TWEETING THE HEADLINES:
THE IMPACT OF SOCIAL MEDIA ENDORSEMENT
ON YOUNG ADULT NEWS READERS

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I couldn’t have made it this far in my personal, educational or professional pursuits without the support of my parents, Delbert and Kathy Hall.
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TWEETING THE HEADLINES: THE IMPACT OF SOCIAL MEDIA ENDORSEMENT ON YOUNG ADULT NEWS READERS

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ABSTRACT

Since the Internet became a mainstream form of communications in 1999, journalism has become a multi-platform discipline. Twitter is a social media site that is emerging as an avenue for getting news online. Previous research about Twitter, a social networking site that limits messages to 140 characters, has also shown Twitter’s promise as a channel for news because of the speed at which information can travel and its ability to connect people. By Twitter users following people and companies, the senders have become endorsers of information. This study looked at how Twitter endorsement effects young adult news readers’ perceptions of credibility, bias, interest, arousal, importance and knowledge. The 172 participants were placed into one of three conditions. The conditions were stories endorsed by a professional news media outlet tweets, stories endorsed by peer tweets and stories with no social media endorsement. The study found that stories endorsed by Twitter tweets were rated more credible by participants than the non-endorsed stories. Different media platforms also effected knowledge acquisition. Unlike previous research, which found that newer platforms decreased retention rates, this study found that knowledge acquisition was higher among participants in the professional news outlet social media endorsed news condition. However, participants’ social media reading frequency did not correlate with their interest in news. Participants rated print and online news more interesting and read them more frequently.
Chapter 1

With more than 57 percent of the public getting their news from at least one Internet or digital source, Americans are spending more time following news compared to the last decade and rivaling the mid-1990s when news consumption was at one of its highest totals (Pew, 2010). In 2000, Americans spent an average of 57 minutes per day getting news from television, radio or newspapers. While that number is still consistent, according to a 2000 study, Americans have also added 13 minutes to their news consumption through online sources for a total of 70 minutes per day spent with the news (Mitchell, Rosenstiel, & Christian, 2012). This increase in time spent reading news online shows the prominence of the Internet in the information-gathering process of a person’s everyday life since the Internet became a mainstream form of communication in 1999 (Spiegel, 1999). To accommodate this change in technology, the journalism industry has been going through a shift in how it presents and distributes its content to its readers, viewers or listeners. The channels for getting information to an audience have increased. Newspapers now have a print edition, a tablet edition, an online news website and a presence on social media sites.

For this study, the research will focus on social media as the path to getting content to the reader. 37 percent of Internet users have used social media to share news stories (Purcell, Rainie, Mitchell, Rosenstiel & Olmstead, 2010), which is why social media are worthy to be studied in comparison to a traditional newspaper. This study will focus on how social media cues may alter knowledge gain, interest, arousal and
importance levels and perceived bias and credibility. These are all common dependent variables in communication studies. The study will look at social media endorsed stories from print news sources, such as *The Washington Post, The Wall Street Journal* and the *Seattle Times*.

In 2010, only 7 percent of the public received their news through social networking sites (Pew, 2010), but the Pew Research Center’s Project for Excellence in Journalism cited social media as an important channel for news distribution (2009). Social media sites, such as Facebook and Twitter, are used by a majority of the major news companies as a content dissemination channel. In 2012, the *Tuscaloosa News* won a Pulitzer Prize for its breaking news coverage of the April 27, 2011, tornado that ripped through Alabama (Reynolds, 2012). However, it was not just because of the newspaper’s print edition, which had to be printed in Birmingham for two days, that the paper received its accolades. The newspaper used its limited resources, literally, since the generator could only sustain several computers at a time, to publish the paper, but turned to social media to give readers real-time updates until a printed version could get to the newspaper subscribers’ doorsteps. The newspaper’s Pulitzer application highlighted the Twitter feed that provided information to “residents, emergency personnel and readers around the world” (Reynolds, 2012).

Twitter is just one of the many avenues journalists are using in the Web 2.0 era to keep readers, viewers and listeners “in-the-know,” especially during times of crisis. Using social media also allows information about one community to be shared and
discussed within seconds, not only throughout a community, but also throughout the world (Stassen, 2010). Many people beyond the Alabama newspaper’s readership logged on to its social media to get the latest news from the April 2011 tornado. The same level of engagement from those outside the immediate news vicinity was also witnessed during the summer 2012 movie theater shooting in Aurora, Colorado. A Poynter Institute article uses a series of Twitter updates to show how news about the shooting spread throughout the country from those who were in the theater to their followers and beyond (Moos, 2012). Through social media coverage of these recent news events, stories of those who lost their lives, pictures from the scenes and words of sorrow and encouragement have been featured in the national news and the social media newsfeed. Social media are emerging as a powerful source for news.

Recent research supports Twitter as a content dissemination tool during crisis situations, such as communicating about the Great Tohoku earthquake (Acar & Muraki, 2011); building credibility between politicians and their audience during political campaigns (Johnson, 2012); and reporting national and international events (Chew & Eysenbach, 2010). Because of Twitter’s growing prominence as a channel for receiving news, Twitter is an important area to research to see how an audience perceives news through this medium. While many people log onto social media sites for breaking news coverage, how consumers acquire knowledge in the same way as they have from reading a newspaper or watching TV news is unclear.
Knowledge has often been studied through the lens of Tichenor, Donohue and Olien’s (1970) knowledge gap theory. That research shows a correlation between consumption habits and the socioeconomic level of news consumers. The consensus from previous research has been that people with higher education levels have more knowledge about the news because of accessibility and because they are also more inclined to consume news. This creates a “knowledge gap” between higher and lower-educated people (Tichenor et al, 1970). Knowledge gap theory has influenced more recent journalism research, including knowledge acquisition and news habits among college students (Koch, 1994) and differences between online and print newspaper readers’ information absorption (Tewksbury, 2000). It is the latter that this research is using as a basis for how different channels of social media endorsements might affect knowledge about news events. However, most of that research has looked at knowledge acquisition as a stand-alone concept or as a way to compare knowledge gain across different media, such as between newspapers and online news websites and among radio listeners, TV watchers and print and online readers.

This study takes a closer look at knowledge but also examines importance, interest, arousal, bias and credibility as responses to social media-based news. These topics are important to study in relation to social media because social media are sourced differently than a traditional news story. In traditional news media, the audience is passively receiving news that has been determined by a group of editors and other content producers competing for limited space or time (Lee and Ma, 2012, Shoemaker & Vos, 2009). In social media, news readers play a more active role in getting news. They follow
and “friend” a variety of people who share news, including real and online friends, acquaintances and professional news outlets.

Research using a survey of college students shows that two of the most common reasons people share news online is to seek social status, such as getting attention, and to become an opinion leader (Lee & Ma, 2011). These findings indicate young adult college students use social media to establish their credibility, but how they perceive credibility when they receive news could be affected by the source that posts or, in this study’s case, tweets the article. In a traditional newspaper, there is a sense of credibility about who is producing the news (Berlo, Lemart & Mertz, 1969). In social media, there is a shift in who holds the reigns in ensuring credibility because of variability in fact-checking from website to website. Haas and Wearden (2003) found that there is a significant amount of variability in online news because of “false or misleading claims about expertise or other characteristics that can bolster credibility.” The researchers suggest that online news sharing points to a shift for web users to be more responsible in checking the credibility of the news they are reading and sharing (Fenton, 2009). The Pew Research Center’s State of the Media (2012) overview also discusses the prevalence of social media by saying that newsmakers and others with information to share are adept at using technology and social media to get their information out to the public, and this is done without any filter by the traditional media. The research found this was most common among political news, especially during the 2012 presidential election, and the information coming through the online news web was more of a megaphone for candidates than investigative journalism into the issues.
When a story comes from a traditional news site, such as a well-established newspaper like *The New York Times* or *The Washington Post*, the gatekeeping may be less about perceived credibility, because of a prior relationship with the news source, and more about the reader determining the interest level or importance of the story. Social media do not allow readers to interpret the “importance” of the news the same way a print paper does by using headline size and placement. Most print readers understand that a story above the fold and the centerpiece stories have been selected by editors as the most important news of the issue. All Twitter tweets are limited to the same 140 characters, so it is harder to determine importance of a story. Twitter news consumers can look at the number of followers the news outlet has or the person tweeting the information. The Twitter user can also look at the number of Retweets a certain tweet containing a news link has to determine importance of a story (Westerman, 2012). Research has shown a positive relationship between the number of followers versus follows and credibility (Westerman, 2012). This finding is consistent with the two most salient findings from Lee and Ma’s research (2012) that sharing information is important to status seeking and creating a sense of personal credibility as a Twitter user. Their study focuses on the influences of news-sharing intentions. Just from the amount of previous research on Twitter, it is clear that Twitter is becoming a major avenue for sharing information. Journalism has piggybacked on this trend with many media outlets sharing news through social media, but it is up to the audience to determine how they will consume and use this information. A study on social information processing, found users go to social media sites to look for stories recommended by others Lerman (2008). Endorsement through
sharing information is a major component of social media. As the technology changes, the journalism industry changes. The purpose of this experiment is to look at Twitter from the audience’s perspective and see how Twitter endorsement of news affects knowledge gain, arousal, interest, perceived credibility, bias, and news importance among young adult news readers between 18 and 30 years.
Chapter 2: Literature Review

The changing role of media with the Internet

While journalism has been changing with the landscape of the Internet, much of the news content being accessed online through search engines and mobile and tablet apps is produced by more well-known news outlets. In 2011, the Pew Research Center’s Project for Excellence in Journalism found that of the top 25 websites for news, 11 of them were newspaper websites, including The New York Times, The Washington Post and the Chicago Tribune, six were broadcast television networks and one was Reuters, a wire service (Pew, 2011). The report said that 46 percent of the public gets news through an online channel three or more days a week. That is nearly half of the public, which is up from 29 percent in 2004. About a third of the public, 32 percent, reported it reads news daily through online sources (Pew, 2011). This ability to stay connected and access the news from anywhere through phones, tablets and even television is aiding in the increase in time the American public is spending reading and interacting with news. The Pew Research Center’s survey (2010) found that the public uses email, customized homepages and RSS readers, blogs, cell phones/smartphones, social networking sites, podcasts, Twitter and iPads to access the news. While the percentage of people using those avenues is lower than going to a website or search engine, the other platforms for media access are still being used (Pew, 2010). All of these channels for accessing news pose a challenge to journalism because information has to be constant and has to be presented across many different platforms. However, journalism still has the same goal: to inform
audiences. Journalism is a form of surveillance that monitors and informs citizens about its government as well as its other social institutions (Tewksbury & Althaus, 2000).

