. V.S. Naipaul, a man who has earned a knighthood, a nobel and enemies galore
5. Back in 1968, when a tie was no tie

Sports

1. Storms on the horizon: PGA in good shape. But L.P.G.A. and retailers feel the effects of a struggling economy
2. Thanks to Celtics, D'Antoni knows Knicks frustration
3. From top rookie to M.V.P., Pedroia builds on success
4. Leaders of solid rookie class
5. New yank seeks a fresh start

There were 30 headlines across the 7 sections of the paper used in this study – exactly the same as the first day of data gathering. On this date 25 participants (group 1) used the NYT Online as their assigned media condition. There were 750 possibilities (25 readers times 30 media-cued stories) for readers to access front-page stories that were designated, using media cues, to be the most important stories. This group read 22 of the front page cued stories or 2.93% of those available.

The 21 participants that formed Group 2 used the NYT Reader as their media condition. There were 630 possibilities (21 readers times 30 media-cued stories) for readers to access front-page, media-cued stories. This group read 26 of the front page cued stories or 4.12% of those available.

On this date the final 26 participants (group 3) used the New York Times print version as their assigned media condition. There were 780 possibilities for these readers to access media cued stories (26 participants times 30 media-cued stories). This group read 107 of the front page cued stories or 13.71% of those available. This figure illustrates the rapid decline in access of media-cued stories when comparing the print version either of the digital versions of the paper.

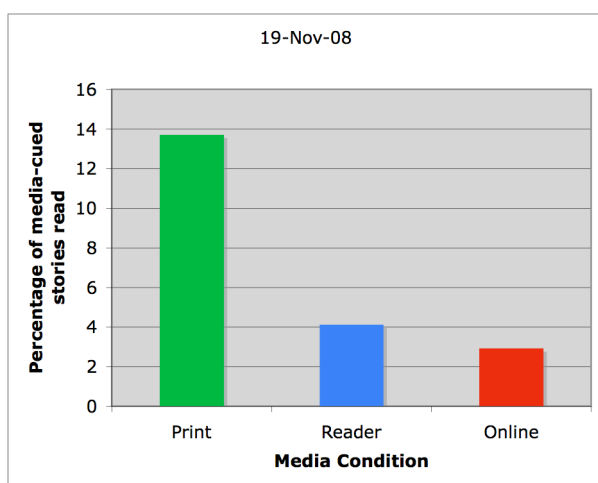


Fig. 4.2

On December 1st, 2008, the front page of the seven sections used in this study consisted of these headlines:

Front Page

1. Free of soot and scaffolding, a church begins anew
2. City pays back \$800 million in business tax
3. A security chief quits as India struggles to respond to attacks
4. A handpicked team for a foreign policy shift
5. Going off to college for less (passport required)
6. In hard times for TV anchors, trusted older faces fade out
7. Deep discounts draw shoppers, but not profits

International

1. Tense calm settles on Nigerian town after religious clashes kill hundreds
2. Training today's legionnaires to fight (and eat rodents)

National

1. A story of exile and union few are left to tell
2. F.D.A. details its food safety campaign
3. Turning around the idea of student loans

New York

1. A flash of menace, and a death by police bullet

Business Day

1. Squeezing the most from a stimulus package
2. Friend, foe, or just a fan
3. Architects of shopping frenzy
4. Each player in big three is devising its own plan
5. Makers hope touch screens will help cellphone sales
6. Autoworkers fear prospect of givebacks

Arts

1. Houses of worship choosing to avoid landmark status
2. Honor just to be asked in, as film academy tightens its ranks
3. Crumbling south Bronx as a muse
4. Reveling in winter in all its warmth
5. A media mogul with relentless moxie

Sports

1. Burrell will surrender to authorities
2. Driven to success, not distraction, Giants get seventh straight victory
3. On wet day, Jets slide backward
4. Oklahoma wins where it matters, off the field

There were 28 headlines across the 7 sections of the paper used in this study. On this date the 25 participants of group 1 used the NYT Reader as their assigned media condition. There were 700 possibilities (25 readers times 28 media-cued stories) for readers to access front-page stories that were designated, using media cues, to be the most important stories. This group read 70 of the front page cued stories or 10% of those available.

The 21 participants in Group 2 used the print version as their media condition. There were 588 possibilities (21 readers times 28 media-cued stories) for readers to access front-page, media-cued stories. This group read 96 of the front page cued stories or 16.32% of those available.

Group 3, made up of 26 participants, used the NYT Online as their assigned media condition. There were 728 possibilities for these readers to access media cued stories (26 participants times 28 media-cued stories). This group read 77 of the front page cued stories or 10.57% of those available. This figure, like the previous one, illustrates the rapid decline in access of media-cued stories when comparing the print version to either of the digital versions.

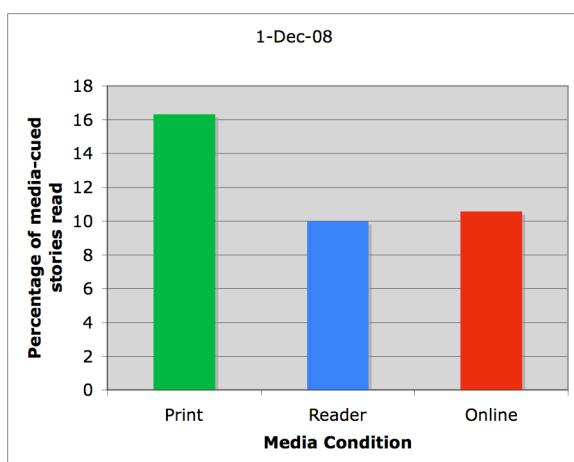


Fig. 4.3

These three charts further illustrate how readers chose more media-cued stories when using the print version of the New York Times compared with the digital versions. These charts show how each group (1-3) accessed news stories.

