

MEDIA USAGE OF JOURNALISM STUDENTS OF
THE UNIVERSITY OF MISSOURI-COLUMBIA

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EMMY ANDERSON

Clyde H. Bentley, Thesis Supervisor

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The undersigned, appointed by the dean of the Graduate School, have examined the thesis entitled

MEDIA USAGE OF JOURNALISM STUDENTS OF THE UNIVERSITY OF
MISSOURI-COLUMBIA

presented by Emmy Anderson,

a candidate for the degree of Master of Arts,

and hereby certify that, in their opinion, it is worthy of acceptance.

Professor Clyde Bentley

Professor Mike McKean

Professor Tom Warhover

Professor Suraj Commuri

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CHAPTER 1

INTRODUCTION

As Internet use continues to grow among U.S. citizens, more Americans are able to turn to the Internet as a source of information. Kaye and Johnson,¹ Stempel² and others have conducted studies to determine whether this has been detrimental to Americans' use of traditional news media; however, the studies so far have been contradictory, with some finding usage of online news relating to decreased usage of traditional media, while others find usage of online news does not affect or even increases usage of traditional media.

In recent years as Internet technology has become mainstream, many schools and colleges have integrated its use into their curricula, virtually ensuring that younger generations will become familiar with the Internet and many of its uses. Research has pointed to younger adults and children as heavier users of the Internet than older Americans³. As this section of the audience, who grew up learning the technology as it developed and are more familiar with it, begins to outnumber those who pre-date the Internet, a different trend in the effects of Internet use on other media use might be seen. As some of these younger adults rise to leadership positions in the media industry itself, differences in the way they use various news media may lead them to make changes to the way news is presented to the American public.

Given this, what are the characteristics and media usage habits of students at one of the nation's top college journalism programs today? Despite their common interest in the news, do younger members have different media usage habits than older members of

this group?

A study of journalism students at the University of Missouri-Columbia, the oldest and one of the most prestigious journalism schools in the country, will provide evidence to answer these questions.

CHAPTER 2

PURPOSE OF THE STUDY

The purpose of this study is to examine the media usage habits of college journalism students at one of the premier programs in the field to determine whether and how usage of one medium might be negatively or positively affected by usage of another medium. The study will also examine differences in usage between older students and younger students.

CHAPTER 3

RATIONALE

On a typical day in December 2000, 58 million Americans were logging onto the Internet, according to the Pew Research Center's Internet and American Life Project⁴. That number was an increase of 9 million daily users from just six months earlier.

In 1995, just 5 million Americans had access to the Internet. By 1999, that number had jumped to 50 million.⁵ Less than half of American adults had Internet access by the end of 2000. Just over five years later, 73 percent of U.S. adults had Internet access, according to Pew Internet Project data from early 2006, which estimated the total number of American adults who used the Internet had reached more than 147 million.⁶

As the number of people using the Internet increased, the demographics and characteristics of these people also changed. When the Internet was first gaining popularity, the characteristics of the average user were much different from those of the average American. For example, in a 1995 survey of 23,300 Internet users, only 32.5 percent were female, while 67.5 percent were male, compared to the general population's split of 52 percent female, 48 percent male.⁷ The median income of survey respondents was between \$50,000 and \$60,000, higher than the U.S. median at the time, which was estimated by the 1993 U.S. Census at \$36,950.⁸

However, as more people became Internet users, more recent studies have shown the Internet-using segment of the population is becoming more analogous to the U.S. population as a whole. For example, a 1998 survey of 37,000 Internet users showed the gender gap decreasing to a closer reflection of the general population, with 48.9 percent

female and 51.1 percent male.⁹

As certain traits of Internet users come into closer correlation with traits of the general population, what are the factors that determine whether an individual is more likely to use the Internet for news-gathering?

Several studies have examined the characteristics of Internet news users; most have compared them with users of traditional media forms. One motivation for this focus was that during the same two-year time span in which Internet access jumped from less than half of the U.S. population to more than 59 percent, circulation of traditional print newspapers declined from 55.7 million in 2000 to 55.1 million in 2002.¹⁰

Media displacement or substitution theory suggests that as the Internet becomes readily available to more people and its use becomes more prevalent, use of other more traditional media will decline. This theory states that time spent on existing media tends to decline as newer media are adopted because audiences have limited amounts of time and money to allocate to media use.¹¹

However, evidence of this displacement effect of Internet use on use of more traditional media has not been demonstrated conclusively.

A study done in 2000 by the Stanford Institute for the Quantitative Study of Society surveyed 4,113 individuals with and without Internet access nationwide and found that the more time people spent using the Internet, the more they turned away from traditional media.¹² Their results showed that for every additional hour spent on the Internet each week, more people reported decreased use of traditional media. Of those who spent 10 hours or more per week on the Internet, 39 percent reported reading newspapers less than they did before they began using the Internet.

Kaye and Johnson's research also showed higher Internet use was correlated with decreased reliance on traditional media.¹³ Their study comparing a survey in 1996 and one in 2000 found that all three measures they used to calculate Internet use – hours per week on the Internet, hours per week looking at political sites, and reliance on the Internet – were negatively correlated with time spent with traditional media. Comparisons between the two studies showed 35 percent of Internet users had decreased the amount of time they spent reading newspapers in 2000, up from 28 percent who reported less newspaper use in 1996.

A study conducted in 2004 also found that displacement existed – not only for print newspapers but for television as well.¹⁴ The results of this survey of 211 respondents in Columbus, Ohio, indicated that the Internet had a displacement effect on the respondents' traditional media use, with the largest displacements occurring for television and newspapers.

However, other research into the effects of Internet use on print news use has yielded conflicting results.

Stempel's study of changes in media use from 1995 to 1999 found Internet users were more likely than non-users to read newspapers and listen to radio news.¹⁵ This study compared a 1995 survey done by Stempel of 1,006 adults in the United States¹⁶ with a 1999 survey of 805 U.S. adults.¹⁷ The 1995 study found just 5.3 percent of respondents regularly used the Internet; by 1999, that number had jumped to 34.5 percent. Regular use of newspapers fell from 59.3 percent of respondents in 1995 to 54.2 percent in 1999. On the surface, those numbers seemed to suggest that the Internet was indeed having a detrimental effect on print news use. However, further evaluation of the survey data from

1999 led Stempel to a different conclusion. The 1999 survey showed that half of the respondents were using the Internet at least once a week, if not regularly. Of those Internet users, 59.3 percent also reported regularly reading newspapers, while only 49.3 percent of non-users also regularly read a newspaper. In other words, the decline in newspaper readership was not attributable to Internet users, but to those who didn't use the Internet.

Althaus and Tewksbury found results similar to Stempel's in their 2000 study of media use by 520 students at a large public university.¹⁸ Use of the Internet by the subjects of the study was positively correlated with newspaper reading, leading the authors to conclude that using the Internet for news "supplements rather than substitutes" for the use of traditional news media in the community.

And in 2006, Douglas Ahlers published a study stating "the hypothesized shift of news consumption from the traditional media to the online news media... is not supported by the facts."¹⁹ Ahlers' study found that while 22 percent of U.S. adults had substituted some online news for traditional news sources, for a substantial portion of that group, the online news media served as a complement to, rather than as a substitute for, traditional media.

The changes the Internet is undergoing and the changes in its use may be one of the reasons for these conflicting findings.

At a time when the technology associated with the Internet and its use is advancing in leaps and bounds, studies from just a few years ago can already be considered dated. As Althaus and Tewksbury put it in early 2000, "the continuing evolution of Internet technology and consumption patterns ensures that any study of the

general adult population's Internet use will be extremely time-bound.”²⁰

At the time of their study, the choice of using the Internet still depended most on a person's computer literacy and access to the Internet because both assets were still in limited supply. For many today, the choice between the Internet and traditional media depends instead on how well each satisfies the user's interests and needs, according to uses and gratifications theory.²¹ This adds to the importance of determining which types of news lead users to seek information from online sources and which may be seen as better served by more traditional media. Examining the length of time these users have had access to the Internet will also add depth to this issue, allowing us to look at Internet and media use habits among those with the most Internet experience as well as those with the least to see how they differ.