In 2012, three of Alabama’s largest newspapers – The Birmingham News, The Huntsville Times and the Press-Register in Mobile – reduced their print publication from seven days a week to just three and shifted to a digital-first approach to the news (Associated Press, 2012). The question on many journalists’ minds is whether the Internet might be the death of some of the more traditional avenues of obtaining news. An article by Douglas Ahlers (2006) looked at a hypothesized shift from traditional to digital news reports. The research found that 22 percent of U.S. adults use some online news as a substitute for offline news, but online news is more often used as a complement to offline news, such as newspapers and television (Ahlers, 2006). This was also supported by results from the Pew Research Center’s survey on news consumption (2010). While the Internet and mobile applications are gaining ground as channels for news access, differing media platforms offer more variety to the consumer. Printed newspapers tend to attract readers who can dedicate prolonged attention to a story, whereas someone who is listening to a news story, such as on the radio or TV, is often doing other tasks, such as driving or cleaning (DeFleur, Davenport, Cronin & DeFleur, 1992). What the Internet is bringing to the news media is two-way conversation between the news producers and their audience, which can create a richer experience for news readers (Stassen, 2010).
Social media and journalism

Social media websites allow users to communicate with one another and share resources after signing up (Thelwall, 2008). This ability to exchange information with others was part of the development of Web 2.0, which was supposed to offer a more dynamic Internet experience to its users because it provides more ways to interact (Stassen, 2010). Web 2.0 applications include web logs (better known as blogs); microblogs, such as Twitter; and other sites, including Digg, Facebook and Delicious (Thewell, 2008). All of these are designed as ways to communicate with others, whether they are friends in real life or in the digital world. The idea is that, rather than passively using the Internet to find information, users can create and distribute information they find salient for their audience through a network of links. The four main characteristics that make up social media sites are: (1) user-created media content; (2) user-organized content through tags, which are categories or classifications for grouping information by topic; (3) user-interactive content; and (4) user-created content around interest areas (Lerman, 2008).

Sharing information is particularly important from a journalistic perspective because audiences need access to news to be informed. Social media are a catalyst for spreading information quickly and efficiently and endorsing news. By having the information sent by friends or credible news outlets, consumers may find the information more compelling and be more interested in reading the story. Repeating information from multiple sources may also create higher interest in the news stories similarly to how McCombs and Mauro’s research (1977) found the amount of space devoted to the story
improved readership. The more times a person sees a story through social media, the more space that story is taking up. Social media are about sharing the news, too. Researchers found that social media sites help users find interesting stories through social filtering. This allows them to create a forum to promote those stories to others (Lerman, 2008), which enables the continued sharing. The research study revealed users also looked at stories at which their friends were looking (Lerman, 2008).

**HQ1a.** Participants will be more interested in stories that have been endorsed by social media than non-endorsed news stories.

The news value of social media sites has been questioned. Thelwell (2008), who conducted a quantitative analysis of more than 25,000 texts from Windows Live Spaces, found that news stories were in the minority of topics discussed on the social media site. However, social media’s role in journalism and its power to aid news consumption is a newer area of research to be explored. This research suggests that social media’s sharing capabilities offer an opportunity for stories to live on longer and contain more pertinent information because they are not tethered to news space. They can also be continuously updated, which may create multiple social media endorsements per story and bolster the effect of having specific news stories that take up more space. An example of that goes back to the *Tuscaloosa News*’ coverage of the tornado. The *Tuscaloosa News* continuously updated its social media throughout the tornado and in the days following the tornado (Reynolds, 2012). The ability for the newspaper and its followers to share news as more information was released exposed Twitter users to the same or similar
articles over a longer period of time. Research has suggested one of the reasons for a gap in news knowledge is that news stories don’t always get enough coverage in the media (Tichenor, Donohue & Olien, 1970). Unlike in a traditional print newspaper or cable broadcast, social media and the unlimited space of the Internet allow for news stories to be covered more extensively. This coverage results in multiple endorsements, creating more opportunities for readers to be exposed to the news and decreasing the knowledge gap.

**Social media’s effect on news consumption habits**

The overwhelming number of options for getting news on the Internet creates a “high-choice media environment” (Prior, 2005). One possible result of all the choices is “social herding,” which British researchers say is when people group themselves into clusters around sources of information. For instance, Coleman (2005) found that consumers choose a paper that is in line with their beliefs as a way to reinforce what they already think is “right” or “important.” While newspapers in the U.S. try to present the same information with the goal of objectivity, social media may foster the same division between readers as the British newspapers because of the amount of national and international sources being tweeted and shared. This can also be a factor at the individual level. Someone who has a more conservative view about politics will follow news websites and be “followers” or “friends” with people who have similar values, which can cause group polarization (Coleman, 2005). Social networks play an important role in
information dissemination because of their ability to segment information and connect with specific people or companies acts as a social filter (Lerman, 2008).

Group polarization, which is deliberative groups of individuals with similar viewpoints banding together (Yardi & Boyd, 2010), gives readers more control of their news experience. However, it is considered problematic by some researchers. Cass Sunstein’s research (2001) claims the Internet has created a polarized culture because of the ability to be surrounded by information specific to interests. Sunstein’s research primarily looks at political exposure and found people who are not politically inclined do not seek out political information. A study about news versus entertainment news choices found that consumers who did not voluntarily integrate political news into their lives had less political knowledge and were less likely to vote (Prior, 2005). When the population in the high-choice environment who were not interested in politics did encounter political information, the exposure to political information was most often through commercials that were aired or inserted into their preferred choice of entertainment media. In a study comparing print and online reader habits and knowledge, results similar to Prior’s (2005) study about high-choice environments were found when the researchers compared the online version to the print version of The New York Times. In The New York Times study, online readers were less likely to start or even spend as much time with stories about international, national or political news (Tewksbury & Althaus, 2000) than non-public affairs stories. The study did say the online readers have more options for stories to read than the print users, and they took advantage and read information that may be more in line with their interests.
A study that looked at Twitter and whether it was a social network or a news media outlet found that, based on reciprocated relationships, which means two people who follow each other on Twitter (since that isn’t inherent on sites such as Facebook, where confirmation is required), there was an exhibited level of homophily within social media that influences the information a user reads (Kwak et al, 2010). Yardi and Boyd (2010) studied homophily and Twitter because they believe homophily leads to polarization. This idea of homophily could be considered a peer effect because it has to do with creating a connection through similarities. McPherson, Smith-Lovin and Cook (2001) observed homophily in social networks, not the online version, by studying a series of previous studies. They found homogeneity to be a main characteristic of personal relationships, including occupation, network positions, behaviors and intrapersonal values, even within large groups. Yardi and Boyd’s study (2010) built off of McPherson et al’s research because it suggested that homophily might limit social worlds and the information people receive through social networks. They applied it to Twitter and a controversial murder of an abortion doctor. They found tweet replies by the like-minded users strengthened group identity and replies by different-minded users strengthened in-group versus out-group relationships (Yardi et al., 2010). Based on the previous studies, this study suggests the role of peer influence will cross over into the digital world of news. It predicts that online news consumers will be more interested in news that is endorsed by their in-group because they will already have a connection to the peer who tweeted the news than news consumers who encounter news from a professional news source.
HQ1b. Participants will be more interested in peer-endorsed social media stories than stories endorsed by a company or news organization.

The learning curve: Knowledge gap between traditional and new media

Tichenor, Donohue and Olien’s (1970) study of the knowledge gap found that consumers with a higher socioeconomic status sought out and acquired information at a higher rate than consumers with a lower socioeconomic standing. Some reasons they cited for greater knowledge accumulation include better communication skills, greater prior knowledge and more interaction with others of similar education and economic status. While the original knowledge gap theory found that people with higher education tend to have better recall of news topics and provide more detailed information (Tichenor, Donohue and Olien, 1970), research suggests that television could be considered a “knowledge leveler” because it attracts those who are less educated and gives them access to similar information (DeFluer, Davenport, Cronin & DeFluer, 1992).