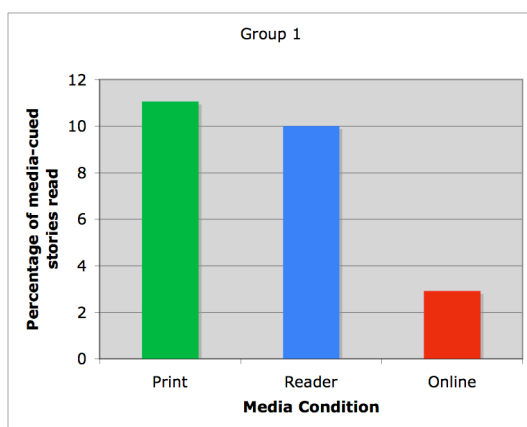


Fig. 4.4

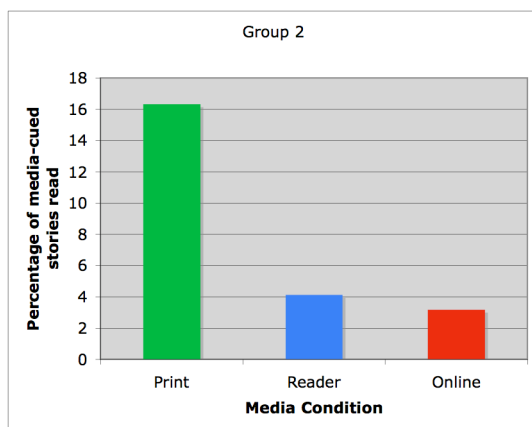


Fig. 4.5

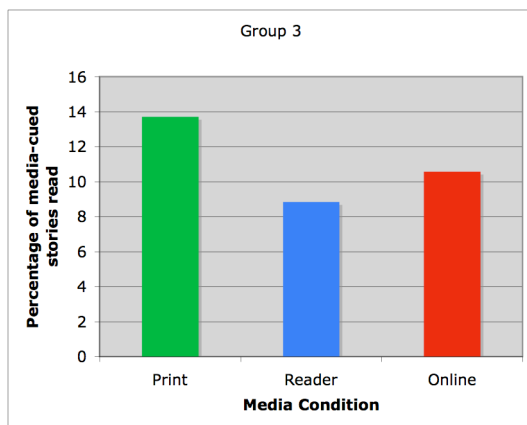


Fig. 4.6

Participant use of the NYT Reader presented inconsistent findings. Sometimes it appeared similar to the NYT Online in terms of the percentage of media-cued stories the users read. Other times it appeared to resemble the higher percentages of the print version of the New York Times. One consistent finding was that the users were more likely to access media-cued stories using the print version than they were using the NYT Online.

Group one read close to the same percentage of cued stories from the print and NYT Reader versions of the paper (print=11.06%, Reader= 10%). Cued-story access when group 1 used the NYT Online dropped to 2.93%. The findings for Group 1 support Tewsbury and Althaus claim that users are less likely to read stories ranked highly important by newspaper editors when they are using an online version of the paper compared with its print counterpart. Given the similarities in the percentage of media-cued stories across these two formats, these findings also indicate that the NYT Reader may simulate the usage of a traditional print paper.

Group two showed that the users of both digital versions of the paper were much more likely to miss stories that were cued for reading. When they read the print version of the New York Times they accessed 16.32% of the cued stories. Using the NYT Reader they read 4.12% of the cued stories and 3.17% of the cues stories when using the NYT Online. These data still support Tewksbury and Althaus' findings that print newspapers direct users to read more media-cued stories than digital newspapers. Unlike the findings in group 1, they do not suggest that the NYT Reader and NYT Online are vastly different in terms of how users decide on what stories they want to read.

Group three showed less disparity between the percentages of stories accessed across the different formats. Participants in this group read 13.71% of the cued stories in the print paper. They read 8.84% of the cued stories when using the NYT Reader and 10.57% of the cued stories when using the NYT Online. This was the only group that did not have the NYT Online as the format that least directed users to media-cued stories. These findings will be discussed in greater detail and by looking at qualitative data in the next chapter of this paper.

For the next two research questions focus group interviews were used to better understand why these users preferred certain newspaper formats to others. Quantitative data will be used to augment findings from these interviews in the next chapter.

RQ2: To What extent do digital formats replicate the print paper reading experience?

RQ2a: To what extent does the Times Reader replicate the print paper reading experience?

RQ2b: To what extent does the New York Times online replicate the print paper reading experience?

Roger Fidler (1997) has written that an important consideration for the adoption of new forms of media is the degree to which they are related to earlier forms. This point drives the second research question of this study. Determining the degree to which young readers feel there is an overlap or bridging of the print and digital formats may have an effect on how willing they are to adopt newer technologies. This information was gathered during the focus group interviews conducted with all of the participants.

The responses from the participants vary somewhat, but the majority of feedback the researcher got from the users indicates two themes:

1. Using the NYT Online is a completely different experience from using a print version of the New York Times. The users preferred the NYT Online over the print version
2. When describing the NYT Reader, participants used the positive descriptions of both the NYT Online and the print version.

Based on this discussion topic the groups did tend to describe the NYT Reader as a format that replicates, to some extent, the print version of the New York Times. The groups were much more clear in their description of the NYT Online and how using it is a completely different experience from reading a print paper. One of the participants stated that, “The online version is way better. It’s updated and you can link to other stories. I wish they would just stop printing all of those newspapers and wasting all of that paper. There is no need for it now.” There was this small thread of environmental concern tied to some of the answers students gave. A male student stated sarcastically, “I’m glad these people need to have the paper because it just feels right under their arm or they need to do the crossword puzzle on the john. Never mind all of the paper and energy used to... make something that was outdated over a decade ago.” But mainly, students just preferred the online version of the paper to the print version for convenience. Another participant said, “I’m on the computer pretty much everyday. I listen to music on my computer, I talk to my parents on the computer, I do my homework on the computer, and I get my news there too. So, it (getting news online) doesn’t really feel like a preference to me, it just sort of feels like that’s how it’s always been for me.”

This quote is insight into how imbued the youth-oriented audiences for newspapers are with online information. Many of them don't view these as choices (print versus digital) any more than people in older demographics would see using a car as a preference over a horse and buggy. Those older people wouldn't necessarily view the choice in terms of a preference. The horse and buggy still exists, and those people do indeed prefer to use a car, but it isn't a realistic choice. Answers from this interview showed the researcher that for most of the college-aged students in this study, the print paper is almost non-existent as a medium.

One of the consistently positive remarks users did have for the print paper was that while reading it one could concentrate and focus better on the story than they could in an online environment. This connects with positive responses from interviewees about the NYT Reader. In the next research question some of the remarks reported on attest to how pleased many of the users were with the NYT Reader interface. They mentioned "flow" on a number of occasions. The interface lets a user arrow left to right and up and down and fills the screen with text by automatically resizing it. So, there is no horizontal or vertical scrolling like there is when using websites. A participant in the study said, "I like the arrows. I like how the whole page is a story. There's like no other information in your face except the story. I actually enjoyed that very much." Another user stated, "The Reader for me was sort of like the best of the other two (print version and NYT Online). I wasn't wrestling with a giant piece of tissue paper but it was just the story without all the advertisements and links and stuff." With regard to checking e-mail and using social networks during the time they were assigned to read the papers, one female student explained, "When I'm online I'm always using e-mail. Even if I'm not using it, I'm still

using it. It's there and if a message comes in I check it. I have to admit I was more into the stories in the Reader thing. It took up the whole screen so I was probably less distracted than when I was reading the Safari version (this refers to the NYT Online – Safari is the Apple computer web browser).

These comments reveal that the NYT Reader may be an alternative for youth readers that can hold their attention better. The quantitative data from research question one is not definitive on whether the agenda setting function of the media is lessened when users read the NYT Reader instead of a print paper.

RQ3: What formats do readers prefer for digital newspapers?

Using mixed methods the researcher attempted to detect patterns of user preferences and to develop a deep understanding of what aspects of a newspaper the users preferred. This data is collected in two ways. Firstly, the participants filled out questionnaires, which gathered information about which formats they preferred and to what degree their preferences differed. Secondly, the researcher conducted focus group interviews with the participants to explore what users prefer in a newspaper format and why.

Questionnaire

Participants submitted a questionnaire that asked them to list which version of the New York Times they most preferred. They were instructed to rank the choices in preference in order of first, second, and third place. They were also instructed that two or all of the formats could share rank. For example, if a participant preferred the online and reader versions of the New York Times equally over the print version, they were told to report them both as "1". The questionnaire also measured user satisfaction across the

different formats by asking participants to use a Likert item. The participants could choose from 1 (totally unsatisfied) to 10 (totally satisfied).