As Kaye and Johnson point out, most studies of the Internet's effect on traditional media have been cross-sectional analyses, a characteristic that emphasizes the time-bound nature of research such as Althaus and Tewksbury's. Kaye and Johnson argue that longitudinal comparisons across time, such as Stempel's, are necessary for a true measure of how the Internet's growing presence is effecting the traditional media. An example of how longitudinal research can add depth to the study of this question is Kaye and Johnson's finding that although use of the Internet was only a weak predictor of traditional media use in 2000, its influence had grown since 1996, when use of the Internet did not predict traditional media use at all.²²

Another important factor to consider when debating the effects of a developing technology are the people who are developing along with it.²³ As mentioned earlier, research points to younger adults and children as heavier users of the Internet than older

Americans.²⁴ A 2001 study by a newspaper research firm showed that the Internet ranked first among teens for access to quick information.²⁵ And teens are not the youngest group to be technology-savvy. Nearly half (48 percent) of U.S. children under the age of 6 had already used a computer in 2003. Each day, 27 percent of all 4- to 6-year-olds used a computer in that year.²⁶ As these children grow up, they will likely follow the tendency of Generation X-ers to rely more heavily on the Internet for news than older generations.²⁷

Lin found that infrequent newspaper readers and nonreaders tended to be Gen X or younger, and that their infrequent use of newspapers also made them more likely to adopt online services, suggesting that younger generations may see greater displacement effects of Internet use on use of other news media.²⁸

Indeed, with the launch of MySpace in August 2003, many younger Internet users found a new use for their time online. Initial growth of this site and other social networking communities like it, such as Facebook, was primarily focused among younger users. A study by comScore Media Matrix showed that in Aug. 2005, 45 percent of Myspace's 21 million users were under age 24. The same group reported that in Aug. 2006, 48 percent of Facebook's 14 million users were under the age of 24.²⁹

By studying the media usage of journalism students at a large public college, we will be able to determine whether this younger population, with its familiarity with the online world and new opportunities it presents, might indeed be more likely to adopt online services for at least a portion of their news consumption.

But there are also factors other than user age that may influence whether the relationship between traditional media and new technology will be one of substitution or

replacement.

One of these factors that may contradict a prediction of Internet substitution for more traditional media is immediate availability of breaking news, which can be extrapolated from the behavior of Americans toward different media after the attacks of Sept. 11, 2001.

This tragic event so shook and riveted the nation that 97 percent of Americans had learned of the attacks within three hours of the first World Trade Center collision. Half of the respondents in a survey by Kanihan and Gale cited broadcast media (television or radio) as their source of initial information that the attack had occurred.³⁰ Forty-eight percent found out from another person, and just two percent learned from the Internet. These findings illustrate one of the key selling points of broadcast media: immediacy. Although the Internet can be updated more often than newspapers, a notice of information is generally not presented to an Internet user while he is online (as a news bulletin would be on TV or radio); if he is not online, he will have no way to know that an updated posting has been made.

In the case of Sept. 11, updates had not even been made to most daily newspaper Web sites by late that morning, according to Randle's analysis of the Web sites of 89 daily newspapers.³¹ Results show 65 percent lacked any mention of the attacks 2 ½ hours after they occurred; 38 percent still said nothing about the attacks 7 hours afterward. As the Sept. 11 attacks were arguably the biggest American news story in the past decade and therefore the most likely to trigger Web site updates, this suggests that many Internet news sites, despite their potential for continuous updates, had yet to truly compete with broadcast media for immediate availability of information.

This failure of the Internet to live up to its potential for immediacy after such an important event is echoed by a Stempel study one month after the attacks that showed Americans considered television and newspapers to be more useful sources of information about the attacks.³² With average use of TV (83 percent) and newspapers (61 percent) at their highest levels in six years, 91 percent of survey respondents considered TV news useful after the attacks and 67 percent said the same about newspapers. A study by Poindexter and Conway showed use of the Internet was not at an increased level after the attacks,³³ and Stempel's research showed just 37 percent of respondents considered the Internet a useful source of information about the attacks.³⁴

These results suggest that by the end of 2001, the Internet was not seen as a viable replacement for more traditional media such as television and newspapers.

This may be due to the type of information Internet users look for online. In 2002, Wu and Bechtel found a negative correlation between accident and disaster news with traffic to the New York Times online.³⁵ Measuring the day's news by television news broadcasts, the researchers found that people were more likely to visit the Web site of the Times on days with a high proportion of news stories about international politics, technology and education. Days with higher proportions of domestic political news and disaster stories correlated with less traffic to the New York Times online.

The authors argue that this finding suggests certain Web sites may be accessed according to a user's perception of its most valuable offerings. The New York Times is considered an authority on international news, so Internet users may turn to its online version during times of international events, while stories about local events such as disasters may be perceived to be better covered by more localized media. By carving out

niches for specialized Web sites covering these issues, newspapers could use these sites to attract more readers to their printed versions by promoting the brand of the newspaper on the site, argue Lin and Jeffres.³⁶

Comparing the types of news that draw users to an online news site will allow us to see how Wu and Bechtel's findings relate to this audience. It will also provide an update to these earlier studies of motivations for Internet news use.

This is true of the study as a whole. Since the Internet has surged in popularity as users' history with the medium grows, a study of one audience who uses the Internet will provide updated insight into questions that have been asked of the medium since its introduction. By determining the aggregate usage characteristics of journalism students at the University of Missouri-Columbia, we will be adding to the dialogue about what types of people turn to the Internet for news information and how they align with or differ from the general population. This information could be used as a jumping-off point for further research into media displacement, such as what types of people are more likely to adopt online news services over print newspapers or for which types of people use of one medium correlates with use of others.

CHAPTER 4

RESEARCH DESIGN

This study examined University of Missouri-Columbia journalism students enrolled during the winter, summer and fall semesters of 2007, using a quantitative Web-based survey.

This survey sample most likely is not representative of the U.S. population as a whole. Instead, it provides a view into the state of media usage among a unique population that straddles two characteristics that seem to be at odds with each other in previous research into the subject. Having chosen to study journalism at a university highly regarded for its program in the field, the population is likely to be highly interested in news – a characteristic that might be interpreted from studies such as Althaus and Tewksbury’s to lead to increased usage of both online and print news, rather than substitution of one for the other. At the same time, the majority of these students are fairly young, members of Generation Next as they’ve been dubbed by The Pew Research Center for the People and the Press,³⁷ among others – a characteristic that seems to point toward higher substitution of online news for more traditional media in research by Abrahamson and others.

As the oldest and one of the most prestigious journalism schools in the country, the University of Missouri has educated Pulitzer Prize winners and other top journalists for nearly 100 years. The school’s “Missouri Method” focuses on real-world training with student-produced newspapers, magazines, radio and TV stations. In recent years the school has added online publications and programs to its curriculum, further illustrating

the increasing ubiquity of online news and ensuring its current students are familiar with the area. The survey aimed to find whether these future leaders' presumed interest in and exposure to news in all forms led to complementary usage of various media, or whether their youth and increased knowledge of news online led them to be poster children for displacement.

A link to the Web-based survey used for this research was emailed on April 4, 2007, to the undergraduate and graduate journalism students enrolled at the University of Missouri-Columbia. The survey link was emailed again to the list of enrolled students at the beginning of the summer and fall semesters, encompassing all 1,800 journalism students enrolled for the year 2007. Participants self-selected by clicking on the survey link to complete the survey. The survey software allowed each person to respond only once.

From the 1,800 enrolled students to whom the survey was distributed, a total of 409 responses, for a response rate of 23 percent, were obtained. Using sample size computation, 409 responses allow a 95% confidence rate that the error is + or - 5%.