The study of TV was just one change in the way the knowledge gap has been affected and reimagined. How digital media may change knowledge acquisition is the focus of the present study. Prior (2005) argued that digital news will increase the knowledge gap because those with access to both traditional and new media will continue to seek out greater news. This follows with Ahlers (2006) research suggesting that news consumers are not abandoning traditional media, but they are using online media sources to complement information they have learned from traditional sources. Research that has challenged the original knowledge gap and its correlation with education level has found
that the knowledge gap is digitally driven (Yang & Grabe, 2011). Arguing that “exposure preferences were significantly influenced by the medium, not the education level” (Yang et al, 2011). Participants who read the print news were more likely than online readers to expose themselves to public affairs news than entertainment news, even when accounting for education. However, the approach in this study is to look at how access to news within a homogenous society could affect knowledge. This will be studied by using participants with similar education levels who already consume and have access to news through both newspapers and social media.

Based on previous research, newspaper readers should remember information better than computer news consumers (DeFleur et al, 1992). Those results have been consistent with other studies. In a study comparing the subscribers of *The New York Times* print versus online versions, researchers found that online readers recalled less information about public affairs than print readers (Koch, 1994). These results suggest that social media news consumers are less likely to read a variety of news topics than those consuming news through a traditional source and, therefore, will gain less news knowledge. There are several factors that influence this pattern. The first goes back to how many channels there are for absorbing news (Prior, 2005). Those who watch broadcast news shows are likely to be exposed to national, political and public affairs news, as well as a more “feel-good” and light pieces, because that is what a typical broadcast features. Users of the social media have the option of many sorts of news, from harder news, such as public affairs and politics, to more science and technology and entertainment news. Ahlers (2006) refers to the Internet as “encyclopedic.” His study also
found news consumers with a preference for entertainment are less knowledgeable once they have new media options because they don’t have to default to traditional news cycles and topics.

HQ2. Participants will be more knowledgeable about social media-endorsed news stories than non-social endorsed news stories.

Mind the gap: The relationship between knowledge and interest

Knowledge as defined by educational psychologists Jonassen, Beissner and Yacci (1993) takes on three forms: declarative, structural and procedural. Declarative knowledge is defined as knowing something exists, but structural and procedural focus more on problem solving and application of knowledge. One study found that the print readers did comprehend more public affairs knowledge (Yang et al, 2011) at a procedural level. The results of research by Yang and Grabe (2011) and another study by Tewksbury and Althaus (2000) are in line with the traditional definition of knowledge gap theory. Tewksbury et al also found that knowledge acquisition at the structural level, since those who were able to recall basic information, as well as describe in detail what the stories were about, was highest among those who read the traditional print information and who have a higher socioeconomic standing. Although the knowledge gap research focuses on this difference between knowledge and education level in most cases, Tichenor, Donohue and Olien (1970) also mention belief in correlation with knowledge. They found that belief increased with knowledge when asking people if they believed a man would reach the moon. More educated participants believed this to be true, whereas belief by less
educated participants was much lower. While Tichenor et al are proponents of “knowledge is power,” their insertion of belief into the equation suggests that knowledge, like belief, is socially constructed (Hindman, 2009). This means that social circles and demographics have as much influence on knowledge and beliefs as they do on interest. However, education level was associated with both elites (those of a higher demographic) and non-elites (those of a lower demographic) for affecting belief-structuring ability in a research study (Barton and Parsons, 1977). In essence, the higher the level of education, the more consistent a person was with his beliefs.

The correlation between knowledge and belief is supported by Hindman’s (2009) belief gap research; however, he found that, in some cases, beliefs about structural knowledge, the basic facts, were used for the self-serving advancement of a person’s own interests. For example, in Hindman’s (2009) study, it was not knowledge about a political topic that news consumers accumulated but rather beliefs that were in line with particular knowledge related to their politician or political parties’ objectives, which is also in line with group polarization. While this shows a procedural level of knowledge, because the participants are seeking specific facts and applying them to their beliefs, it could be a misleading representation of the news at the structural level.

This same argument could be used on the relationship between knowledge and arousal. The Internet has the ability to foster a self-serving attitude toward news more than traditional print newspapers because social media offers access to more filtering options that allow a reader to gain knowledge in line with his or her particular belief. A
study looking at knowledge gap and arousal, which this study will define using three adjectives: interesting, exciting, and attention-holding, found similar results to belief in regards to arousal and information retrieval. The study found that judgments, in relation to self, influence one’s ability to learn and remember information after it has been presented (Grabe et al, 2008). This was tested between higher and lower education levels. Although the study’s findings were that participants with lower education levels learn information less efficiently, which is line with the knowledge gap theory, there was a knowledge gap between higher and lower levels of information across all of the arousal levels. This study will not be looking across education levels since all participants are university students. The research will be measuring arousal in response to the social media endorsement. Arousal is important to study in relation to social media news because in order for social media to be a two-way type of communication, news readers need to feel the information. This connection can happen on different levels. The arousal variable, for this study, is made up of the adjectives: arousal, interesting, attention-holding and exciting. John Berger and Katherine Milkman conducted a study on what makes online content viral (2011). The researchers looked at different reasons, from the information was informative to the information evoked an emotional response. The results from the study found the content that elicited higher arousal, either negative or positive response-wise, was more viral. Based on that knowledge, this study suggests that because of the appeal of sharing information, social media news consumers will express higher levels of arousal toward news stories. Since interest is one of the elements associated with arousal, this study will also look at interest in news story and frequency
of reading. Previous research by Diddi and LaRose (2006) found that news habit strength was positively related to news consumption habits. This was tested across platforms to see if a habit had started to form with social media news consumers. Diddi and LaRose found that consumers tend to lapse into a pattern when confronted with many different media. It is particularly important to study this pattern in young adults who are striking out on their own for the first time to see what habits they express. While all participants in this study are reading the same articles on which their information acquisition was measured, only two out of three groups are getting the “endorsed” news to see if their interest level increases.

**HQ3.** Arousal effects will be stronger in participants who read social media-endorsed stories than in the non-endorsed news stories.

**HQ3a.** Participants who consume print news several times per week will have a higher interest in news than participants who consumer news once per week or less.

**HQ3b.** Participants who consume online news several times per week will have a higher interest in news than participants who consume news once per week or less.

**HQ3c.** Participants who consume social news several times per week will have a higher interest in news than participants who consume news once per week or less.
Who said it: Twitter, credibility and importance

Social media allow many more people, groups and news organizations to not just have a voice but also to have a voice that can be heard much further than when there were only a few platforms for getting out information. One of social media’s benefits is that its form has given smaller online news producers an opportunity to share a minority voice that in the past did not make it into the dominant news media (Rivas-Rodriguez, 2003). In traditional media, the mass media spoke to only the prominent voice because of the economic constraints of publishing (Fenton, 2009). The Internet has allowed for online journalism to offer audiences information that is more “contextualized, textured and multidimensional” (Fenton, 2009). By offering this role to individuals and smaller organizations to participate in news aggregation, consumers have to do more to insure what information they are receiving is accurate. One of the criticisms of this multiplicity is that having so many people adding to the conversations – Tweeting/retweeting, blogging and writing – is that it is hard for journalists to claim privilege over other news producers because the nature of the Internet allows many people to become journalists with the right tools and share information (N. Fenton, 2009). Traditional forms of journalism, such as print newspapers and broadcast journalism, include discussions and research on agenda-setting and gatekeeping. Agenda setting theory, which was initially defined in 1972 by theorists Maxwell McCombs and Donald L. Shaw (McCombs & Shaw, 1972), found that the media doesn’t tell people what to think; it tells them what to think about. Gatekeeping, which is related to agenda-setting, is the process of content mediators determining what articles or information should be given to the public as
priority pieces and how it should be presented (Shoemaker and Vos, 2009). While
gatekeeping is a major part of determining what goes on an online news outlet,
information can run loose on the Internet because there is not just one entry point to
online news. Fenton (2009) also points out that Internet has created an increased
awareness in subjectivity around news. Sundar and Nass (2001) cite four sources for
online news: news editors, computers, other users and the user himself. When the users
step outside of a well-known media outlet through a social media link or Twitter tweet
that is when credibility and accuracy-issues often come into play.

Part of journalism’s role is to report on and keep an eye on the actions of the
government and its other agencies (Tewksbury et al, 2000). Journalism acts as a
messenger between the government or other newsmakers and the news readers;
credibility is one of the foundations of journalism. Carl Hovland (1951) and his
researchers wrote the seminal research on “source credibility.” They found that
credibility was an important, but not well-defined, attitude that the audience had toward
the communicator (Hovland & Weiss, 1951). In this initial study, the researchers defined
credibility as trustworthiness and studied how readers determined credibility using high
and low scale. Newer research has broadened the terms related to credibility, including
safety, qualification and dynamism (Berlo, Lemert and Mertz, 1969). Safety in this study
included trustworthiness, but it also included other perceptions of trustworthiness,
including fair and just. This study looks to determine how news consumers judge
credibility when information is being shared online. Sharing for this study is considered
an endorsement because it is being suggested by a news outlet or peer through Twitter.
Allsop, Bassett and Hoskins (2007) found 59 percent of people reported that they frequently shared online content with others. Harris (2010) claims that someone tweets a link to a *New York Times* article every four seconds. The question is if the consumers’ perceived credibility is affected by that endorsement versus just reading a news story. Previous research by Nowak, Szamrej and Latane (1990) found that when it came to opinions, participants would consult with friends and family. This study’s hypothesis takes Nowak et al.’s results and applied the same principal to news. This study suggests information endorsed by a media outlet or a digital relationship will be perceived as more credible. Fenton (2009) points out that the Internet puts more responsibility on the news consumers to check the validity and credibility of information through looking at multiple sources but that the number of sources for different opinions on news, through blogs and news sites, has opened up the door to “the impossibility of objectivity and an increased awareness of subjectivity” (Fenton, 2009, p. 560) in online news. While journalism’s role has traditionally been objectivity, the shift in the source endorsing the news may have a similar affect to biased as it does credibility. This study will ask participants about perceived bias surrounding news stories. This will allow the researcher to see if credibility and biased are both affected by news endorsement.