The scores of the rankings were obtained by averaging the total numbers submitted for each format. In ranking 1st to 3rd the Times Reader scored an average of 1.59, the NYT Online scored an average of 1.77, and the print version of the New York Times averaged a 2.63.

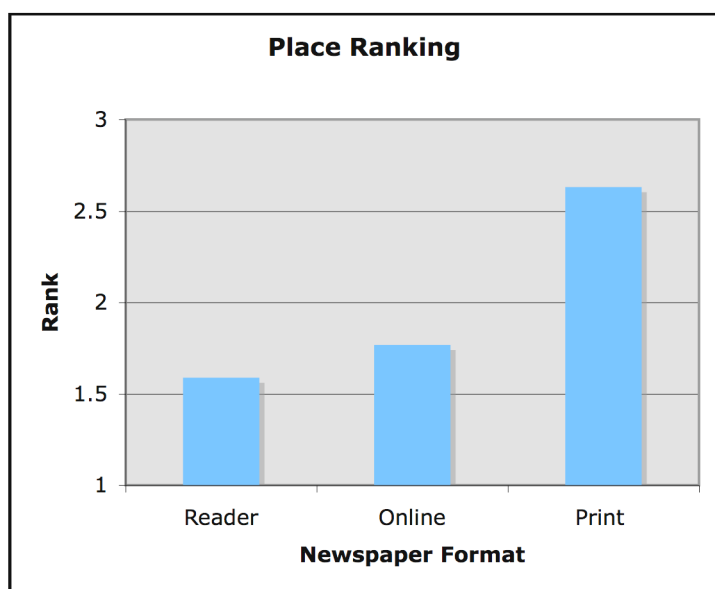


Fig. 4.7

More than half of the participants (36 of the 71) chose the Times Reader as their number one preferred format for text-based news delivery. 28 of the participants chose the NYT Reader as their second most preferred format of the New York Times. 7 participants preferred using the NYT Reader the least of the three formats. 28 participants preferred using the NYT Online above the other two formats. 31 participants chose the NYT Online as their second preference and 7 chose it as their least preferred format. 7 participants most preferred the print version of the paper and 12 chose it as the format they preferred second best. In the most striking of the findings in this area, 52

participants chose the print version of the New York Times as the format they preferred least.

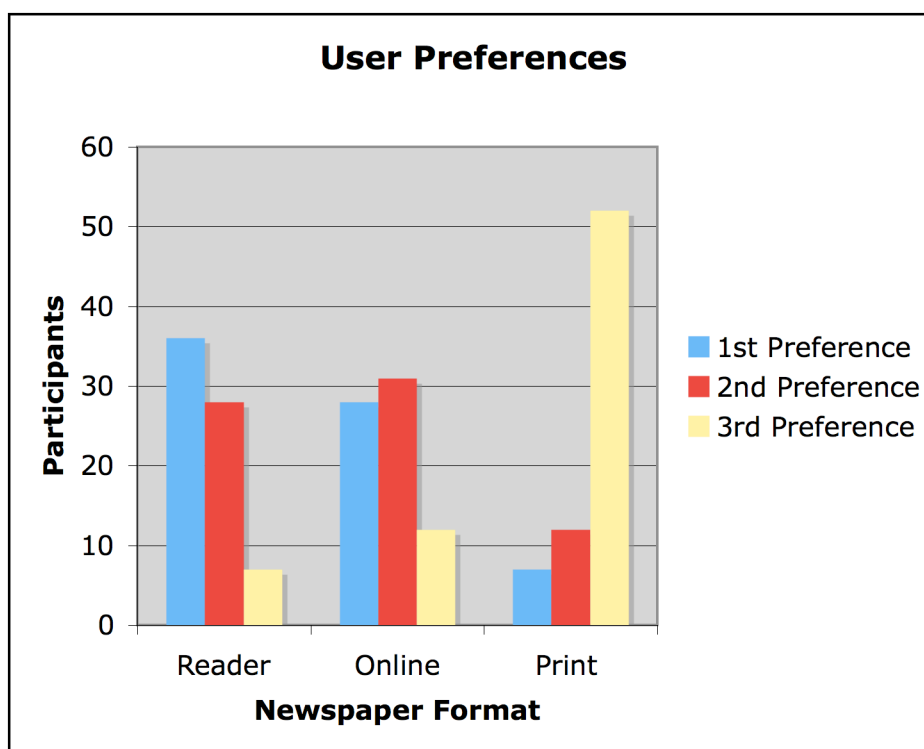


Fig. 4.8

As this chart indicates, there is some variation between preferences for the digital versions of the New York Times (Reader & Online). Combined with information from the focus group interviews, which is covered in the next section, it appears students prefer digital formats to print versions of the New York Times. The distinction of preference between the NYT Reader and the NYT Online, both of the digital versions used in this study, is negligible. However, there is a clear distinction between user preferences for these digital formats and the print version of the New York Times. The graph illustrates the large gap between both digital formats and the print version.

To further explore the distinction of preferences across formats, participants measured their satisfaction with each using a Likert scale. It was a ten-point scale

ranging from 1 (totally unsatisfied) to 10 (totally satisfied). The purpose of this scale was to observe the difference between each ranking of preference. The earlier graphs illustrate the differences of preferences by ranking one through three. This scale illustrates the gap between each ranking. The data show that with this sample there is a contrast between satisfaction levels for digitally delivered, text-based news and print newspapers. The NYT Reader had an average score of 8.28, the NYT Online an average score of 7.92, and the print version had an average score of 5.79. This graph illustrates the drop in reported satisfaction levels across the different formats.

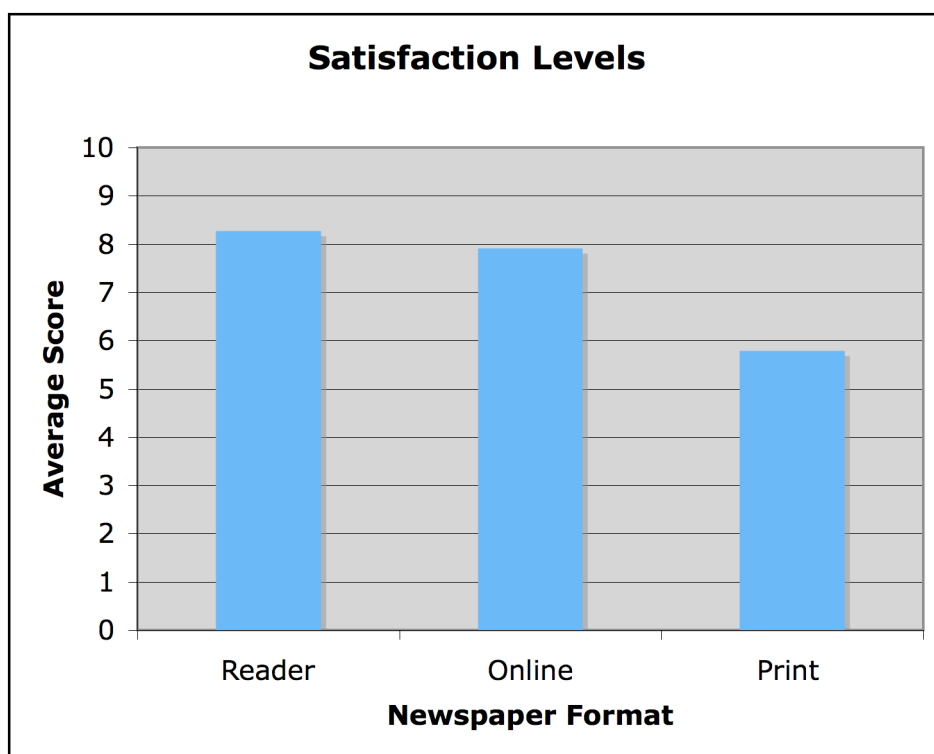


Fig: 4.9

The graph also illustrates the small distinction in satisfaction levels between digital formats and the sharper drop when compared with the print version of the paper.