An online survey was used for several reasons, based on the Internet's potential to maximize the efficiency and usefulness of the survey methodology. Online surveys are cost efficient, and research has shown they are also fast. A 2001 study of mail, fax and Web-based survey methods found the average response time for a Web survey was 5.97 days, compared with 16.46 days for mail surveys. In addition, because this survey was designed, in part, to study Internet usage, an online survey ensured respondents were, in fact, online users.

At the same time, limitations exist due to the online format of the study and the

self-selecting nature of the sample. Participants may have chosen to take the survey because they had strong views about the topic. Students who were less familiar or comfortable with online surveys may have chosen not to take the survey for that reason. Finally, because the subjects were being questioned about a topic that they were studying at the college level, some may have been inclined to answer the questions the way they *thought* they should as journalism students, rather than to reflect their true behaviors.

CHAPTER 5

HYPOTHESES

The survey involved questions about four aspects of the respondents' lives: Internet use, media use, lifestyle and demographics. Based on the review of previous research, the following hypotheses were developed.

Internet Use

The literature review indicates that time spent using the Internet in general might have a substitution effect on time spent with other media, and that the longer a person has had access to the Internet, the more familiar he or she feels with it and the more he or she uses it.

H1: Time spent using the Internet by MU journalism students is negatively correlated with time spent with traditional media such as television, radio and print newspapers.

H2: Respondents' number of years of experience with the Internet is positively correlated with time spent using the Internet.

These hypotheses were tested by running bivariate correlations between respondents' answers to question 2 and questions 6 through 9 and between respondents' answers to question 1 and question 2.

Media Use

The literature review indicates that younger generations may see greater displacement effects of Internet use on use of other news media. Because the majority of respondents were under 22 years old, this leads us to hypothesize that they will rely on

online newspapers as a primary news source and have a higher opinion of its timeliness and ease of use as compared with print newspapers.

H3: Online newspapers are the primary source of news for respondents.

This hypothesis was tested by collapsing responses to questions 21 through 26 to determine which medium is ranked as a primary news source most often among all six categories of news.

H4: Online newspapers are regarded by respondents to be timelier than print newspapers.

H5: Online newspapers are regarded by respondents to be easier to use than the traditional print version.

These hypotheses were tested by comparing the average agreement rating of respondents to the descriptives in the Likert scales in questions 19 and 20.

Lifestyle

The literature review indicates different media may be used to fulfill different needs of the user. For example, localized information may be perceived to be fulfilled better by local print newspapers. This leads us to hypothesize that those who are more frequently involved in attending cultural events, which are by nature specific to the locality in which they are occurring, may use print news more than those who are not involved in this activity.

H6: Involvement in attending cultural events is positively correlated with print news use.

This hypothesis was tested by running bivariate correlations between respondents' answers to question 23e and question 9.

CHAPTER 6

RESULTS

Internet Use

Not surprisingly given the ubiquity of the Internet in American homes, schools and places of employment, this survey showed University of Missouri journalism students to be highly familiar with and active on the Internet on a daily basis.

The great majority of respondents, 80 percent, reported they had been using the Internet for at least seven years or more. Another 17 percent reported having used the Internet for five to seven years. See Table 1.

Table 1. Length of History of Internet Use.

Length of Use	Response Percent	Response Count
less than 1 year	0.25%	1
1 to 3 years	0.00%	0
3 to 5 years	2.71%	11
5 to 7 years	17.00%	69
7 to 10 years	46.55%	189
more than 10 years	33.50%	136

Time spent using the Internet each day was reported by a majority of respondents, 57 percent, to be three or more hours per day. Twenty-three percent of respondents reported using the Internet five or more hours per day. Just five percent of respondents reported using the Internet one hour or less per day. See Table 2.

Table 2. Average Time Spent on Internet Per Day.

Average Time	Response Percent	Response Count
0 to 30 minutes	0.98%	4
31 minutes to 1 hour	4.42%	18
1 to 3 hours	35.87%	146
3 to 5 hours	36.11%	147
5 to 8 hours	18.67%	76
more than 8 hours	3.93%	16

Of the 72 percent of respondents who reported being employed, 73 percent responded that their job required them to access the Internet more than once per day. See Table 3.

Table 3. Frequency of Internet Use Required by Job.

Frequency	Response Percent	Response Count
Never	17.79%	71
Once per week	7.52%	30
Once per day	5.76%	23
Two to three times per day	11.53%	46
Continuously throughout the day	57.39%	229

When asked how frequently they access the Internet from various locations, among those who were employed and required to access the Internet more than once per day, “work” received the highest rating of the five locations queried. On a scale of 1 to 5, with 1 meaning “never” and 5 meaning “always,” this group of respondents’ average rating for “work” was 4.38. Fifty-five percent of this group gave “work” a rating of 5, reporting it was the location from which they “always” accessed the Internet.

Comparatively, among the entire population of respondents, the “work” rating fell to 3.64, lower than the top-rated “home” and “school,” which averaged ratings of 4.34 and 3.85, respectively. See Table 4.

Table 4. Frequency of Accessing Internet by Location.

Location	Never	Rarely	Sometimes	Often	Always	Rating Average
Home	10	6	16	166	194	4.35
Work	64	24	36	113	139	3.64
School	24	12	69	159	108	3.85
Free community facility (such as a library)	84	115	108	57	15	2.48
Paid community facility (such as an Internet cafe)	211	101	48	9	4	1.64

Regarding activities conducted while using the Internet, 76 percent of respondents reported they “always” check email when they access the Internet. Of the 11 activities queried, email received the highest average rating, 4.73, among all respondents on a scale of 1 to 5, with 1 meaning “never” and 5 meaning “always.” Twenty-nine percent reported they “always” read news when they access the Internet, and an additional 48 percent reported they “frequently” read news, giving news-reading the second-highest average rating, 4.01, among all respondents. See Table 5. A small correlation, 0.14, was found between age and the reported frequency of news-reading while online. A paired two-sample t-test showed the p value was less than .0001, indicating there is a

statistically significant relationship between age and frequency of reading news while online.

Table 5. Frequency of Performing Tasks When Accessing Internet.

Tasks	Never	Rarely	Sometimes	Frequently	Always	Rating Average
Send and receive e-mail	1	1	7	85	298	4.73
Read news	3	12	77	187	113	4.01
Shop	13	91	180	89	17	3.02
Find information about an upcoming event	0	26	145	173	48	3.62
Occupy free time	7	22	87	194	81	3.82
Post messages on a bulletin board or chat room	120	140	61	47	21	2.25
Post messages on a Web log (“blog”)	148	121	73	36	11	2.08
Read messages on a bulletin board, chat room or blog	64	124	110	71	21	2.64
Conduct business	73	58	121	107	31	2.91
Construct or update a personal Web site or social networking page	82	53	91	121	43	2.97
Construct or update a business Web site	258	58	35	25	14	1.66

Forty-one percent of respondents reported they “always” or “frequently” constructed or updated a personal Web site or social networking page when they accessed the Internet, while 35 percent said they “never” or “rarely” did. Among the youngest group of respondents, 18- to 22-year-olds, 52 percent reported they “always” or “frequently” constructed or updated a personal Web site or social networking page when they accessed the Internet. A negative medium correlation of -0.34 was found between age and frequency of this activity, showing that the younger the respondent, the more likely they tended to be to update a personal Web site or social networking page frequently. A paired two-sample t-test returned a two-tailed p value of less than .001, indicating there is a statistically significant negative correlation between age and frequency of updating a personal site or social networking page.

Media Use

When it came to questions regarding the amount of time participants spent with other media, responses generally were distributed across several of the choices given. A total of 71 percent reported watching television for more than 30 minutes per day; however, those responses were broken into three roughly even groups: 29 percent of total respondents reported watching for 31 minutes to one hour per day, while 24 percent reported one to two hours and 18 percent reported more than two hours. Thirty percent reported watching 30 minutes or fewer per day. See Table 6.