**HQ4a.** Participants reading social media news will deem endorsed news articles as more credible than participants who read non-endorsed news.

**HQ4b.** Participants reading social media news will deem endorsed news articles as more biased than participants who read non-endorsed news.
Hovland et al’s studies in 1951 and 1953 defined source credibility. In a research study that followed Hovland et al, Berlo et al’s (1969) experiment identified three types of credibility: safety, qualification and dynamism. Within each of these types of credibility was a range of different descriptors. When determining importance in relation to credibility, importance fell into the qualification type. In Berlo et al’s (1969) study using a list of polar adjectives, respondents had their “highest loading,” which means more positive adjectives on the scale, on the qualification factor. Adjectives attributed to qualification included important, informed, experienced, powerful and successful. The results of qualification relate more to the reaction of the readers to the information, which is supported by Hovland’s (1951) definition of credible. The safety level was more closely related to the intent of the material by its content producers (Berlo et al). This finding is particularly important as this study looks at social media as the vehicle for news from a user’s perspective and how the news consumers make news judgments to determine importance of news and how often the consumer read news.

From a social impact theory lens, the ability to tailor social networks to interest (Lee & Ma, 2011), can make a greater impact on audience reactions to a Tweet. Social impact theory looks at the influence of outside forces effects on individuals or a social structure (Latene, 1981). The basic idea behind the theory is that people affect each other (Latene, 1981) right down to determining importance of a news story because of the avenue that it comes to the user.
In social media, there are multiple groups that are affecting each other when it comes to news consumption. Twitter is more of an audience-driven platform because it allows readers to determine what news gets shared through their tweets and retweets and what news they personally read, based on whom they follow. Twitter users also have an added element of being their own judge of importance. Unlike a more traditional medium, such as print newspapers, where a reader may have to contact the company to find out the circulation, Twitter allows users to see how many followers the account has and how many retweets a certain article may have, which can affect perceived importance. On some news websites, readers can even see how many times a story has been shared on Twitter. A recent study on Twitter found that judgment of credibility was affected by the ratio of followers to follows (Westerman et al, 2012). The smaller the gap between the number of follows and the number of followers, the more competent the participants perceived the source. Results also found that follow-to-follower ratio also influenced how the audience perceived the fellow user to know the truth, which was labeled as competence, and the degree to which they were able to share the truth through tweets, which was labeled as trustworthiness. In this study, the research looks at perceived importance from both an overall view of news and within the individual stories that the participants read.

Another consideration that has to be taken into account for receiving that important news is how often a reader is accessing the news. Research on print readership in the 1970s found that newspaper reading is a habitual practice and readership of young adults between 18-34 years old was dependent on the tradition of newspaper reading in
their household growing up (Stone & Wetherington, 1979). Another research study found that news habit strength was positively related to news consumption patterns, which supported the hypothesis (Didd & LaRose, 2010). While the Stone and Wetherington studied newspapers exclusively, Didd and LaRose’s research (2010) also found a significant result of a positive relationship between new electronic media and habit strength. This is important to the relationship between frequency of reading news and importance placed on news because it suggests that news consumers are connecting with information in similar ways across platforms and forming news consuming habits. Based on the previous research studies, this study suggests that the more habitual a reader is in consuming news, the higher importance he or she will place on importance of news. Based on the second finding, this research this suggests this to hold true across all platforms, including print, online and social media.

HQ5a. Participants who consume print news several times per week will give higher importance to news than participants who consume news once per week or less.

HQ5b. Participants who consume online news several times per week will give higher importance to news than participants who consume news once per week or less.

HQ5c. Participants who consume social media news several times per week will give higher importance to news than participants who consume news once per week or less.
The hypotheses were tested in an experiment in which participants read three news stories on a computer and answered a series of questions related to the dependent variables – knowledge, interest, importance, arousal, bias and credibility. Two of the conditions used social media endorsement in the form of Twitter tweets. The tweets were either from a professional media outlet or a peer. Previous research has found that social media users are connected to each other through similar interests or those connections are friends and family members (Lee & Ma). Since the relationship is already naturally occurring between social media and news readers, this study hoped to recreate a similar effect to see how a peer social media endorsement changes the interpretation of news stories. This study focused on the effects of social media endorsements within the young adult population between 18 and 30 years old. Thomas Patterson (2007) defined young adults as 18 to 30 years old in his study “Young People and News.” Using that age range was appropriate for this research on social media news reading and Twitter because research from the Pew Research Center found that Twitter is particularly appealing to adults between 18 and 29 years old. Studying this phenomenon with young adults was also appropriate since 18 to 29 year olds are the most likely to be using any social media site at 83 percent. Twitter was used as the platform for presenting the information with social media stimuli because a study about Twitter found that it is a social networking site that also acts mostly closely to a news medium because of the speed at which stories are retweeted (Kwak et al., 2010). Another study, which also used Twitter to study homophily and polarization cited using Twitter because Twitter has become a place where people seek and share information.
Chapter 3: Methodology

Method

The experiment was designed to test the influence of three endorsement conditions (news story only, news story plus social media endorsement from a professional news source, and news story plus social media endorsement from a university student) on six dependent variables: knowledge, interest, importance, arousal, bias and credibility.

The experiment employed a between-subject design, with each person seeing three stories with their specific endorsement condition. The news stories were non-political, national news stories of presumed interest to college students that ran between December 2012 and February 2013. In order to prevent crystallized knowledge from contaminating the data, the news stories used in the experiment were not breaking news stories or stories that were prominently discussed in the news when they were published. They contained little to no controversial topics. For the two Twitter endorsements, the participants were presented with an image of a Twitter tweet, which included the headline of the story and the person or news organization that tweeted the story, which acted as a link to the story. When there was a news story with no social media endorsement, participants were asked to click on the headline of the story, which was a link to read the story on the same website as the other conditions. All conditions saw the same screen
when they linked through to the story. Examples of the stimulus material are found in appendix 1.

Since Twitter tweets are limited to 140 characters, each Tweet contained the headlines and a link to the same content as in the non-Twitter simulated condition. There was no extra information in the tweet the control condition did not have. The research used a posttest-only design to measure the effects of the independent variables on the dependent variables and collect demographic and news consumption habit information. The post-test asked a series of questions about the news articles, including closed-ended knowledge questions about facts presented in the articles, how interested the participant was in the article, the level of importance the participant felt the news story had and the level of bias presented in the article. A post-test was taken after the participant read each story before going onto the next story. For the four fact-based questions about each story, the answers were measured for the number of correct responses to determine level of knowledge. For the bias-, importance-, arousal- and interest-related questions, a five-point Likert scale was be used. The dependent variables were measured using a scale that included these levels bias/important, somewhat bias/important, neutral, somewhat unbiased/unimportant and very unbiased/unimportant.

Sample

This experiment used convenience sampling from a large, public university in a mid-sized town in the Midwest. All participants were enrolled as students at the university. The researcher worked with several professors at the university to recruit
students to participate in the experiment for class credit, such as participation points or extra credit, and voluntary participation from students within the journalism school through posting on the undergraduate and graduate listervs. All students had to be between 18 and 30 years old to participate because this research focused on the young adult population between 18 and 30 years old. Because a between-subject factorial design was being used, a medium sample size of 160 participants was determined to be appropriate based on a number of variables, conditions and the confidence level (.05). Participants accessed the experiment on their own time on their personal computers.

If they signed up to participate through their class or were a part of the journalism undergraduate or graduate listserv, the participants received an email with three links. Each link was a different condition. Each participant selected a link based on his birth month. Once he clicked the link, he was redirected to the website with the experiment and the consent information before continuing with the experiment. Within the experiment, the stories (blocked with their questions) were randomized to make sure that order effects did not create the results. Participants took between 15 minutes and one hour to respond to the questionnaire. The participants were debriefed at the end with a screen explaining that the purpose of this study was to determine the endorsement effect.

**Experimental design**

Once the participant clicked through to the appropriate link corresponding to her birth month to allow for randomization, she was taken to the first experiment page. The onscreen experiment began with an IRB consent form to briefly describe the participant’s
rights as a participant and what she would be doing while participating. Of course, the participant was not informed of the role of endorsement in the consent form. By clicking through to the second screen to start the experiment, the participant was agreeing to the terms of the experiment. Participants in the A group, who had birthdays from January to April, were in the professional media outlet Twitter condition. Participants in the B group, who had birthdays from May through August, were in the student Twitter condition. Participants in the C group, who had birthdays from September through December, were in the news story only group and only saw headlines with no Twitter tweet to connect them to the story.

All participants read the same three stories, with different stimuli, that had been selected by the researcher and randomly assigned. After each story, the participant answered a series of questions relating to information in the story to study knowledge, as well as questions that measured arousal, interest and importance levels of the stories and perceived bias and credibility. The questions followed each story. They were grouped as blocks in the experimental software. After answering the questions, the participants were debriefed and thanked for their time. If they were participating in the experiment for class credit, they were required to provide their university user name and the name of the professor who was giving the class or extra credit points. Although that information was provided, no identifying information was used in the reporting of the data from this experiment. The information was sent to the university professors to provide a log of who from their class received credit. The document with the personal information is stored on the researcher’s computer, which is in a locked apartment.
Variables

The independent variables for this experiment are stories and endorsement.