Based on the questionnaire data, it appears that youth users prefer digital formats to the traditional print versions of the New York Times. Next, the researcher conducted focus group interviews to get a deeper understanding of why this may be the case.

Focus Group Interviews

The second way this data was gathered was by engaging all three groups of participants in focus group interviews. The qualitative nature of this data provided a deeply contextualized examination of what readers prefer when using digital newspapers and what they like and dislike about print papers. Using two different formats, the NYT Online and the NYT Reader, participants were able to experience digital newspapers that differ greatly in their functionalism from a print paper. The following are answers to questions that were posed to the participants after they received training on the NYT Online and NYT Reader, and used all three versions of the New York Times during this study.

After determining, by show of hands, that so few participants preferred the NY Times print version, the researcher began by probing as to why these individuals felt so differently from their peers about the formats. An interesting theme became evident in this small cohort of users who preferred print newspapers. 52 of the 71 participants placed the print version as the third in a choice of three preferences. On a 10-point Likert scale measuring user satisfaction the print version averaged 5.79 compared with 8.28 (NYT Reader) and 7.92 (NYT Online). The survey reveals evidence that students have a preference for using digital newspapers and against using print newspapers.

Print Version

During the discussion of why participants preferred the print version of the paper three themes emerged:

1. Users liked the tactile nature of holding a newspaper. Some examples cited by interviewees include being able to fold it up, take it to the beach, bring it in the bathroom, write on it, eat with it, throw it away, and use it for another purpose other than as a channel for information delivery.
2. Users did not like using computer screens for long periods of time. People who gave this as a reason for preferring print on paper described themselves as “heavy readers”.
3. Participants were used to print newspapers as a matter of habit. Very few of the participants read newspapers daily from a young age. Some of those users claimed the habitual nature of newspaper reading is the reason they prefer print.

Tactile Nature of holding a newspaper:

The researcher started the focus group interview by asking the readers who preferred the print version of the paper why they did. One user stated, “I just like to have something in front of me that I can read... something I can hold in my hands.” Another reader stated, “A newspaper is so much easier to deal with. You can fold it up easily and like take it anywhere you want. You can’t do that with a computer. Even a laptop is a pain to carry around.” One of his group mates followed up, “Quite honestly, I usually

read the paper in the bathroom. I'm not taking my laptop in there." The flexibility of use and disposable nature of the print newspaper was a factor with those users who preferred that medium. One participant described how she liked to cut certain clippings out of newspapers, typically related to sports or if someone she knew was written about in the paper. When asked about printing the story from an online paper she stated, "It's just not the same. Don't you think there's something special about being in a real newspaper?" There were a few instances when participants of this study referred to a print paper as "real".

Aversion to computer screens:

One participant commented, "The fact that... you can just take your time with it because you're not staring at a screen. After a while my eyes start to hurt a little bit after reading a screen for so long, whereas with a print version you can just relax and there's no glare or anything like that." Another participant said, "My eyes get so sore when I stare at a screen for a long time. I don't mind online papers, in fact, I kind of like them because they are always updated. But, if I do get some news online, I usually print the story and read it on paper. The regular newspaper, the print kind, is still my favorite and I don't think that will ever change."

Habit

Other participants felt their preference for a print paper was tied to the habitual nature of reading the news. One reader explained, "It's because it's what I've grown up with so I'm so used to using print." Another participant said, "You know how when you always use something or do something a certain way you don't really think about it? You just sort of do it. I used to read the comics when I was a kid and then the sports when I got

older and now I read more real news. I'm just used to reading a real newspaper...the kind that is printed on paper." A few others from the small group who preferred print newspapers also explained that the habitual nature of using a print newspaper was a factor in why they preferred it to online versions. This reinforces the importance of Fidler's (1997) contention that a vital factor for adoption of a new form of media is that it is related to earlier forms of media.

Not Preferring the Print Version

An interesting observation the researcher made was how animate the participants were when describing the reasons they did not prefer the print version of the New York Times. When the researcher asked, "What don't you like about the print paper as a news medium?" the group all started speaking at once, talking over one another trying to get their answers heard. Some of the reasons blurted out were, "Dirty", "Hard to find things", "Annoying to fold". "Dirty" and "annoying" were descriptors of the print version used throughout the interviews.

Two main themes emerged from discussing why users did not prefer the print version of the New York Times

1. Users did not like navigating through the paper. They did not like how stories were continued several pages away from where they started. They were very annoyed that stories did not just continue on the next page.
2. These users did not like the tactile nature of holding a newspaper. They complained of how dirty the print papers were and how ink got on their hands when they used them.

The most negative responses regarding using a print paper had to do with navigating the pages to find stories. The vast majority of participants expressed displeasure over trying to find stories and in just trying to handle the newspaper. The same physical qualities that attracted those who prefer a print paper (the tactile nature of how paper feels and works) were reasons for not preferring print with a majority of participant from the study. One participant responded, “I don’t like that the articles are all split up, I want them all together. Why do I have to flip twenty pages to find what I’m looking for? It’s like a treasure hunt, I’m just trying to read.” There was a theme throughout the interviews that young readers generally do not like negotiating the pages of a print paper. The New York Times is a big paper and extends to full length. Ironically, one of the traditionally positive aspects of the paper, the depth and breadth of content, may be a contributing factor to why contemporary students do not prefer it now. That volume of information means larger surface area on paper, which results in more pages. The youth cohort interviewed for this study felt very negatively toward using pages of print that were considered very large. As one participant explained, “It’s hard enough to get us (college-aged readers) to read the news at all. The paper is way too much work. My dad spreads the paper all over on Sundays and he read it for hours. I just don’t get it.” Another participant stated she didn’t like navigating through the pages of the print version of the New York Times because, “it’s so big and bulky and you have to keep turning pages and then you lose pages and then you have to find the different sections and then you just have this mass of paper in front of you and you don’t know where to look.” Another student illustrated how some youth readers have very little attention span when it comes to news. She did not like the way print papers continued

stories in different sections. This student said, “You have to read what section to go to and then find that section and you’ve lost interest by that point.” Another member of that same group stated, “I kind of feel the same way because I would really lose interest within about five seconds of what I’m looking for. If I’m on the Internet I’m only going to spend a couple of seconds looking for exactly what I want to read. That’s really all the time I want to invest in it.”

Several readers said that having their hands getting dirty with ink also bothered them. On the first day that one of the groups used the print version of the paper, the researcher witnessed something that may have illustrated how foreign the concept of using a print paper is to some college-aged readers. Two students needed to leave the computer lab where the quasi-experiment took place because the smell generated by over 30 print versions of the New York Times made them nauseated.

Another student brought up the point that her father takes certain sections of the paper to work and she has been left with half stories that continued on section that were missing. “That doesn’t happen when I’m using the online version or Yahoo News or something like that” she said.