Table 6. Average Time Spent Viewing Television Per Day.

Average Time Spent	Response Percent	Response Count
none	10.16%	39
1 to 30 minutes	19.79%	76
31 minutes to 1 hour	28.76%	111
1 to 2 hours	23.70%	91
More than 2 hours	17.88%	69

Few participants reported listening to as much radio as they watched TV. In fact, twenty-three percent of survey participants reported that on an average day they spent no time listening to the radio. Thirty-one percent reported they listened for one to 15 minutes per day, and 24 percent reported 16 to 31 minutes of listening. Twenty-three percent reported more than 30 minutes spent listening to the radio each day. See Table 7.

Table 7. Average Time Spent Listening to Radio Per Day.

Average Time Spent	Response Percent	Response Count
none	22.92%	88
1 to 15 minutes	31.07%	119
16 to 30 minutes	23.76%	91
31 minutes to 1 hour	14.62%	56
More than 1 hour	7.57%	29

Most respondents reported at least some time spent reading books each day. Twenty-nine percent reported 31 minutes to one hour per day, 25 percent reported 16 to 30 minutes, 23 percent reported more than one hour and 15 percent reported 1 to 15 minutes. See Table 8.

Table 8. Average Time Spent Reading Books Per Day.

Average Time Spent	Response Percent	Response Count
none	8.33%	32
1 to 15 minutes	15.36%	59
16 to 30 minutes	24.48%	94
31 minutes to 1 hour	28.91%	111
More than 1 hour	22.92%	88

On the other hand, a large portion of respondents, 66 percent, reported spending 15 minutes or less reading print news each day. Nearly half of those, 31 percent of total respondents, reported that on an average day they spent no time reading print news. However, nearly a third of respondents, 32 percent, reported spending more than 15 minutes each day reading print news. See Table 9.

Table 9. Average Time Spent Reading Print Newspapers Per Day.

Average Time Spent	Response Percent	Response Count
none	31.15%	119
1 to 15 minutes	35.86%	137
16 to 30 minutes	21.2%	81
31 to 1 hour	10.21%	39
more than 1 hour	1.57%	6

In comparison, only 10 percent of respondents reported spending no time reading online news. A nearly equal number of respondents reported spending 1 to 15 minutes reading online news as did reading print news. See Figure 1. The majority of respondents, 55 percent, reported spending more than 15 minutes each day reading online news. See Table 10.

Figure 1. Average Time Spent Reading Print News vs. Online News.

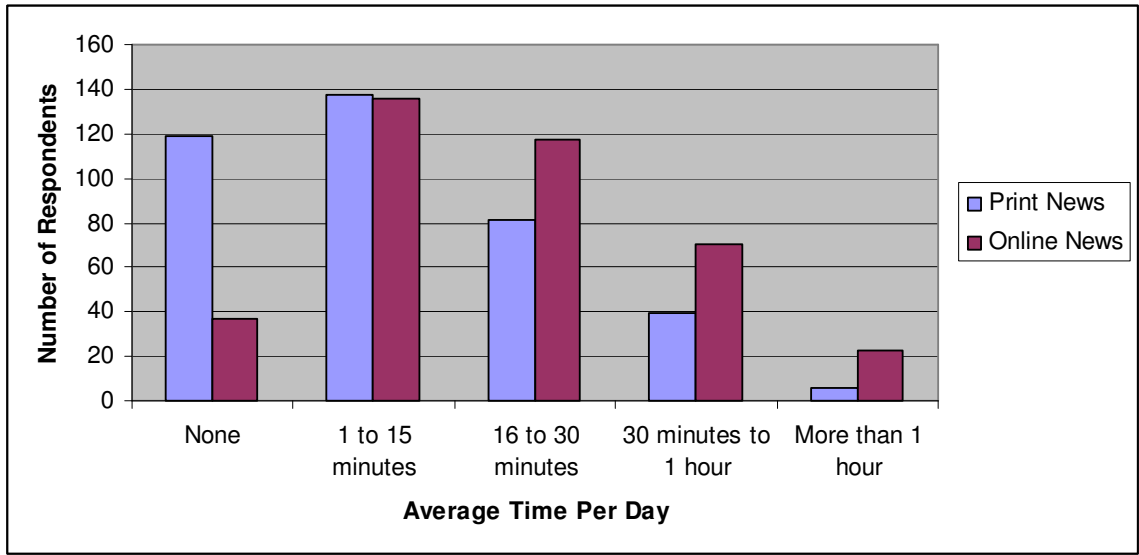


Table 10. Average Time Spent Reading Online Newspapers Per Day.

Average Time Spent	Response Percent	Response Count
none	9.66%	37
1 to 15 minutes	35.51%	136
16 to 30 minutes	30.55%	117
31 minutes to 1 hour	18.28%	70
More than 1 hour	6.01%	23

However, this did not seem to indicate that respondents were substituting online news use for print news use. In fact, time spent reading print news was shown to be positively correlated to time spent reading online news, with a correlation coefficient of 0.33. A paired two-sample t-test showed the two-tailed p value was less than .0001, indicating the correlation between time spent reading online news and time spent reading print news is statistically significant.

Still, when it came to choosing a primary source for several different types of news, online newspapers received many more responses than print newspapers.

For national and international news, 53 percent of respondents selected online newspapers as their primary source, while television came in second with 18 percent of responses, daily print newspapers came in third with 17 percent of responses and other Web sites came in fourth with 16 percent of responses. However, for respondents age 28 and older, daily print newspapers came in a close second to online newspapers, receiving 27 percent of responses compared with 32 percent for online newspapers. See Table 11. A p-value of .05 indicates that the difference between the older and younger respondents' answers is statistically significant.

Table 11. Primary Source of National and International News.

Source	All Responses	Responses, Age 28 and Older	Responses, Age 27 and Younger
Television	17.50%	12.20%	15.38%
Radios	5.94%	6.10%	4.68%
Magazines	5.31%	3.66%	4.68%
Daily print newspapers	17.19%	26.83%	11.04%
Weekly community newspapers	.63%	0.00%	0.67%
Online newspapers	53.44%	31.71%	48.49%
Other websites	16.25%	8.54%	15.05%
Other	2.36%	10.98%	0.00%

This held true for other categories of news queried as well. For political news, online newspapers again were named most often as the primary source, chosen by 37 percent of respondents, while 20 percent chose television, 14 percent chose other Web sites and 13 percent chose daily printed newspapers. Among respondents age 28 and older, daily print newspapers again moved up to second, with 17 percent of responses, compared with 26 percent for online newspapers. See Table 12. However, this

difference between the two age groups' responses was not shown to be statistically significant.

Table 12. Primary Source of Political News.

Source	All Responses	Responses, Age 28 and Older	Responses, Age 27 and Younger
Television	20.74%	14.81%	21.45%
Radios	6.12%	8.64%	5.28%
Magazines	7.18%	8.64%	6.60%
Daily print newspapers	13.03%	17.28%	11.88%
Weekly community newspapers	0.27%	0.00%	0.33%
Online newspapers	36.97%	25.93%	38.94%
Other websites	14.36%	13.58%	14.19%
Other	1.33%	11.11%	1.32%

Likewise, the primary source for business news chosen by 36 percent of respondents was online newspapers. Daily print newspapers came in second among all respondents in this category of news, with 21 percent of respondents choosing them as their primary source. Fifteen percent chose television, and another 15 percent chose other Web sites. Among respondents age 28 and older, daily print newspapers closed the gap with online newspapers slightly, receiving 22 percent of responses, compared with 28 percent for online newspapers. See Table 13. However, this difference between the responses of the two age groups was not shown to be statistically significant.

Table 13. Primary Source of Business News.