Stories. The stories selected were from The Washington Post, The Wall Street Journal, and the Seattle Times. All are large, daily newspapers. The researcher selected the stories. The stories were approximately the same length and had a similar number of comments to help with consistency. They covered three different topics: public policy, education and sports.

Endorsement. This study is measuring the effect of endorsement on the participants’ news reading. There are three conditions: two social media endorsements and one non-endorsement (story-only condition). The endorsements through social media are Twitter tweets from professional news outlets’ Twitter accounts promoting a story and Twitter tweets from a peer (fellow student at the university, where the experiment was conducted). The non-endorsement was the headline of the article and the hyperlink on the experiment screen.

The dependent variables are knowledge, interest, importance, arousal, and perceived credibility and bias.

Knowledge.

To test for knowledge, each story was broken into four parts. The researcher created a question for each section of the news story. The questions were all multiple choice and were specific to the story to prevent previous knowledge from effecting the
score. Each correct answer was worth 1 point. The total number of points the participant
to could get per story was 4, and between the three stories, the highest score could be a
12. The purpose of taking the questions from different sections of the story was to see if
participants read all the way through the story. The questions were pre-tested on six
volunteer participants. Each gave feedback on initial question for clarity and difficulty.
All of the pre-test participants were in college or recent college graduates.

**Means.** The mean knowledge score for Story 1 is \( M = 3.05 \). Its standard
deviation is \( sd = .93 \). The mean knowledge score for Story 2 is \( M = 2.84 \). Its standard
deviation is \( sd = .87 \). The mean knowledge score for Story 3 is \( M = 3.24 \). Its standard
deviation is \( sd = .851 \).

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</tbody>
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Table 1.1

**Interest and importance.**

Interest was measured on a Likert scale. Even though this is a bipolar scale, very
interested to very uninterested, five points were chosen instead of seven because the level
of differentiation wasn’t particularly large between levels. None of the stories are
controversial. Participants were asked how interested they were in the story they had just
read. The participants were also asked about interest in news stories in general.
Importance was measured on the same scale. However, the participants were asked about importance level at the individual story level and across news in general.

**Means.** The mean interest score for Story 1 is \( M = 2.88 \) out of five. Its standard deviation is \( sd = 1.19 \). The mean interest score for Story 2 is \( M = 3.02 \) out of five. Its standard deviation is \( sd = 1.05 \). The mean interest score for Story 3 is \( M = 3.91 \) out of five. Its standard deviation is \( sd = .99 \).

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<tr>
<td>Story3 Interesting</td>
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</tbody>
</table>

Table 1.2

The mean importance score for Story 1 is \( M = 3.99 \) out of five. Its standard deviation is \( sd = 1.01 \). The mean interest score for Story 2 is \( M = 3.59 \) out of five. Its standard deviation is \( sd = .90 \). The mean interest score for Story 3 is \( M = 2.35 \) out of five. Its standard deviation is \( sd = .98 \).

<table>
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<td>Story2 Important</td>
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<tr>
<td>Story3 Important</td>
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</table>

Table 1.3
Arousal.

Arousal was also measured on a five-point Likert scale. When looking at arousal, participants were given a list of different adjectives related to arousal. Using a factor analysis, four of the words came back in the factor matrix as having communalities. Those were arousal, interesting, exciting and attention-holding. The adjectives were chosen by the researcher because they were synonymous with the term arouse. Serious was initially in the adjectives testing for arousal. However, when a factor matrix was run, it was an outlier. A reliability test was run for the arousal scale for Story 1, and it was reliable (Cronbach’s Alpha = .87). A reliability test was run for the arousal scale for Story 2, and it was reliable (Cronbach’s Alpha = .81). A reliability test was run for the arousal scale for Story 3, and it was reliable (Cronbach’s Alpha = .81).

**Mean.** The mean arousal score for Story 1 is \((M = 7.87)\) out of 15. Its standard deviation is \((sd = 3.03)\). The mean arousal score for Story 2 is \((M = 8.03)\) out of 15. Its standard deviation is \((sd = 2.54)\). The mean arousal score for Story 3 is \((M = 10.21)\) out of 15. Its standard deviation is \((sd = 2.55)\).

<table>
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<tr>
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</table>

Table 1.4
Credibility.

When looking at credibility, participants were given a list of adjectives related to credibility to use for ranking each story. Using a factor analysis, four of the adjectives came back in the factor matrix as having communalities. Those were credible, thorough, comprehensive and factual. The researcher selected those adjectives because they were synonymous with credible and gave the researcher multiple levels to ask participants about credibility. The adjectives were created into one variable, overall credibility. A reliability test was run for the credibility scale for Story 1, and it was reliable (Cronbach’s Alpha = .88). A reliability test was run for the credibility scale for Story 2, and it was reliable (Cronbach’s Alpha = .87). A reliability test was run for the credibility scale for Story 3, and it was reliable (Cronbach’s Alpha = .86).

**Means.** The mean credibility score for Story 1 is \( (M = 15.03) \) out of 20. Its standard deviation is \( (sd = 3.13) \). The mean credibility score for Story 2 is \( (M = 15.08) \) out of 20. Its standard deviation is \( (sd = 2.97) \). The mean credibility score for Story 3 is \( (M = 14.76) \) out of 20. Its standard deviation is \( (sd = 2.82) \).

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<td>Story3_Credibility</td>
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Table 1.5
Bias.

Similar to arousal and credibility, the researcher selected adjectives related to bias to study bias across several levels. The terms used were bias, factual and informative. However, the factor matrix showed little commonalities between the three words, so biased was the only one used. It was measured on a five-point Likert scale.

Means. The mean biased score for Story 1 is (M = 2.44) out of 5. Its standard deviation is (sd = 1.04). The mean biased score for Story 2 is (M = 2.20) out of 5. Its standard deviation is (sd = 1.08). The mean credibility score for Story 3 is (M = 2.22) out of 5. Its standard deviation is (sd = 1.107).

<table>
<thead>
<tr>
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Table 1.6
Chapter 4: Results

One hundred seventy-two students participated.

Hypothesis 1a predicted that participants were more likely to be aroused by stories that have been endorsed by social media (professional and peer) than those who read news stories without any endorsement. To test this hypothesis, a repeated-measures ANOVA was conducted. There was no significant main effect of endorsement on arousal, $F(2,169) = 1.32, p > .001$ but the main effect of story on arousal was significant, $F(2,169) = 43.71, p < .001$. However, there was no significant interaction, $F(4,169) = 1.04, p > .001$. The social media-endorsed news readers’ arousal level did not differ significantly from the participants who had news delivered through a hyperlink with no social media Tweet. Participants who received Twitter-endorsed messages had a mean arousal of ($M = 8.94, sd = .23$) if they received a professional news media Tweet and ($M = 8.42, sd = .23$) if they received a peer Twitter endorsement of the news stories. Participants who didn’t receive Twitter-endorsed news had a mean interest level of ($M = 8.75, sd = .22$). Thus the hypothesis was not supported.

H1b predicted that participants would be more likely to have higher arousal levels in stories that have been endorsed by personal social media contacts rather than a company or news organization’s social media. As seen in the first repeated-measures ANOVA, this hypothesis was not supported.
Hypothesis 2 predicted participants in the social media condition (professional and peer) were less likely to be as knowledgeable about news stories as participants in the non-social media endorsed condition. To test this hypothesis, a repeated-measures ANOVA was conducted. There was a significant main effect of endorsement on knowledge, $F(2, 169) = 4.10, p < .05$. A follow-up post-hoc test was conducted. A significant difference was between the professional Twitter endorsement, $M = 3.21, sd = .07$, and the story-only endorsement, $M = 2.95, sd = .07$. The main effect of story on knowledge was significant, $F(2, 169) = 8.99, p < .001$; however, there was no significant interaction, $F(4, 169) = .75, p > .05$. The professional news outlet social media-endorsed news story had a higher score on the knowledge questions than the news story-only condition with no social media endorsement. The hypothesis was not supported.

<table>
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<td>3.2131</td>
<td>.93300</td>
<td>61</td>
</tr>
<tr>
<td>Total</td>
<td>3.2442</td>
<td>.85068</td>
<td>172</td>
</tr>
</tbody>
</table>

Table 2.1
Hypothesis 3 predicted that participants who read news at a higher frequency would be more interested in news than those who read news less frequently. A correlation was conducted across the three platforms: print news, online news and social media news. Hypothesis 3a, which predicted that participants who read print news several times per week or more would have a higher interest in news, was significant. A Pearson correlation coefficient was calculated for the relationship and found that there was a moderate-strength, positive correlation \((r = .43, p < .001)\) between print readers and their interest in news reading, indicating a significant linear relationship between the two variables. Print readers who read news more frequently had a higher interest in news. The hypothesis was supported.

Hypothesis 3b predicted that participants who read online news several times per week or more would have a higher interest in the news, was also supported. A Pearson correlation coefficient was calculated for the relationship. It showed that there was a moderate-strength, positive correlation \((r = .37, p < .001)\) between online readers and their interest in news reading, indicating a significant linear relationship between the two variables. Online readers who read news more frequently had a higher interest in news.