NYT Online

Two main themes emerged from the discussion about what students liked and disliked about using the NYT Online:

1. It was a much more dynamic experience than using the print version.
Readers could use hyperlinks to expand their knowledge on a topic or a person in a story. Users liked that they could multitask while reading the paper. Several of them talked about checking e-mail or attending to their

Facebook or Myspace accounts during the course of reading the NYT Online.

2. Some students did not like how distracted they were from reading stories because of all the other options a reader has while using an online newspaper.

Responses of those who preferred using the online version of the New York Times included the flexibility to leave the paper. Many of them perceive that when reading the print version users cannot expand their knowledge of a subject beyond what is in the paper. Many of them considered using a print newspaper as an isolating experience. Some viewed this as a pro and by others as a con. One of the participants stated that, “It’s easy to click around and when you’re reading an article it shows all the related articles on the side of it that way you can keep going with the trend that you’re reading and it helps you further develop your opinion on a different topic or a situation.” Another user said, “Just using a computer to access information is so much more efficient.” She then went on to explain how she read a story in the NYT Online about some race riots from the 1960’s. She searched the name of the riots on Google and was able to find information about them right away. She explained, “This help me understand the original story much better. I had never heard of these riots and so getting some background on them made the story make more sense to me.”

Some members of the small group that preferred print as the best format for newspapers saw this freedom to move out of the paper as deleterious to the experience of reading a newspaper. One of those users stated, “How can you read a paper when the e-mail chime keeps going off and Facebook messages keep coming in. I don’t think I

would ever finish a story if I were reading it online.” The researcher learned in his pilot study that youth users were largely predisposed to checking e-mail and Facebook or other social networking sites while using the digital versions of the New York Times.

Some users most preferred the convenience of reading a paper online since many young people spend so much time online to begin with. “It’s more easily accessible, like rather than having to go find a print version... we are all basically on the Internet anyway so it’s kind of like right there.” Another student said, “It was much more convenient (than print papers). I just went on – I didn’t have to buy anything, I didn’t have to download anything.”

The pilot study showed that distractibility could be a problem with digital papers – specifically the online version of the New York Times. In this larger study, however, users who preferred the NYT Online actually saw the freedom to move about the internet as a positive attribute of this format. One user even enjoyed the advertisements online and liked being able to pursue a product by clicking a link - “It gives you the ability to move away from just the news to find out about ads by clicking on the links.”

Times Reader

In the survey results presented earlier in this chapter, the Times Reader was ranked the highest of the three formats used in this study (NYT print version, NYT Online, and NYT Reader). It was also the most preferred of the three formats and had the highest user satisfaction score. However, during the focus group interviews participants spoke more critically of the NYT Reader than they did of the NYT Online. Most of the criticism was about navigation and some of this may have been a result of users having little experience with the NYT Reader interface. To mitigate this problem the researcher

did a two-day training session with all of the participants in the study. If a candidate for the study missed even one training day he or she was excluded from the final selection of participants. Still, most of the complaints about the interface were determined to be because of user-error. For example, one student referred to having felt “stuck” once she was a few pages into a story. After describing feeling stuck she said, “I guess that could be a good thing,” acknowledging that online papers give the user “freedom” to move around that may keep them from focusing on a particular story. Another user complained of having to keep using the back-arrow keys to get to the beginning of a section. In the training session the participants were instructed in how to quickly get back to a section or the paper’s front page. The Times Reader Interface is similar in its look to the NYT Online and there were no such criticisms of that interface. The researcher did not expect this kind of confusion from any users even though these complaints were sparse and by only a small amount of participants.

Even with these complaints there was one theme that emerged from the focus group interviews about the NYT Reader:

1. Many of the participants described the Reader as “cleaner” than both other versions and that it was easy to use. It was less distracting than being online but not as constricting as being in a print paper. The theme would be, “the best of both worlds”.

Upon discussing the NYT Reader, one participant stated, “I just like the format of it. It was a lot cleaner than the website. The website, the New York Times Online seems really jumbled to me... there’s just a lot of stuff to look at and I just liked the cleaner format of the Reader. Another student also found the NYT Reader “clean” when

comparing it to the NYT Online. The student commented, “The site was very cluttered, it seemed like they were trying to match too much information on each page. Whereas the Reader, it had the separate tabs on top for each of the topics and you could just really smoothly transition between them. And I like the archive thing, how you can through past papers.”

Several participants preferred the navigational flow of the NYT Reader to the NYT Online. In fact, “flow” was a word repeated a number of times to describe what they liked best about the NYT Reader. “Clean” was also an interesting descriptor of the NYT Reader by some users. Although the print version of the paper was widely rejected by a large majority of participants in this study, the NYT Reader appears to have some of the qualities that they liked in both the print and online versions of the New York Times.

One user stated, “The flow is really nice. I like how you can just bounce from story to story using the arrow keys. It’s very cool.” Lack of “flow” was one of the major criticisms of the print paper. Yet another user compared the NYT Reader favorably against the NYT Online by stating, “I like how... it’s nice and clean. There aren’t all sorts of ads popping up and you can pay attention a little better to the stories you are reading.” Another participant comparing online to the Reader said, “It’s less distracting. I know for me I’ll just get distracted if I start clicking on... advertisements. So the Reader is more direct and if I just wanted to read and get news that was the best way to do it.” Another participant who preferred the NYT Reader stated, “I don’t really like that (referring to the ads and hyperlinks in the NYT Online). That’s why I prefer the Reader because if you’re specifically going somewhere to read the news the Reader is right there. You open it up, you do what you have to do and then all of your stories are laid out for

you. The interface is friendly, it's easy to use, it's attractive... It's laid out in front of you, it's neat, it's not sloppy.”

Users disagree on whether or not easy access to information that might lure them away from the story they are reading is a good or bad thing. As reported, some participants viewed external information as a means to learn more about a subject covered in a newspaper story. Others found distractions, such as e-mail and social networking, inhibited their ability to effectively read a story and to complete it while using digital formats completely.

CHAPTER 5

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter concludes the study. It contains a summary that describes the theoretical foundation, research design and major findings. The summary is followed by a discussion and conclusion. Lastly, the researcher offers recommendations for future studies in this area and implications of preferences for print and digital newspapers in the evolving media environment.

Summary

A recent government census study on households revealed that 74.5% of the population that is less than twenty-five years of age uses the Internet. Slightly more than half the total population in this age group has access to broadband Internet service (U.S. Dept. of Commerce, 2008). Young people are using online services and their usage has been steadily increasing (NTIA, 2004). The dynamic nature of getting information online may obviate the need for young consumers of news to receive this information on the printed page. Studies dating back over a decade have researched how young readers acquire news in digital domains compared with using print newspapers (D'Haenens, Jankowski & Heuvalman, 2004; Tewskbury & Althaus, 2000; DeWaal, Schonbach & Lauf, 2005).

How young readers prefer to receive news is a timely and important area of research. As newspapers struggle to stay in business they must determine how to maintain an audience. Understanding user preferences may help them retain and grow their readership. The various outlets for news consumption and the technologies they

employ make the anachronistic ink-on-paper news medium outdated and inefficient for modern youth readers. Computer-based newspapers are a logical replacement for the print paper when considering the ubiquity of desktop, laptop, and handheld computing devices. What effect might a transition like this have on the consumers of news – specifically young consumers?