Source	All Responses	Responses, Age 28 and Older	Responses, Age 27 and Younger
Television	15.49%	10.13%	16.55%
Radios	4.35%	6.33%	3.72%
Magazines	4.35%	6.33%	3.72%
Daily print newspapers	20.92%	21.52%	20.27%
Weekly community newspapers	0.54%	0.00%	0.68%
Online newspapers	35.87%	27.85%	37.16%
Other websites	14.95%	16.46%	14.19%
Other	3.53%	11.39%	3.72%

Not surprisingly, daily print news performed strongly in the local and regional news category among both older and younger users. Thirty-five percent of respondents chose daily print newspapers as their primary source for this type of news, while 31 percent chose online newspapers and 24 percent chose television. See Table 14.

Table 14. Primary Source of Local and Regional News.

Source	All Responses	Responses, Age 28 and Older	Responses, Age 27 and Younger
Television	23.71%	14.81%	23.75%
Radios	4.57%	3.70%	4.35%
Magazines	1.71%	2.47%	1.34%
Daily print newspapers	34.57%	30.86%	32.11%
Weekly community newspapers	4.86%	4.94%	4.35%
Online newspapers	30.57%	27.16%	28.43%
Other websites	4.57%	4.94%	4.01%
Other	1.71%	11.11%	1.67%

Television was most often chosen by respondents as their primary source for sports news, with 35 percent of responses. Online newspapers followed with 22 percent

of responses, other Web sites with 17 percent and daily print news with 13 percent. See Table 15.

Table 15. Primary Source of Sports News.

Source	All Responses	Responses, Age 28 and Older	Responses, Age 27 and Younger
Television	34.99%	27.03%	36.52%
Radios	3.58%	5.41%	3.07%
Magazines	1.93%	1.35%	2.05%
Daily print newspapers	13.22%	14.86%	12.63%
Weekly community newspapers	0.00%	0.00%	0.00%
Online newspapers	22.31%	25.68%	21.16%
Other websites	16.80%	13.51%	17.41%
Other	7.16%	12.16%	7.17%

For entertainment news, 35 percent of respondents selected other Web sites as their primary source. Twenty-six percent selected television, 18 percent selected magazines and 14 percent said online news. See Table 16.

Table 16. Primary Source of Entertainment News.

Source	All Responses	Responses, Age 28 and Older	Responses Age 27 and Younger
Television	26.37%	22.37%	26.78%
Radios	2.47%	3.95%	2.03%
Magazines	17.86%	9.21%	19.66%
Daily print newspapers	2.47%	1.32%	2.71%
Weekly community newspapers	0.00%	0.00%	0.00%
Online newspapers	14.01%	18.42%	12.54%
Other websites	34.89%	32.89%	34.58%
Other	1.92%	11.84%	1.69%

The reliance by many respondents on online newspapers as their primary source

for several categories of news was reflected in the participants' answers to questions about subscriptions. While most respondents reported they did not have a daily print news subscription (78 percent), the majority reported they did have at least one subscription or registration to an online newspaper (56 percent).

Several demographic factors were shown to be positively correlated to print news subscription, including age and income, which had medium positive correlations of 0.38 and 0.33, respectively, with print news subscription; and education, which had a small positive correlation of 0.17 with print news subscription. Paired-sample t-tests showed the p values associated with these correlations were less than .0001 for income and age and .0003 for education, indicating these relationships with print news subscription are statistically significant. Of respondents in the 18- to 22-year-old age group, only 14 percent reported having a print news subscription, compared with 39 percent of those 23 or older and 57 percent of those 28 or older. See Table 17. Two-sample t-tests returned p values of 0.0008 and 0.009, respectively, showing these details are statistically significant.

Table 17. Subscription to Print Newspaper(s), by Age.

Age	Percent Yes	Count Yes
18 to 22 years old	14.4%	33
23 or older	39.2%	49
28 or older	56.9%	29

Participants reported levels of agreement with descriptions of online news and print news that seemed to indicate most saw positive aspects of both types of news. On a scale of 1 to 5, with 1 meaning strongly disagree and 5 meaning strongly agree, online news received a higher average rating for ease of use, 4.41, than did print news, 3.75.

Likewise, for timeliness online news received an average rating of 4.64, while print news was given an average of 3.56. On the other hand, print news received a higher average rating for credibility, 4.33, than did online news, 3.9. Paired-sample t-tests returned two-tailed p values less than .001 in each case, indicating the differences between the rankings are statistically significant. Finally, participants gave print and online news roughly equal ratings on relevance – 4.2 for online and 4.09 for print. Ratings given did not vary significantly from one age group to another.

Given this positive attitude among all age groups toward aspects of both types of media, along with the responses to questions regarding which types of media participants relied on for various types of news, it was not surprising to see that respondents found print news better for some uses and online news more useful for others.

On a scale of 1 to 5, with 1 meaning exclusively print news and 5 meaning exclusively online news, uses such as editorials, advertisements, local news, community events and coupons all received average ratings of less than 3, indicating most respondents found print news more useful. Sports news, business news, political news and national and internal news received average ratings of more than 3, indicating most respondents found online news more useful. In addition, many respondents ranked both print and online news as useful for many of the uses specified. See Table 18.

Table 18. Most Useful Form of News, by Use.

Use	Print news		Both print and online		Online news	Rating Average
Entertainment news	7	7	110	52	183	4.11
National/world news	20	6	142	47	154	3.84
Political news	25	10	157	56	119	3.64
Business news	35	20	163	36	110	3.46
Sports news	31	19	163	43	96	3.44
Editorial/opinion	83	38	155	28	60	2.85
Advertisements	128	37	151	12	30	2.38
Local news	142	34	149	9	32	2.33
Community events	143	63	104	17	40	2.31
Coupons	237	31	73	5	12	1.67

Lifestyle

Answers to questions regarding how often respondents directly participated in various forms of media showed that respondents participated more frequently in user-generated types of content than traditional forms. On a scale of 1 to 5, with 1 meaning never and 5 meaning daily, commenting on a social networking site received the highest average rating, 3.09, with 48 percent of respondents reporting they do so frequently or daily. Among respondents age 27 and younger, that number increased to 55 percent, while it was less than 7 percent for respondents age 28 and older. A two-sample t-test returned a two-tailed p value less than .0001, indicating the difference between the responses of the two age groups is statistically significant.

Writing letters to the editors of print, TV or online news outlets, was reported by 53 percent of respondents as an activity they had never done. Ninety-two respondents reported they had written a letter to the editor that was published in a print news source,

while only 55 reported writing a letter to the editor that was published online. More respondents reported having been interviewed for a news story, with only 25 percent saying they had never done so. See Table 19.

Table 19. Frequency of Participation in Media-Related Activities.

Activity	Never	Rarely	Sometimes	Frequently	Daily	Rating Average
I have commented on a social networking site.	79	45	62	112	61	3.09
I have commented on a Web log (“blog”).	131	89	85	51	3	2.18
I have been interviewed for a news story.	89	164	99	6	0	2.06
I have written a letter to the editor of a newspaper, magazine, Web site, or TV or radio news station.	191	130	35	3	0	1.58
I have written a letter to the editor that was published in a print newspaper or magazine.	266	70	21	1	0	1.32
I have written a letter to the editor that was published online.	305	39	13	3	0	1.21

Respondents also were asked how frequently they participated in a variety of non-media-related activities and hobbies, with walking/hiking/biking receiving the highest average rating, 3.23, on a scale of 1 to 5, with 1 meaning never and 5 meaning daily. Indoor fitness, travel, attending movies and attending cultural events received the next highest ratings, all at or above 3, meaning sometimes. On the low end were fishing/hunting, golf and gardening, all with average ratings between 2, rarely, and 1, never. See Table 20. The only statistically significant correlation found between these

activities and average time spent with print news was a medium negative correlation with attending movies. A paired-sample t-test returned a correlation coefficient of -0.15, and a two-tailed p value less than .0001, indicating the negative relationship between attending movies and average time spent with print news was statistically significant.