Hypothesis 3c predicted that participants who read social media news several times per week or more would have a higher interest in the news. The hypothesis was not supported. A Pearson correlation coefficient was calculated for the relationship. A weak correlation that was not significant \((r = .07, p > .00)\) was found.
Hypothesis 4a predicted that participants in the social media news conditions (professional and peer) were more likely to rate endorsed news articles as more credible than participants who read non-endorsed news stories. To test this hypothesis, a repeated-measures ANOVA was conducted. There was a significant main effect of endorsement on credibility, $F(2, 169) = 3.75, p < .05$. A follow-up post-hoc test reveals that the significant difference is between the professional Twitter endorsement ($m = 15.35, sd = .33$) and the story-only endorsement ($m = 14.27, sd = .31$). The hypothesis was supported. However, the main effect of story on credibility was not significant, $F(2, 169) = 1.37, p > .05$. There was also no significant interaction between story and credibility, $F(4, 169) = 1.85, p > .05$. The participants with the social media endorsement, both conditions of social media endorsement, perceived credibility as higher than the news story-only condition with no social media endorsement.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Story1 Credibility</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>15.1071</td>
<td>2.83920</td>
<td>56</td>
</tr>
<tr>
<td>Student</td>
<td>15.7636</td>
<td>2.93739</td>
<td>55</td>
</tr>
<tr>
<td>Control</td>
<td>14.3115</td>
<td>3.43774</td>
<td>61</td>
</tr>
<tr>
<td>Total</td>
<td>15.0349</td>
<td>3.13422</td>
<td>172</td>
</tr>
<tr>
<td><strong>Story2 Credibility</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>15.4821</td>
<td>2.91074</td>
<td>56</td>
</tr>
<tr>
<td>Student</td>
<td>15.5091</td>
<td>2.68654</td>
<td>55</td>
</tr>
<tr>
<td>Control</td>
<td>14.3279</td>
<td>3.15553</td>
<td>61</td>
</tr>
<tr>
<td>Total</td>
<td>15.0814</td>
<td>2.96851</td>
<td>172</td>
</tr>
<tr>
<td><strong>Story3 Credibility</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>15.4643</td>
<td>3.07461</td>
<td>56</td>
</tr>
<tr>
<td>Student</td>
<td>14.7091</td>
<td>2.73978</td>
<td>55</td>
</tr>
<tr>
<td>Control</td>
<td>14.1639</td>
<td>2.54415</td>
<td>61</td>
</tr>
<tr>
<td>Total</td>
<td>14.7616</td>
<td>2.82349</td>
<td>172</td>
</tr>
</tbody>
</table>

Table 2.2
Hypothesis 4b predicted that participants in the social media news condition (professional and peer) were more likely to deem endorsed news articles as more biased than participants who read the non-endorsed news story. To test this hypothesis, a repeated-measures ANOVA was conducted. There was no significant effect of endorsement on bias, $F(2, 169) = .7, p > .05$. There was no significant main effect of story on bias, $F(2, 169) = .414, p > .05$. There was also no significant interaction of story on bias, $F(4, 169) = .64, p > .05$. Despite the non-significant result, participants reading the professionally endorsed stories did perceive it as more biased than the participants reading the story-only condition.

<table>
<thead>
<tr>
<th></th>
<th>Condition</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Story 1 Biased</td>
<td>Professional</td>
<td>2.52</td>
<td>.972</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>2.33</td>
<td>1.090</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>2.46</td>
<td>1.074</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.44</td>
<td>1.044</td>
<td>172</td>
</tr>
<tr>
<td>Story 2 Biased</td>
<td>Professional</td>
<td>2.20</td>
<td>1.052</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>2.18</td>
<td>1.073</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>2.23</td>
<td>1.116</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.20</td>
<td>1.076</td>
<td>172</td>
</tr>
<tr>
<td>Story 3 Biased</td>
<td>Professional</td>
<td>2.41</td>
<td>1.332</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>2.05</td>
<td>0.951</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>2.20</td>
<td>.997</td>
<td>61</td>
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<tr>
<td></td>
<td>Total</td>
<td>2.22</td>
<td>1.107</td>
<td>172</td>
</tr>
</tbody>
</table>

Table 2.3

Hypothesis 5 predicted participants who read news at a higher frequency would place more importance on news reading than those who read less frequently. To test this hypothesis, a correlation was used. It was tested across three platforms: print news, online
news and social media news. Hypothesis 5a predicted that participants who read print news several times per week or more would place higher importance on news was significant. A Pearson correlation coefficient was calculated for the relationship and found that there was a weak-strength, negative correlation ($r = -.18$, $p < .05$) between print reading and interest in news, indicating a significant linear relationship between the two variables. Print readers who read news more frequently placed a lower importance on news. Despite significance, this does not support the hypothesis.

Hypothesis 5b predicted that participants who read online news several times per week or more would place a higher importance on news. A Pearson correlation coefficient was calculated for the relationship and it showed that there was a weak, negative correlation ($r = -.18$, $p < .05$) between online reading and interest in news. Online readers who read news more frequently placed a lower importance on news. H 5b was therefore not supported.

Hypothesis 5c predicted that participants who read social media news several times per week or more would place a higher importance on the news. A Pearson correlation coefficient examining the relationship between social media news reading frequency and importance rating for the news was run. There was a positive correlation, but it was not significant. H 5c was therefore not supported.
Chapter 5: Discussion

This study investigated the effect that social media endorsement had on young adult news readers. Coming from the intersection of a revised knowledge gap theory and the role of gatekeeping for online news, this study looked at six main areas of influences on young news readers when looking through news on Twitter versus non-endorsed story-only news: knowledge acquisition, perceived bias and credibility, and arousal, interest and importance level. The results of this study found statistical significance among five of the six areas being studied, although not all of the significance resulted in supported hypotheses. They were arousal, knowledge acquisition, perceived credibility, interest and importance level. These findings suggest that social media users are able to act as their own gatekeepers as they sort through the news they encounter as a result of friends and followers.

The findings from the knowledge acquisition questions of the results suggest that endorsement through the social media platform can influence the amount of information a young reader gains while online. The stories also effected knowledge gain. When knowledge was tested across the three stories using a repeated-measures ANOVA, there was a significant main effect between the professional Twitter endorsement and the news story-only endorsement conditions. Across the three stories, the scores from the knowledge test were the highest from the professional social media endorsement condition; however, the hypothesis that social media news readers would acquire less knowledge than their peers who received non-endorsed news stories that simulated
reading news in a more traditional setting, such as an online news page, was not supported. The hypothesis was based off of a previous study by Koch et al (1994), who compared the knowledge gain of readers between print and online readers of The New York Times. His results found that print readers of the paper had a higher retention rate than those who read the same news online. Another research group, DeFleur et al (1992), also found that newspaper readers would remember information better in printed newspapers than online. These findings are not consistent with the findings from this study, which takes that research a step further to compare news endorsed through the social media website Twitter versus an online article with no endorsement from news outlets or peers. This result could be a sign of a change in which outlets young adults use for accessing news. Online news reading is gaining popularity with over half of the public getting news from at least one digital source per day (Pew, 2010). However, because social media usage for news consumers is still low, with only 7 percent (Pew, 2010) of news readers using social media as a news reading service, the research results were more in line with the research of DeFleur et al (1992) and Koch et al (1994), where the older medium had better results for memory of information.

Knowledge has also been related to arousal levels. A study looking at the knowledge gap theory and arousal found that self-interest increased the participant’s ability to learn and remember information (Grabe et al, 2011). While that study compared results of higher and lower education levels, this study used participants with approximately the same education level to study across media platforms. All participants had to be college students earning their bachelor or masters degrees at a large,
Midwestern university. The result was more of a revised knowledge gap theory, which doesn’t focus as closely on education and socioeconomics, and looks more at the correlation between knowledge and interest levels across news platforms. The result of this study was that there was an effect of stories on arousal, but there was no effect of endorsement on arousal - even when social media endorsements were from “peers.” The latter is what the hypothesis was testing, and it did not support the hypothesis. One of the results of this could be that the simulation was not true enough to life.

Interest, which is a byproduct of arousal, was significant when looking at the relation between interest and the frequency of reading news when participants read print and online news. This seems pretty obvious. Those who read news more often are more interested in the news. However, there was no significance between readers of social media news and their frequency of reading. This suggests that social media readers may not be forming the same bond with their news as those who read printed news or online news. This may be because print and online users are in the habit of picking up the same magazine or newspaper or going to the same websites everyday. Using social media as a filter for news can direct readers to many different news sources each day. Thus, interest level in relation to the “who” was endorsing the news had no significance on participants, which could be a result of the participants not noticing who was sending out the news because of the set up of the experiment, a disregard for who is sending the news or the fact that the stories were being endorsed by a person different than the website where the reader was directed. However, not noticing the source of the endorsement and the “landing webpage” of the article goes against the idea of personal gatekeeping, which
relates to Hovland and Weiss’ (1951) credibility. Credibility did have statistical significance.

Hovland & Weiss (1951), who studied credibility, found that source credibility was important but not well-defined. Shoemaker and Vos (2009) found that the Internet could be overwhelming because of information overload, which makes determining credibility harder. When a national newspaper comes to a person’s doorstep, because of the foundation of journalism on accuracy and its role as a “watchdog” on the government (Tewksbury, 2000), the reader assumes the paper is credible. Fenton (2009) points out that, though all Internet information may not go through the same rigorous process, users have more tools for determining credibility. The results of this study found endorsement had a significant effect on credibility, not the story on credibility. The statistical significance for credibility was between the professional social media-endorsed news and the news story-only condition. All news was coming from national news sources, which may have influenced this outcome. If information was coming from unknown news sources, the outcome may have been different. Future studies could look at endorsing news from unknown or fake newspapers to see if readers presume credibility different across platforms when the source is less familiar. Within the individual stories, only one of the stories was statistically significant. However, participants for two out of the three stories rated the Twitter-endorsed news stories as more credible than the non-endorsed news stories.
Bias did not have statistical significance. This may be a result of the experimental design and not testing on a broad enough range of topics.