Tewksbury and Althaus (2000) showed that college-aged students who used online newspapers were less likely to read national, international, and political news stories. These stories were “cued” by editors as important stories. Media cues are a series of design aspects that readers use to determine how important a story is (Graber, 1988). Story placement, headline size, story size, pictures, and color ink are examples of media cues used by editors to signify that a particular story should be read. In an online environment some of these cues are diminished. Online versions of newspapers use indices, which list stories. More stories can be placed on a website homepage than a print paper’s front page, but cues tend to be less evident. Story placement in an index could signify to the reader that the first story is the most important. However, using several indices with multiple articles broadens the news landscape for the reader and narrows the level of importance attached to stories that would be highly cued in a print paper.

McCombs and Shaw (1972) proposed that gatekeepers, such as newspaper editors or television producers, have the power to set the agenda for what constitutes the most important news. They determine which news stories are relevant and worthy of reporting by choosing the stories that are published and broadcasted. This is referred to as the *agenda setting function* of the media (McCombs & Shaw, 1972). Doris Graber (1988) wrote about how this control manifests itself not only in story selection, but in how the

stories selected are presented to the public through the structure of a news medium using the media cues described earlier.

Studying reader preferences for news and how readers use different formats of information delivery are important for the survival of newspaper organizations and to understand the most effective ways to deliver information. This dissertation compared student use of three different formats of the New York Times to determine what preferences users had for acquiring text-based news. The researcher also observed if readers accessed news differently when using different versions of the New York Times. One of the formats was the traditional print version of the newspaper. Its use was compared with two digital versions of the paper – the New York Times Online and the New York Times Reader. While research does exist that compares the print version of a paper with its online counterpart, to this author's knowledge there is no published study that compares usage of a print paper with a "reader" version. The NYT Reader is a fairly new program that navigates differently than the NYT Online. The columns of text automatically "re-flow" so that the user doesn't have to scroll vertically or horizontally to access the information in an article. Users can access stories in the NYT Reader by using arrows to virtually flip pages, stories, or sections. The NYT Reader also has no advertisements. Reflowing text is a very manageable task in reader programs. According to Fidler (2009), trying to incorporate advertising into these programs is extremely difficult and the New York Times has not been able to do it effectively. Graphic and other multimedia components used in advertising cannot reflow the way text does.

The researcher found a possible disconnect between what young readers chose to read and what gatekeepers determined they should read. The diminished media cues from the NYT Online and the new format of the NYT Reader provided a good point of comparison.

By gathering information on what stories the participants accessed across the different formats and by interviewing students about user preferences the researcher attempted to answer the following questions:

RQ1: Will readers of the New York Times access more media-cued stories when using the New York Times print version, New York Times Online, or the New York Times Reader?

RQ2: To what extent do digital formats replicate the print paper reading experience?

RQ2a: To what extent does the Times Reader replicate the print paper reading experience?

RQ2b: To what extent does the New York Times online replicate the print paper reading experience?

RQ3: What formats do readers prefer for digital newspapers?

Starting with the first research question, the readers did access more media-cued stories when using the print version of the paper compared with the digital versions. That difference is more pronounced when comparing the print version of the New York Times with the NYT Online. Unlike the Tewksbury and Althaus study (2000), which concentrated on student access to international, national, and political news stories, this study examined a broader array of topics reported on in the paper. As covered in the

Literature Review for this paper, Graber (1988) explained that participants in her research were able to determine for themselves what they thought was important:

They did not read stories merely because the media deemed them important. Rather, the power of media cues lay in the assumption that stories selected for prominence were likely to contain information that would be useful and interesting for the reader. (p.98)

By recording the stories that users read in seven different sections of the paper the researcher hoped to get a better perspective on the power of media cues accounting for reader interest. Whether the students were accessing stories from the National or Arts sections of the paper was not as relevant to the question at hand as what stories they accessed once they were in a section that interested them.

Findings show that on three separate days of story logging, the three groups of participants read more importance-cued stories in the print version of the paper every day. Readers of both digital versions of the paper accessed fewer media-cued stories than when they read the print version of the New York Times. Whether comparing groups to each another, or a single group using the different papers, reading the print version always resulted in more media-cued stories being read. From the uses and gratification perspective, this would suggest newspaper readers are more active participants in story selection when they use computer-based versions of the papers than when they use the print versions.

The second research question asked if the NYT Reader or the NYT Online replicate the print paper reading experience? This question was derived from Fidler's (1997) claim that an important consideration for the adoption of new forms of media is the degree to which they are related to earlier forms.

There appears to be some evidence that the New York Times Reader does replicate the experience of using the print version of the paper. During interviews reported in Chapter 4, students indicated that the “flow” of the interface reminded them of using a newspaper in that it was not as “scattered” as their experiences were with the NYT Online. Participants explained that by “scattered” they meant accessing stories in a non-linear fashion, which meant early story placement played a smaller role as a media cue. One of the major reasons for participants to prefer the NYT Reader or print version to the NYT Online was that the online version presented too many distractions. Participants found the NYT Reader interface held their attention better than the online version did.

A large majority of the students reported that they did not prefer the print version of the New York Times. Much of the qualitative data explains that they had a hard time navigating the print paper because they were used to accessing information from computers. Inversely, a large majority did prefer the NYT Online to its print counterpart. The quantitative data showed that students accessed fewer media-cued stories when using the NYT Online than they did when using the print paper. The NYT Online was, according to the participants, a very different reading experience from the print version. A majority of the participants did report that they preferred the NYT Reader to the NYT Online. They also reported in the focus group interviews that the Reader was similar to the print paper - the format they most vociferously rejected during the focus group interviews and on the surveys. Why might students prefer the digital version of the paper that most replicated the print version they largely rejected? The Reader appears to include the “best of both worlds” as one participant explained it. With the NYT Reader

the user gets an interface that focuses more on specific news stories at hand, like the print version, in a dynamic computer-based environment. This supports Fidler's claim for the adoption of new media technologies as the NYT Reader seems to be more of a bridge between the traditional print and online versions of the New York Times. The author of this study interviewed Roger Fidler who explained that the NYT Reader is, "essentially a web application but it is trying to take on more of the appearance of a printed newspaper with some of the same typographic cues that are available in print" (Fidler, 2008). In this interview Fidler described the NYT Reader as a product that is "dynamically repackaging their web content into a more newspaper-like presentation" (Fidler, 2008).

In addressing research question two, the findings in this study showed that the NYT Reader did, to a large extent, replicate the print paper reading experience with participants. The NYT Online did not, to a large extent, replicate the print paper reading experience. These findings were supported qualitatively in focus group interviews and quantitatively by observing the stories accessed across the different versions of the New York Times. In addition, the designers of the NYT Reader expressed their intention of designing a product that closely represented the traditional print version of the New York Times (Larson, 2009). Roger Fidler, a leading researcher in the field of text-based news innovation, also explained the purposeful design of the NYT Reader was to replicate its print counterpart.

Research question three asks: What formats do readers prefer for digital newspapers? Participants of this study rated the NYT Reader as the format they most preferred. Information obtained through focus group interviews and surveys show that the navigational aspects of the NYT Reader are what students liked best. The "reflow" of

text and the lack of advertisements along with the limited amount of hyperlinks were all noted as positive aspects of the NYT Reader. Users reported the lack of distractions associated with using the online version of the paper as a preference.