Table 20. Frequency of Participation in Activities and Hobbies.

Activity	Average Rating
Walking/hiking/ Biking	3.23
Indoor fitness activities/aerobics	3.08
Travel	3.06
Attending movies	3
Attending cultural events (art exhibits, concerts, theatre, etc.)	3
Photography	2.69
Volunteering	2.53
Religious activities	2.51
Home improvement/ repair	2.16
Political activities	2
Playing/coaching team sports	1.9
Environmental activities	1.87
Gardening	1.65
Fishing/hunting	1.42
Golf	1.44

Demographics

The survey population was mostly female (72 percent), which is in line with the overall percentage of journalism students who are female. The population was mostly 18 to 22 years old (65 percent) and mostly Caucasian (82 percent). See Tables 21 and 22. Participants were evenly split between those working toward their first bachelor's degree

and those who already had earned a bachelor’s degree or higher. See Table 23. Participants also were evenly split between those with a household income of less than \$25,000 per year and those with a household income of more than \$25,000 per year. 20 percent of respondents reported a household income of \$100,001 or more per year. See Table 24. A cross tabulation showed that, of the 69 students reporting income greater than \$100,001 per year, 41 reported they were undergraduates, indicating they may have reported their parents’ income rather than their own.

Table 21. Age.

Age	Response Percent	Response Count
17 or younger	0.00%	0
18-22	65.08%	233
23-27	20.95%	75
28-35	10.89%	39
36-50	2.51%	9
51-65	0.84%	3
66 or older	0.00%	0

Table 22. Ethnic Background

Ethnic Background	Response Percent	Response Count
Caucasian, non-Hispanic	82.45%	296
African-American	4.18%	15
Hispanic	4.18%	15
Asian/Pacific Islander	7.24%	26
Native American	0.28%	1
Other (please specify)	1.67%	6
<i>answered question</i>		359

Table 23. Highest Education Level Attained.

Education Level	Response Percent	Response Count
some high school	0.00%	0
high school diploma/GED	3.64%	13
At least one semester of college, but no degree awarded	46.22%	165
Associate's degree	1.40%	5
Bachelor's degree	12.61%	45
some graduate or professional school	26.33%	94
graduate or professional degree	9.80%	35

Table 24. Annual Household Income

Income	Response Percent	Response Count
\$25,000 or less	49.85%	164
\$25,001 to \$50,000	10.33%	34
\$50,001 to \$75,000	8.51%	28
\$75,001 to \$100,000	10.33%	34
\$100,001 to \$150,000	12.77%	42
\$150,001 or more	8.21%	27

As referenced earlier, 72 percent of respondents reported being employed either full-time or part-time. Not surprisingly given that participants were journalism students, the highest percentage of responses to the question about field of employment was communications, in which 45 percent of respondents reported working. Twenty-one percent reported employment in the retail/hospitality field and 16 percent reported working in education. See Table 25.

Table 25. Type of Employment.

Type	Response Percent	Response Count
Medical/Healthcare	3.11%	7
Retail/Hospitality	21.33%	48
Clerical/Administrative	12%	27
Communications	44.89%	101
Education	15.56%	35
Professional Services: Legal, Financial, Real Estate	3.11%	7
Labor: Construction, Agriculture, Mining	1.33%	3
Technology/Technical	7.11%	16

CHAPTER 7

DISCUSSION

Hypothesis 1

As noted previously, studies by Kaye and Johnson and others indicated that time spent using the Internet in general might have a substitution effect on time spent with other media. However, Hypothesis 1, proposing time spent using the Internet would be negatively correlated among the survey population with use of print news, television, radio and books, was not supported for any of these media as no statistically significant correlations were found. In addition, time spent reading online news, rather than time spent using the Internet in general, did show a correlation to time spent reading print news – but it was a medium positive correlation coefficient of 0.33. In other words, the respondents of this survey who read more news online also read more news in print, rather than online news usage having a substitutive effect on other forms of news use. The critical r value for a 0.05 significance level for 388 degrees of freedom is .113, and a paired-sample t-test returned a p value less than .0001, indicating this is a statistically significant relationship.

This is in line with results of studies conducted by Althaus and Tewksbury, Stempel and others, which found positive correlations between time spent online and time spent with print news. In particular, Ahlers' recent study from 2006 showed that many adults in the U.S. today report complementary uses of online news and print news, rather than patterns of substitution.

It seems likely that as Internet users have become more savvy over time, they

have developed more sophisticated patterns of using it for news gathering – spending more time online to focus on the needs they feel are best met by online sources, while complementing it with other media for uses they feel the Internet is not best at fulfilling.

Hypothesis 2

Hypothesis 2 proposed that respondents' number of years of experience with the Internet is positively correlated with time spent using the Internet. A small positive correlation coefficient of 0.26 was found between these two variables, supporting the hypothesis that respondents who had a longer history of Internet use tended to spend more time per day on the Internet. Given the critical value of r of 0.098 for 405 degrees of freedom and a 0.05 significance level, this was found to be a statistically significant correlation. However, a longer history of using the Internet was not found to be related to time spent reading print news, showing no tendency for those Missouri journalism students who have a longer history with the Internet to increasingly turn away from print news.

Hypothesis 3

At the same time, Hypothesis 3, proposing online newspapers are the primary source of news for respondents, was supported. Thirty-eight percent, 681 total, of the 1,793 responses to the six questions asking respondents their primary source of various types of news listed online news. Television came in second, with 28 percent of responses or 497 total, while print news and other Web sites each received 20 percent of responses to these questions, 359 and 365 total, respectively.

However, as Ahlers pointed out in his 2006 study, a more realistic description of the way Americans use media today is one in which they “consume a varied diet of

media” rather than just one medium. This view seems to hold up among this population, illustrated by the varied responses to primary news sources for different types of news. While many of the types of news queried resulted in a majority of responses for online news, other types saw print or television news selected most often. Still, comparing these answers by age showed older respondents were more likely to select traditional forms of media than younger respondents were.

Online newspapers were the most reported primary source for several of the individual types of news questioned. However, for local and regional news, respondents most often selected print news. And when rating whether print or online news was more useful for specific purposes, print news was rated higher on average for several uses such as local news, community events and editorial/opinion. This is similar to Wu and Bechtel’s finding in 2002 that different types of news seemed to attract varying levels of online news usage.³⁸

At roughly the same point in the Internet’s history, just a month after the Sept. 11, 2001, attacks, a study by Stempel showed only 37 percent of people surveyed considered the Internet a source of useful information about the tragedy.³⁹ One possible reason for this may have been that Internet news sites had not yet developed as the first source for breaking news in major events. Randle’s analysis of news sites at the time showed 65 percent were not updated to mention the attacks 2 ½ hours after they occurred, and 38 percent had not been updated even 7 hours afterward.⁴⁰

Hypothesis 4

In contrast, many of today’s news Web sites are updated continuously, with labels touting how recently a story has been posted or updated and tickers across the top of the

page trumpeting breaking news headlines before full articles are even written. This increased timeliness was reflected in the survey respondents' perception of online news, as Hypothesis 4, proposing online newspapers are considered to be timelier than print newspapers, was supported. On a scale of 1 to 5, with 1 meaning "strongly disagree" and 5 meaning "strongly agree," online newspapers received an average agreement rating of 4.64 among respondents. Print news received a lower average rating of 3.56. This difference was found to be statistically significant in a paired-sample t-test (two-tailed $p < 0.0001$).

Hypothesis 5

Hypothesis 5, proposing online newspapers are considered to be easier to use than print newspapers, was also supported. On the scale of 1 to 5, online newspapers received an average agreement rating of 4.41 among respondents, compared to print news' lower average rating of 3.75. This difference was found to be statistically significant in a paired-sample t-test (two-tailed $p < 0.0001$).