**Limitations**

This study has several limitations. The main limitation is related to the “peer” condition for Twitter-endorsed news stories. The peer Twitter account was created to mimic the account of a friend or real-life or digital acquaintance someone follows on Twitter. Ideally, this friend would be a trusted source for getting information or someone with similar characteristics and beliefs as the participant. In the design of the experiment, the student Twitter account featured an image of a student wearing team apparel for the school where the research experiment was conducted. The Twitter handle also alluded to the fact that this Twitter account was run by a fellow student. However, participants didn’t actually know this account. This could have affected the outcome related to the peer social media endorsement condition. To more accurately test how peers influence each other when reading news through social media, a qualitative study may be more appropriate. Then, the researcher could sit with a participant while he went through his social media feeds and ask questions as he decided on which stories to read, how that particular friend or follower effected his perception of credibility or bias or how interested the participant was in the story. If it was a trusted friend, the participant may have been more interested in a story or topic he wouldn’t normally be interested in.

Another limitation to this study was presenting participants with stories from well-known, national newspapers. By using these brands, participants are, most likely,
already familiar with the news outlet and may have pre-formed opinions about the news sites. Using a smaller, less well-known news outlet, the results could have been different, especially in regard to perceived credibility and bias since the participant wouldn’t know if it was a legitimate news source, one of the issues Shoemaker and Vos (2009) discussed when looking at online news and credibility. Since some participants took the experiment as part of a class on their own time over a three-week period and were debriefed, the participants could have told other participants what the experiment was studying. That could have skewed results. Other limitations include the sample pool, since many participants were journalism students at the university; the topics of the story, which could have affected some stories as being more interesting or biased than others; and the format of the experiment, where students could have looked up the answers to knowledge questions by keeping their browsers open or the repetition of reading a story and then answering similar questions. The participants may have figured out by the second story that they needed to look to see on which news site the story ran.

**Future research**

As mentioned above, more in-depth knowledge about the influence of social media as a vehicle for news could be gained through one-on-one interviews where participants go through their social media news feed with a researcher and discuss how they make judgments on perceived credibility and bias and interest and importance level based on the sender of the message. The researcher may find out that the sender has more of an influence on the interest level than the actual article because the reader respects or
trusts the source that is suggesting the news stories. Future research could also include comparing Twitter social media endorsements to Facebook social media endorsements. According to the Pew Research Institute, the demographic make-up of Facebook users is more similar to the world demographics than that of Twitter users, which tends to attract more men and users between 18-25 years old (Duggan & Brenner, 2013). A within-subject experiment may have included articles from the same news source but endorsed differently to see if the social media platform affects the same six areas that were researched for this experiment.

**Conclusion**

The channels through which consumers read news are evolving as technology plays a larger role in the lives of the public. More Americans than ever are reading news through digital sources. In 2012, Newsweek ended its print publication to go to an all-digital format. Other news outlets are going to a digital-first method, where their priorities are to get the most up-to-the-minute coverage online and flesh out stories for print the following day. One of the areas of growth for reading news is on social media. In 2010 Facebook introduced the “Social Reader” (Pew, 2010). It has since been discontinued, but Facebook and Twitter both are featured on many news websites to encourage readers to share with their friends and followers. This research study begins to look at how the endorsement of news through social media affects readers in the same way as printed stories in the past have been studied. The findings in this study are not conclusive. However, they show that participants found social media-endorsed news as
more credible than non-endorsed news stories. Participants were also able to glean more knowledge in some cases from the endorsed news stories than the non-endorsed news stories. These results to the hypotheses suggest that social media can behave as a vehicle for sharing news the way it has been predicted by previous research (Latene, 1981) and will not be seen as a less credible option but rather as an opportunity to find news that is of interest to the readers.
APPENDIX

Informed Consent Form for News Consumption Study
You have agreed to participate in a research study by Andrea Hall at the University of Missouri’s School of Journalism about how college students consume news. During this experiment, you read three news stories on computer screens the same way you might read them online. Once you have read each story, you will complete a short questionnaire about that story. The researcher expects your participation to take no longer than 45 minutes. However, you may take as much time as you need to complete the experiment. There are no risks associated with this study. There are also no foreseeable benefits to you as the participant in regards to the outcome of this research. Some students will receive credit toward experiment requirements for classes. For students in J4950, the credit will partially fulfill your experiment participation points, which are worth 10 percent of your grade in the class. The alternative assignment for not completing four experiments is writing a five-page paper about a research method of the student’s choice. In order to receive this credit, please be sure to enter your pawprint and professor’s name when prompted on an upcoming screen.

Your participation is completely voluntary. If at any time you decide not to complete the experiment, you may withdraw with no effect on your grade or class credit. Also note that your individual privacy will be maintained in all publications or presentations related to this study. As a participant, your name will not be associated with your questionnaire. Following the end of the semester, identifying information, pawprint and professor name of students participating, will be destroyed.

If you have any questions or would like additional information about this research project, please contact Andrea Hall at aehrn4@mail.missouri.edu.

Thank you for your participation.

Andrea E. Hall
Master’s Student
Missouri School of Journalism

Thank you for agreeing to participate in this experiment through the University of Missouri.

You will be presented with three stories to read and a series of questions after each story. To get to the stories you will be presented with a link. After you read each story, please close the window with the story and return to the questionnaire. This is expected to take no more than 45 minutes to complete, but you may have as much time as you need.
Story 1
Please read each tweet, then click on the tweet to follow the link. You will need to read the article carefully because you will be asked a series of questions after each story. After you have read the story, please close the story window and return to the survey. Thank you.

Does the electronic-intercept law allow the government to monitor email, telephone calls, both email and telephone calls or neither email nor telephone calls when national security is in question?
   Email
   Telephone
   Telephone and email
   None

Which two presidents have supported the FISA Amendment Act?
   Barack Obama and Bill Clinton
   Barack Obama and George W. Bush
   Bill Clinton and George W. Bush

Did the American Civil Liberties Union sue the government over what the organization is calling the unconstitutionality of the electronic-intercept law?
   Yes
   No

In what state is the FBI facility where companies divert electronic copies of communications?
   Virginia
   Tennessee
   New York
   Florida
Please rate how you felt about this story using the scale below. (With 1= Not at all to 5= A lot).

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interesting</td>
<td>Important</td>
<td>Exciting</td>
<td>Relevant</td>
<td>Attention-holding</td>
</tr>
<tr>
<td>Serious</td>
<td>Informative</td>
<td>Credible</td>
<td>Thorough</td>
<td>Accurate</td>
</tr>
<tr>
<td>Comprehensive</td>
<td>Biased</td>
<td>Factual</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How interested would you be in reading more stories like this one?

| Very Interested | Somewhat interested | Neutral | Somewhat uninterested | Very uninterested |

In what newspaper did this story appear?

- The Wall Street Journal
- The Seattle Times
- St. Louis Post-Dispatch
- The Washington Post
Story 2
Please read each Tweet, then click on the Tweet to follow the link. You will need to read the article carefully because you will be asked a series of questions after reading the story. After you have read the story, please close the story window and return to the survey. Thank you.

In which state does Becky Bennion teach kindergarten?
- Oregon
- Washington
- Idaho
- Montana

What does the new kindergarten program, WaKids, stand for?
- Washington Kindergarten Inventory of Developing Studies
- Washington Kindergarten Inventory of Developmental Skills
- Washington Kindergarten Inventory of Developing Skills
- Washington Kindergarten Invention of Developmental Studies

What is the greatest challenge of the WaKids program?
- Money
- Time
- Resources
- Teachers

True or False: The WaKids program encourages preschool teachers to participate in before-school meetings and conversations between parents and kindergarten teachers.
- True
- False
Please rate how you felt about this story using the scale below. (With 1= Not at all to 5= A lot).

1   2   3   4   5
Interesting
Important
Exciting
Relevant
Attention-holding
Serious
Informative
Credible
Thorough
Accurate
Comprehensive
Biased
Factual

How interested would you be in reading more stories like this one?
Very     Somewhat     Neutral     Somewhat     Very
Interested interested uninterested uninterested

In what newspaper did this story appear?
The Wall Street Journal
The Seattle Times
St. Louis Post-Dispatch
The Washington Post
**Story 3**
Please read each tweet, then click on the tweet to follow the link. You will need to read the article carefully because you will be asked a series of questions after each story. **After you have read the story, please close the story window and return to the survey.** Thank you.

---

What university does Jessica McSweeney attend that requires her to take a swim test to graduate?
- Cornell University
- Columbia University
- The University of Chicago
- University of Notre Dame

Which university recently ended its 60-year-old swim requirement?
- Cornell University
- Columbia University
- The University of Chicago
- University of Notre Dame

Which major at Columbia University was exempt from the swim test?
- Biology
- Physical Education
- Architecture
- Engineering

True or False: Students at Washington and Lee University have to tread water for one minute.
- True
- False
Please rate how you felt about this story using the scale below. (With 1= Not at all to 5= A lot).