In ranking the preference of the digital version the Times Reader scored an average of 1.59, the NYT Online scored an average of 1.77 with 72 respondents.

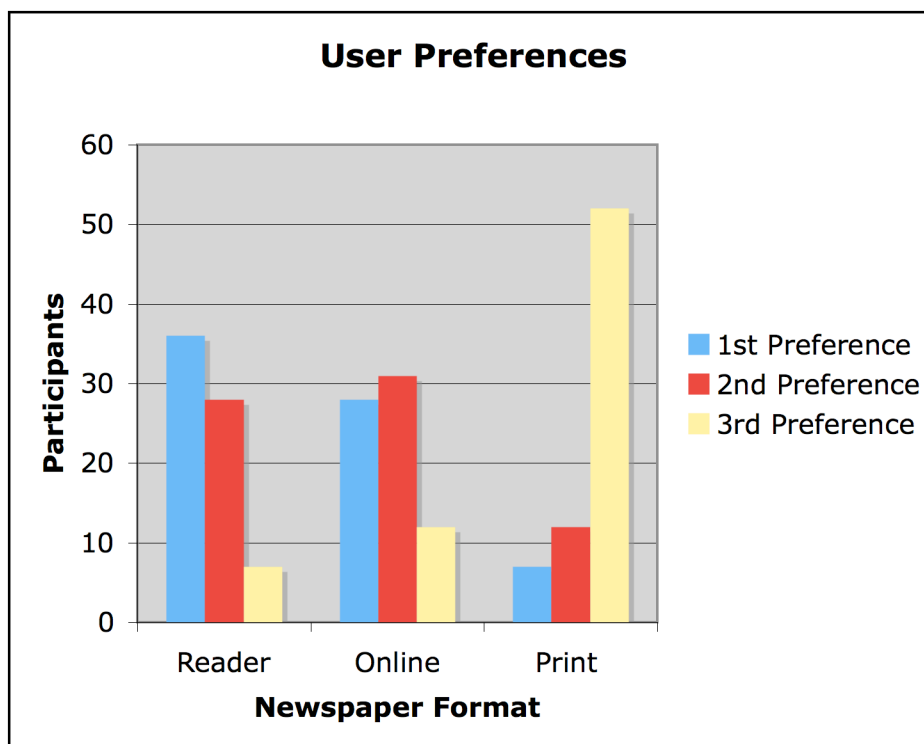


Fig. 4.8

This chart from chapter four illustrates the disparity in preference of the print version with the two digital versions. The disparity between the two digital versions is much less stark. These findings indicate a strong shift away from user preferences for print.

Paradoxically, the digital version they most preferred, the NYT Reader, and the reasons expressed for preferring it was that it resembled a traditional print newspaper.

In the focus group interviews the researcher learned that many participants preferred the design of the NYT Reader. When compared to the NYT Online,

participants liked the isolating experience they got with the Reader. Students were more inclined to engage in other activities such as social networking or checking e-mail when using a standard web browser for the NYT Online.

Some comments from participants explained that they preferred getting news on a computer so they could multitask. Among the very limited number of participants who preferred the print version of the paper (7 of the sample of 72 users) there were complaints about the distractions that arise from reading a paper online. All of the seven participants who preferred the print version of the New York Times considered themselves “heavy readers” of the newspaper – they read a newspaper everyday. This may indicate that rather than disappearing completely, perhaps print versions of newspapers are trending toward much smaller, select groups of readers who use newspapers daily. However, the development of new technologies could very well lead to the end of mass produced, ink-on-paper newspapers. While the reasons they preferred the digital versions of the New York Times are somewhat varied, the fact that a very large majority did not prefer the print version of the Times is the clearest finding in this study.

From a theoretical perspective, the agenda setting function of the media is much stronger in print environments. It was with the print paper that participants were much more likely to follow the cues assigned to stories. Since the student rejection of a format correlates with versions of the paper that exhibits the greatest control over their story selection, students may be rejecting this control by preferring the digital versions of the paper. Perhaps not even being aware of the agenda setting controls of newspaper design,

young readers used to online browsing for information intuitively preferred a format of the paper they consider freer than the print version.

Limitations

1. Participation in the study was voluntary. The results may not be generalized to other members of the cohort.
2. The study focused on “youth readers”, operationalized as roughly 17-23 year old college students. A broader demographic range within this age group could help to make this research more generalizable.
3. Participants were asked to limit their access to news stories during the span of the data gathering (2 weeks). Any access to news during that span may have informed participants of stories that may have raised their “reader interest” levels to choose a previously accessed story over another.
4. Participants had to log the stories they read. If they logged a story immediately after reading it they would have had their natural story selection interrupted by stopping to writing down the headline. This may have effected which stories they accessed. If they logged after reading some or all of the stories they accessed, they may have missed logging some that they actually read.
5. Groups used their media condition in a computer lab or classroom. Students were told they could move around when using the print paper and even sit on the floor if they wished. Participant reporting of preferences may have been different if they used the digital formats on laptops or the print version in a natural setting (i.e. couch, bed, kitchen table).

6. The media conditions were not able to account for handed devices, which many college-aged students use for information retrieval.
7. The digital versions of the New York Times only included the NYT Reader and the NYT Online. There are a few other digital form the paper takes including “Digital Editions”, which is a complete scan of the whole print version of the paper.

Future Research

The findings in this study indicate that neither the print newspaper nor its online counterpart is necessarily the best option for user preferences. While participants strongly prefer digital formats to the print version of the New York Times, they are also attracted to the layout and typography of the print version. Future research could include other digital versions of the New York Times such as “Digital Editions”, which is a scanned version of the entire paper. However, it appears that some alternative, which has yet to be mass marketed or even invented, may be the solution to the problem of dwindling newspaper circulation. There exists very little academic literature on emerging technologies for text-based news delivery. Some progressive technologies are still in the developmental stages and therefore difficult to access. The NYT Reader is available to mass audiences and therefore was a viable alternative to the print and online versions of the New York Times to research. According to Rob Larson, the Vice President of Digital Production for NYTimes.com, a version 2.0 of the NYT Reader was available in early May of 2009. In an article published on the NYTimes.com website Larson describes the new version as such: “With this latest release, Times Reader resembles the printed paper even more closely, and it updates every five minutes with the latest news from the Web.”

(Larson, May 12th, 2009). This quote illustrates that the producers of the New York Times Reader are designing software to incorporate the technological benefits of an online paper with rapid updates. Still, they market the product by claiming the new version resembles the printed paper even more than the older version of the NYT Reader. Using Fidler's view of the adoption of new information technologies, the New York Times must relate newer innovations to current and traditional solutions. According to Fidler (2009), the NYT Reader may be a "bridge technology" to newer e-ink technologies. E-ink (electronic ink) is being used in devices like the Amazon Kindle, the Sony Reader and the iRex iLiad. These devices reflect light unlike computer screens and handheld LCD devices, which project light. This means users can bring E-ink devices outside in daylight and can still read the documents on them. These devices also use very little energy to operate and therefore can last for days and weeks on a single charge. The environmental advantages are worth noting as ink-on-paper uses a tremendous amount of resources including paper, ink, and energy to print and deliver the final product. E-ink devices may be the future of text-based news delivery. As such, research in how these devices are used by consumers is a potentially vital area.