To reiterate, among the survey population Internet news no longer suffers from one of its potential drawbacks in earlier years – a lack of timeliness. It is also considered easier to use than print news. Yet at the same time, print news is still considered, even among the youngest students, to be more credible than online news, indicating there is still a perceived benefit of the print medium among this group of individuals who plan to practice journalism as a profession.

Yet Ahlers' notes in his 2006 study that 77 percent of 18- to 29-year-olds had not read a print newspaper in the past day.⁴¹ In comparison, among the subset of University of Missouri journalism students age 18 to 27, a much smaller 32 percent reported they

spent no time reading print news each day. Nearly one-third, 30 percent, reported they spent more than 15 minutes reading print news each day. So it appears that even with exposure to a curriculum that includes digital journalism and regardless of age, the survey population may be more inclined to use print news than the general population.

Hypothesis 6

Finally, Hypothesis 6, proposing involvement in attending cultural events is positively correlated with print news use, was not supported. Neither print subscription nor time spent with print news per day returned a correlation coefficient greater than the critical value of r (0.113) for 356 degrees of freedom and 0.05 significance level when tested with the responses to frequency of attending cultural events. Correlation coefficients returned were -0.07 and 0.07 respectively. However, attending movies was shown to have a small negative correlation of -0.15 to time spent reading print news.

Hypothesis results have been summarized in table form. See Table 26.

Table 26. Results of Hypotheses.

Hypothesis	Findings	Result
H1: Time spent using the Internet by MU journalism students is negatively correlated with time spent with traditional media such as television, radio and print newspapers.	Paired-sample t-test: $r = 0.33$, $df = 388$, two-tailed $p < 0.0001$	Not supported
H2: Respondents' number of years of experience with the Internet is positively correlated with time spent using the Internet.	Paired-sample t-test; $r = 0.26$, $df = 405$, two-tailed $p < 0.0001$	Supported
H3: Online newspapers are the primary source of news for respondents.	Of 1793 total responses, 681 = online newspapers (497 = TV, 359 = print)	Supported
H4: Online newspapers are regarded by respondents to be timelier than print newspapers.	Difference of means = 1.08; Paired-sample t-test: $df = 377$, two-tailed $p < 0.0001$	Supported
H5: Online newspapers are regarded by respondents to be easier to use than the traditional print version.	Difference of means = 0.66; Paired-sample t-test: $df = 377$, two-tailed $p < 0.0001$	Supported
H6: Involvement in attending cultural events is positively correlated with print news use.	Paired-sample t-test: $r = 0.07$, $<$ critical value of r (0.113) for $df = 354$	Not supported

Statistically significant correlations reported in the results and discussion chapters are summarized in table form. See Table 27.

Table 27. Statistically Significant Correlations Reported

Variable 1	Variable 2	Correlation Coefficient	Degrees of Freedom	Two-tailed p Value
Time spent reading print news	Time spent reading online news	0.33	380	<.0001
Age	Frequency of reading news when online	0.14	356	<.0001
Age	Frequency of updating social networking page	-0.34	356	<.0001
Age	Print news subscription	0.38	358	<.0001
Income	Print news subscription	0.33	328	<.0001
Education	Print news subscription	0.17	356	.0003
Time spent reading print news	Frequency of attending movies	-0.15	354	<.0001

CHAPTER 8

SUMMARY AND CONCLUSIONS

The Internet has become ubiquitous in many Americans' lives. The technology and the tools it offers have been incorporated into many schools' and workplaces' everyday curricula and tasks. It is present and used frequently in homes as well. As a result, children and young adults today are growing up with the Internet from very early ages and will have an opportunity to become more familiar and savvy users of its capabilities than many of those in older generations. Many of today's college students have become accustomed to conducting both schoolwork and social activities online.

As this Internet familiarity and reliance has grown and use of traditional media has been reported as declining, it is not surprising that proposals have been made that the two phenomena are related.

This survey found that there was indeed a relationship between online news use and print news use. Among the survey population of presumably news-interested individuals, this relationship was found to be a positive one. Those who reported reading more online news also tended to report reading more print news. At the same time, a relationship was not found among this population between traditional media use and general Internet use. Whether a respondent spent more or less time online did not have a relationship to how much time they reported spending with print news or TV.

These findings seem to suggest that University of Missouri journalism students, even younger students, use various forms of news in a complementary fashion, rather than substituting one for another.

Also supporting that idea were the varying responses for primary sources of different types of news. While online newspapers were the majority of respondents' primary source for world, political and business news, print newspapers were the primary source reported by the majority of respondents for local and regional news.

In addition, print news was considered to be more credible than online news. Online news was considered to be more timely and easy to use. This further suggests that respondents see separate benefits to each form of news. In fact, the younger members of this particular population appeared to find more benefit in print news than their counterparts in the general U.S. population, reporting more print readership on a daily basis. Given this, it may be these young students who find ways to make print news more attractive to their peers in the future.

It is important to remember that for the average American, access to the Internet is still less than 12 years old. In 1995, only 5 million Americans had online access. Although the technology, and access to it, has grown and developed dramatically in those 12 years, additional time and advancements will likely continue to change the way people perceive and use this medium, along with how that usage is related to other media use.

A related factor in this equation is age. Age played a part in several media usage habits reported in this survey. Younger respondents were more likely to select online news as a primary source for many types of news. They were also more likely to report time spent on social networks, a new user-generated form of media that is just beginning to be used for "news" in the traditional sense of the world. As these younger journalism students grow into more experienced adults and leaders of journalism, their habits may have dramatic effects on the landscape of Internet and media usage.

Regardless of age, the majority of survey respondents reported roughly the same length of history with the Internet, dating back to approximately 1997-2000, the timeframe when online access experienced its initial growth in the United States. Given the ages of the respondents, this timeframe corresponds to a wide variance in the ages at which participants may have first begun accessing the Internet. Some may have been younger than 10, while others may have been 30, 40 or older. As time passes and the population shifts to a higher percentage who have used the Internet since their teens or earlier, it will be interesting to see how this in turn shifts the way they use online news and other media.

Likewise, as the field of journalism itself begins to shift toward professionals who have grown up along with online technology, becoming more familiar not only with consuming online news but with creating it as Missouri journalism students are doing today, the way news is made available to the consumer will likely undergo shifts as well. Among the youngest of these future journalism professionals, this survey points toward a trend of greater reliance on online news, without completely abandoning more traditional media, and a greater interest in information that is user-generated than exhibited by the older members of this group of students. This will likely have interesting and profound effects on the forms of news available to the general public in the future. Examples of current developing forms of news include RSS and feed technologies available to deliver online news directly to a user via email or a personal Web site, rather than the user needing to search online or visit a news Web site to find it. In addition, as younger students in particular spend more time on social networking and blogs, these media are serving as sources of news as well. As these up and coming journalists experiment with

and deliver innovative ways of using and providing news, they will likely have a hand in determining how media companies interact with their audiences in a changing environment.

To that end, this study suggests journalism educators would do well to provide their students with opportunities to combine new media with traditional media. Like the University of Missouri, other leading journalism schools such as Northwestern University and Columbia University, are doing or starting to do this today. It stands to reason that graduates of these programs will be more marketable in the future as today's young adults take their increased Internet experience and reliance with them as they age, requiring media companies to meet many of their needs with online news in order to be relevant and viable.

At the same time, it would be interesting to find out if these students' usage patterns change in future years, as they leave the college atmosphere for their media careers. In just five years, many of the respondents to this survey will have graduated and begun working in various journalistic and other fields, while the Internet likely will have undergone changes as well.

A similar study of the university's journalism students enrolled at some point in the future would also provide an interesting comparison. As noted by Kaye and Johnson, with Internet technology still very new and developing rapidly, studies that track changes between responses at one point in time and responses at another add important information to the body of knowledge about Internet usage and its implications for other media.

APPENDIX

Questionnaire

1. How long have you been using the Internet?
 1. less than 1 year
 2. 1 to 3 years
 3. 3 to 5 years
 4. 5 to 7 years
 5. 7 to 10 years
 6. more than 10 years

2. How much time do you use the Internet on a typical day?
 1. 0 to 30 minutes
 2. 31 minutes to 1 hour
 3. 1 to 3 hours
 4. 3 to 5 hours
 5. 5 to 8 hours
 6. more than 8 hours

3. If you are employed, how often does your job require you to access the Internet?
 1. Never
 2. Once per week
 3. Once per day
 4. Two to three times per day
 5. Continuously throughout the day

4. Using a scale of 1-5, where 1 = never, 3 = sometimes and 5 = always, how often do you access the Internet at the following locations?
 1. Home
 2. Work
 3. School
 4. Free community facility (such as a library)
 5. Paid community facility (such as an Internet cafe)

5. Using a scale of 1-5, where 1 = never, 3 = sometimes and 5 = always, when you access the Internet, how often do you perform the following tasks/activities?
 1. Send and receive e-mail
 2. Read news
 3. Shop
 4. Find information about an upcoming event
 5. Occupy free time

6. Post messages on a bulletin board or chat room
 7. Post messages on a Web log (“blog”)
 8. Read messages on a bulletin board, chat room or blog
 9. Conduct business
 10. Construct or update a personal Web site or social networking page
 11. Construct or update a business Web site
-
6. On average, how much time do you spend watching television each day?
 1. none
 2. 1 to 30 minutes
 3. 31 minutes to 1 hour
 4. 1 to 2 hours
 5. More than 2 hours
-
7. On average, how much time do you spend listening to the radio each day?
 1. none
 2. 1 to 15 minutes
 3. 16 to 30 minutes
 4. 31 minutes to 1 hour
 5. More than 1 hour
-
8. On average, how much time do you spend reading books each day?
 1. none
 2. 1 to 15 minutes
 3. 16 to 30 minutes
 4. 31 minutes to 1 hour
 5. More than 1 hour
-
9. On average, how much time do you spend reading print newspapers each day?
 1. none
 2. 1 to 15 minutes
 3. 16 to 30 minutes
 4. 31 to 1 hour
 5. more than 1 hour
-
10. On average, how much time do you spend reading online newspapers each day?
 1. none
 2. 1 to 15 minutes
 3. 16 to 30 minutes
 4. 31 minutes to 1 hour
 5. More than 1 hour
-
11. Which medium is your primary source of national and international news?

1. Television
 2. Radios
 3. Magazines
 4. Daily printed newspapers
 5. Weekly community newspapers
 6. Online newspapers
 7. Other websites
 8. Other (please specify)
12. Which medium is your primary source of local and regional news?
1. Television
 2. Radios
 3. Magazines
 4. Daily printed newspapers
 5. Weekly community newspapers
 6. Online newspapers
 7. Other websites
 8. Other (please specify)
13. Which medium is your primary source of political news?
1. Television
 2. Radios
 3. Magazines
 4. Daily printed newspapers
 5. Weekly community newspapers
 6. Online newspapers
 7. Other websites
 8. Other (please specify)
14. Which medium is your primary source of entertainment news?
1. Television
 2. Radios
 3. Magazines
 4. Daily printed newspapers
 5. Weekly community newspapers
 6. Online newspapers
 7. Other websites
 8. Other (please specify)
15. Which medium is your primary source of sports news?
1. Television
 2. Radios
 3. Magazines
 4. Daily printed newspapers

5. Weekly community newspapers
 6. Online newspapers
 7. Other websites
 8. Other (please specify)
16. Which medium is your primary source of business news?
1. Television
 2. Radios
 3. Magazines
 4. Daily printed newspapers
 5. Weekly community newspapers
 6. Online newspapers
 7. Other websites
 8. Other (please specify)
17. Do you subscribe to one or more daily print newspapers?
1. No
 2. Yes (please list)
18. Do you subscribe to or are you registered for one or more online newspapers?
1. No
 2. Yes (please list)
19. Using a scale of 1-5, where 1 = strongly disagree, 3 = neutral and 5 = strongly agree, please indicate your level of agreement with the following descriptions of news on the Internet.
- a. Credible
 - b. Easy to Use
 - c. Relevant
 - d. Timely
20. Using a scale of 1-5, where 1 = strongly disagree, 3 = neutral and 5 = strongly agree, please indicate your level of agreement with the following descriptions of news in printed newspapers.
- a. Credible
 - b. Easy to Use
 - c. Relevant
 - d. Timely
21. For the following uses, please indicate which form of news you find most useful, print newspapers or online news, using a scale of 1-5, where 1 = print newspapers, 3 =

both print and online news and 5 = online news.

- a. Local news
- b. National/world news
- c. Political news
- d. Business news
- e. Entertainment news
- f. Editorial/opinion
- g. Sports news
- h. Community events
- i. Advertisements
- j. Coupons

22. Using a scale of 1-5, where 1 = never, 3 = sometimes and 5 = daily, please indicate how often you have participated in the following activities.

- a. I have written a letter to the editor of a newspaper, magazine, Web site, or TV or radio news station.
- b. I have written a letter to the editor that was published in a print newspaper or magazine.
- c. I have written a letter to the editor that was published online.
- d. I have been interviewed for a news story.
- e. I have commented on a Web log (“blog”).
- f. I have commented on a social networking site.

23. Using a scale of 1-5, where 1 = never, 3 = sometimes and 5 = daily, please indicate how often you participate in each of the following activities.

- a. Home improvement/repair
- b. Political activities
- c. Attending movies
- d. Religious activities
- e. Attending cultural events (art exhibits, concerts, theatre, etc.)
- f. Volunteering
- g. Gardening
- h. Walking/hiking/biking
- i. Fishing/hunting
- j. Golf
- k. Indoor fitness activities/aerobics
- l. Playing/coaching team sports
- m. Environmental activities
- n. Travel
- o. Photography

24. What is your gender?

1. Male
2. Female

25. How old are you today?

1. 18-22
2. 23-27
3. 28-35
4. 36-50
5. 51-65
6. 66 or older

26. Which category most closely describes your ethnic background?

1. Asian/Pacific Islander
2. African-American
3. Native American
4. Hispanic
5. Caucasian, non-Hispanic
6. Other (please specify)

27. Are you currently:

1. Employed, either part-time or full-time
2. Retired
3. Unemployed

28. If you are currently employed, what kind of work do you do?

1. Retail/Hospitality
2. Medical/Healthcare
3. Labor: Construction, Agriculture, Mining
4. Communications
5. Professional Services: Legal, Financial, Real Estate
6. Clerical/Administrative
7. Education
8. Technology/Technical

29. If you are currently retired, what kind of work did you do for the majority of your career?

1. Technology/Technical
2. Communications
3. Labor: Construction, Agriculture, Mining
4. Medical/Healthcare
5. Retail/Hospitality
6. Education
7. Professional Services: Legal, Financial, Real Estate
8. Clerical/Administrative

30. What is your highest completed level of education?

1. high school diploma/GED
2. some college (1 or more semesters completed but no degree awarded)
3. Associate's degree
4. Bachelor's degree
5. some graduate or professional school
6. graduate or professional degree

31. What is your annual household income?

1. Less than \$25,000
2. \$25,001 to \$50,000
3. \$50,001 to \$75,000
4. \$75,001 to \$100,000
5. \$100,001 to \$150,000
6. \$150,001 or more

NOTES

¹Barbara K. Kaye and Thomas Johnson, "From here to obscurity? Media substitution theory and traditional media in an on-line world," *Journal of the American Society for Information and Technology* 54, no. 3 (2003): 260-273.

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¹⁹Douglas Ahlers, "News Consumption and the New Electronic Media," *The Harvard International Journal of Press/Politics* 11, no. 1 (2006): 29-52.

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²¹Kaye and Johnson, 2003.

²²Kaye and Johnson, 2003.

²³Mitchell, 1998.

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