It is clear from the small canon in emerging newspaper technologies and user preferences that future research should be done in this area. Research that employs methodology that is less obtrusive to the natural experience of using a newspaper may provide better data on how readers access stories. Perhaps a better-funded study could make use of eye scanning technology to determine stories that users read. This technology can also provide a researcher with more accurate data on how likely media cues are to attract readers. As part of the method for this study and early similar studies

(Tewskbury & Altaus, 2000; D'Haenens, Jankowski & Heuvalman, 2004) participants logged what stories they read. Although this provided a clear list of what stories the participants read, it relied on them to record each story. If a student was captivated by a story they may have forgotten to log it. Also, readers had to stop between stories to do the logging. This may have diverted their attention from accessing other stories, which could have been stimulated by media cues. Taking their focus off the typography may have produced results of story access that would have otherwise been different. Eye-scanning technology could be used to determine the importance of story placement in a much more verifiable way than logging stories.

Future research should consider the negative impact of distractibility for newsreaders documented in this study. Students claim to prefer computer-based news delivery because of the dynamic experience of using hyperlinks and multi-media. However, they complained that they were unable to focus or concentrate on stories that were read online. Both the print and the NYT Reader versions of the paper were said to have presented fewer distractions for the participants. Young readers appear to desire a connection with the world outside of the news story they are reading but may be able to focus better when that access is limited. Participants in this study were more likely to access media-cued stories in print papers than they were when using the NYT Online. Although less so, students also accessed more importance-cued stories on the NYT Reader than they did while using the NYT Online.

Finally, marketing research will have to be done to determine an effective business model for new and emerging technologies in this area. Researching how students use the different version of digital newspapers to determine user preference can

be valuable for product development. However, determining the most highly preferred version of a newspaper and making that product financially sustainable are two separate but equally important facets of this problem. As stated earlier, the NYT Reader cannot effectively integrate advertising into the layout of that version of the paper. Text reflow is manageable but graphic reflow is still not technically feasible. An important area of research, therefore, is the developmental considerations for how to make newspapers financially sustainable.

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 B.A. Communication – Radio and Television

Employment:

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Adjunct Instructor/Assistant Professor

- Teach theory and production courses
- Advise students who are doing independent studies
- Assist students in acquiring quality internships
- Advisor to R.U.N., the Rider University Network
- Committee appointments

August 1997 - 2006

Video Technologies Coordinator

- Develop technology strategies and proposals
- Maintain operating budget
- Maintain television studio equipment
- Work with faculty and administrators when video productions are needed
- Assist students with assignments that require technological aptitude
- Arrange work schedule and manage 10 student workers per semester

- Inventory and manage equipment sign-out system for students
- Community liaison, (I have worked with special-needs high school students, cub scouts, boy scouts, and girl scouts).

Trainfans, Inc.

April 2001 – August 2002

Producer

Created videos about trains for children

- Wrote scripts
- Coordinated with Amtrak and union representatives for shooting in restricted areas
- Videotaped and edited programs

Marcom, Ltd.

April 1996 – September 1997

Producer

- Made industrial videos that covered regulatory compliance and OSHA standards
- Managed crew of 5 or more, including professional actors, on location shoots
- Wrote scripts
- Coordinated taping
- Shot footage
- Edited footage

QVC, Inc

March 1994 – September 1995

Product Coordinator/Stage Manager

- Managed all aspects of the live, nationally broadcast shows
- Organized arrangement of products to be sold on air
- Did product displays for broadcast
- Collaborated with guests and vendors

Teaching Experience:

Fall 1998 – Fall 2009 (All courses taught at Rider University)

COM 105 Mass Media Communication

Provides a detailed investigation and analysis into the nature, history, scope, adequacy, and limitations of mass communication and examines the reciprocal influence of the media on culture.

COM 201 Communication Theory

Studies selected theories, models and research methods in human communication, the dynamics of the communication process in various settings, and the role of communication in human behavior.

COM 230 Radio and Television Communication

Examines the role of electronic communication and its role in society. Scrutinizes the history, technology, structure, and regulation of broadcasting including issues, trends, and the impact of new communication technologies. Introduces basic principles of effective communication in broadcast writing and producing.

COM 331 Television Production

Explores the technological capabilities and limitations of the television medium in team productions using a range of styles and formats. Students learn principles of studio production, electronic field production, and electronic news gathering.

COM 335 Advanced Field Production

Students produce documentaries shot in the field. They construct ideas for films, do research, writing, filming and editing. The course typically involves interdisciplinary work with a History of Sociology major to assist with research.

COM 390 Communication and Society: TV Technology

Students learn about television technology and how it can be used to shape perception. The course provides students with the opportunity to utilize television production equipment to produce a video. They follow the project through from conception, to shooting, to post-production.

COM 431 Advanced Television Production and Research

Students experiment with field shooting and post-production. More emphasis is put on learning the principles of editing. Each student must conceptualize, shoot and edit a final project making use of the knowledge they have acquired.

Scholarly Presentations:

Teaching Communication in a Distance Learning Format, panel presentation at the New Jersey Communication Association Conference, Kean, NJ, March 2009

Social Networking as Augmentation to In-class Discussion, paper presented at the E-Learn Conference, Las Vegas, November 2008

Entering the Student Space: Using Facebook to Foster In-Class Discussion, paper presented at the International Network for Social Network Analysis Conference, Tampa Bay, January 2008

Examining Blackboard's Multiple Contexts and Perspectives' panel presentation at the National Communication Association, Chicago, 2007

Technology and Education: Distributed Learning In a Rich Media World, panel presentation at the Rocky Mountain Communication Association Conference, Denver, 2006

There's Nothing Funny About the Philosophical Underpinnings of Pedagogy: Or Is There?, paper presentation at the Eastern Communication Association Conference, Pittsburgh, 2005

Teaching as an Ecological Activity, panel presentation at the Eastern Communication Association Conference, Pittsburgh, 2005

The Child Audience as a Commodity: A Discursive Analysis of Public Versus Private Television for Children, panel presentation at the International Communication Association conference, New Orleans, 2004

Parents, Profit, and Pedagogy: The Rise of Commercial Educational Television – Issues and Implications, panel presentation at the Eastern Communication Association conference, Boston, 2004

Curriculum as Entertainment: The Preschool Audience - Learning While Watching, panel presentation at the Association for Education in Journalism and Mass Communication mid-winter conference, Rutgers University, 2004

Communication Department Curriculum: How "Jazzy" Should We Be? roundtable panel at the New Jersey Communication Association Conference, Rutgers University, 2004

Awards and Honors

Rider University Distinguished Employee, 2005

Individual at Rider who most influenced an Andrew J. Rider Scholar

- 2003 Megan Botscheller

- 2004 Megan Botscheller

- 2005 Christopher Cook

Award for service and dedication to the freshman class of Rider, 2004

Awarded "Priority Status" as an adjunct instructor

Production and Technical Skills

Video

Final Cut Pro, Avid, Media 100: Digital non-linear editing
Photoshop, After effects, Motion: Compositing and graphic software
Professional ENG/EFP camera
Studio and field lighting
Globecaster: Studio switcher system
Knox Video: Computer integrated video/audio routing system
Firefly: Video broadcast distribution system

References:

Furnished upon request.