1 2 3 4 5

Interesting
Important
Exciting
Relevant
Attention-holding
Serious
Informative
Credible
Thorough
Accurate
Comprehensive
Biased
Factual

How interested would you be in reading more stories like this one?

Very Somewhat Neutral Somewhat Very
Interested interested uninterested uninterested

In what newspaper did this story appear?
The Wall Street Journal
The Seattle Times
St. Louis Post-Dispatch
The Washington Post

Gender
Male
Female

Age: ______________

58
Year in school:
- Freshman
- Sophomore
- Junior
- Senior
- Graduate/Professional

How interested are you in reading news?
- Very interested
- Somewhat interested
- Neutral
- Somewhat uninterested
- Very uninterested

How important is reading news to you?
- Very important
- Somewhat important
- Neutral
- Somewhat unimportant
- Very unimportant

Indicate how often you interact with news in the following platforms:
- Everyday
- Several times per week
- Once per week
- Less than once per week
- Never

Print news
Online news
News (linked to)
Through social media websites

How true do you believe this statement to be: I need to get the news (any form: local, national or international) every day. (1 = Very untrue to 5 = Very true)

1 2 3 4 5

When getting news through a social media source, do you log on to the social media website (Facebook, Twitter, etc) specifically to read the news?
- Yes
- No
How interested are you in the following news story topics? (1 = Not very interested to 5 = Extremely interested)

1  2  3  4  5
Politics
Business/Economics
Religion
Sports
Entertainment
Education

Please enter your Pawprint if you are participating in this experiment for a class. If you are not participating in this experiment for class credit, please move on to the next screen.

Name of professor (if you are participating in this experiment for a class)

Debriefing form:

“How do you read the news?”

Dear Participant

Thank you for participating in this experiment about reading the news. During this study, you were asked to read three news stories and respond to the questions. You were told this experiment measured knowledge level, perceived bias and credibility, interest level, importance and arousal. It did, but it also measured how endorsement of those stories might have affected those elements being tested. You were presented with one of three conditions to determine if endorsement by a specific group (or no one) influenced the criteria above. The conditions included Twitter endorsements from a media professional's Twitter account, Twitter endorsements from a fellow MU student and no endorsement at all.

You were not informed of the element of endorsement because the purposes of this study were to see if participants noticed endorsement and to compare how different endorsements might have influenced the elements being tested.
Your participation and answers will be kept confidential, with the exception that your professor will know you participated in order to give you class credit. However, the professor will not know what information you provided. If you have any questions about today’s experiment in light of learning about this element of the experiment, please contact researcher Andrea Hall via email at aehm4@mail.missouri.edu.

Thank you, again, for participating in this study.

Andrea Hall
Examples of Tweets from experiment

Professional Tweets:

- **SeattleTimesNews @SeattleTimesNews**
  Kindergarten More Challenging for Students, Teachers.
  seattletimes.com/html/localnews...
  View summary

- **WashPoNews @WashPoNews**
  Sharp Debate Expected on Electronic-Intercept Law
  washingtonpost.com/world/national...
  View summary

- **WallStreetJournNews @WSJNews**
  For Certain College Students, This Test Calls for a Plunge.
  online.wsj.com/article/SB1000...
  View summary

Peer Tweets:

- **MUTigerStudent13 @MUTigerStudent13**
  Kindergarten More Challenging for Students, Teachers
  seattletimes.com/html/localnews...
  View summary

- **MUTigerStudent13 @MUTigerStudent13**
  Sharp Debate Expected on Electronic-Intercept Law
  washingtonpost.com/world/national...
  View summary

- **MUTigerStudent13 @MUTigerStudent13**
  For Certain College Students, This Test Calls for a Plunge
  online.wsj.com/article/SB1000...
  View summary
The Washington Post

Sharp debate expected on electronic-intercept law

A measure granting the government expansive power to intercept electronic communications in the United States without a warrant is set to expire this month, setting up a sharp debate in the Senate over how to balance privacy against national security.

The government uses the measure, contained in a law known as the FISA Amendments Act, to intercept e-mails and telephone calls of foreigners located overseas under a blanket approval issued once a year by a special court. But communications of U.S. citizens talking with the foreigners also are being scooped up.

The intelligence community argues that the measure is essential to protect against foreign threats and has made renewing the law its top legislative priority. The House approved a five-year extension in September by a vote of 301 to 118. The Senate must vote by the end of the year or the authority expires.

Opposition has surfaced among a small, bipartisan group of senators worried that Americans engaged in harmless communications with foreigners could be monitored without a warrant or other privacy protections.

Under the law, a special court whose proceedings are secret issues a yearly certification that permits the government to monitor the e-mails and phone calls of foreigners if the government can satisfy the court that its procedures will target people located overseas and ensure the privacy of U.S. citizens caught in the monitoring. Targeting the communications of a U.S. citizen or anyone inside the United States requires a warrant.

One of the complaints of the senators and civil liberties advocates is that the government refuses to disclose the number of U.S. citizens and residents whose communications have been collected or reviewed under the law.

“You have this potentially large pile of communications and nobody knows how many Americans are in that pile,” Sen. Ron Wyden (D-Ore.), a member of the Senate Intelligence Committee, said in an interview.

Wyden has threatened to block a vote on reauthorization unless Senate leaders agree to a debate on changes that would add safeguards for U.S. persons.

Twelve other senators, including conservative Sen. Mike Lee (R-Utah), have joined Wyden in pushing to require the government to provide an estimate of how many communications involving U.S. citizens have been collected under Section 702 of the statute. The senators also want the government to get a court–approved warrant before deliberately searching electronic data for individual Americans.
“The government ought not be able to search through that database for information about a U.S. citizen without a court order because that becomes akin to a warrantless wiretap,” Lee said in an interview.

The law was passed in 2008 as an update to the 1978 Foreign Intelligence Surveillance Act. It expanded the government’s power to conduct electronic surveillance on U.S. soil for foreign targets overseas without individual warrants.

The Obama administration, like the George W. Bush administration, has defended the program as vital to gathering quickly information about the plans and identities of terrorists and other threats.

“There is no question that we’ve gotten valuable information that has led to intelligence and national security successes,” said Robert Litt, general counsel for the Office of the Director of National Intelligence, in a press call this year. “This would really create a risk for our security if we lost this capability.” He cited “specific incidents both involving terrorist attacks and other kinds of threats where we have been able to thwart them or gain insight into them as a result of this collection activity,” but he declined to elaborate.

Litt said estimating the number of communications by U.S. citizens collected “incidentally” under FISA cannot be done with any degree of accuracy. But he said the law is not “a tool for spying on Americans.”

Jameel Jaffer, American Civil Liberties Union deputy legal director, countered that the law provides the government with too much leeway. “It’s a law that gives the government almost unchecked power to monitor Americans’ communications,” he said in an interview. “It’s indefensible that anyone’s even thinking about reauthorizing it without asking questions about the law’s use.”

The ACLU sued the government over the law’s constitutionality. A federal judge threw out the suit, saying the plaintiffs lacked standing, but the U.S. Court of Appeals for the 2nd Circuit reinstated it. The case was argued in October before the Supreme Court, which is considering only whether the plaintiffs have standing to proceed with their challenge.

The procedures involved in monitoring foreign communications remain largely hidden. Officials in the communications industry said the government gives companies the e-mail addresses, phone numbers, user names and other identifiers of foreign targets to tap. The lists could run to dozens or hundreds of identities, said the officials, who spoke on the condition of anonymity to discuss sensitive details. The companies divert electronic copies of the communications in real time to a special FBI facility in Northern Virginia. In the case of e-mail, the government may receive virtual replicas of people’s entire inboxes, the officials said.

The National Security Agency stores the data for translation and analysis. Automated tools help analysts find links in the communications among, say, the e-mails of five members of a suspected terrorist cell.
“Some sniffer is looking for similarities among their contacts,” said a former federal official, who spoke on the condition of anonymity because of the topic’s sensitivity. “If all five are talking to a sixth, that sixth is going to be a person of interest.”

The law allows collection of communications across a broad spectrum of “foreign intelligence” topics and threats, which include nuclear proliferation, foreign diplomats and extremist groups. Critics say the wide range increases the chances that Americans who are not targets of surveillance will have their communications picked up.

Intelligence officials say a warrant requirement would be burdensome and unnecessary, given that the information has been lawfully collected. They note that they have regularly briefed Congress on the program’s operations.

Their reports to Congress have identified no cases of intentional or systematic misuse, according to a Senate Judiciary Committee review. But Wyden said the special court has already found that the government’s efforts to protect the privacy of U.S. citizens failed on at least one occasion.
The Seattle Times:
Kindergarten more challenging for students, teachers

The state’s new $2.75 million WaKIDS program is intended to assess the skills of children entering kindergarten to help teachers better understand their strengths and weaknesses.

By DONNA GORDON BLANKINSHIP
The Associated Press

Becky Bennion has been wiping runny noses and teaching kids to read for 30 years.

The Renton kindergarten teacher says the children haven’t changed much but that society’s expectations about what a 5-year-old should know have evolved dramatically.

That’s one reason she is grateful for a new state program that helps her get to know students before they step into the classroom.

Washington’s new WaKIDS program, which stands for Washington kindergarten inventory of developing skills, is designed to help kindergarten teachers better understand the strengths and weaknesses of children.

The $2.75 million program, including private dollars, is in more than 300 schools in 102 of the state’s 294 school districts, including every school with free all-day kindergarten.

Those schools hold individual parent-teacher meetings before school starts, as well as taking a more formal assessment of each child’s abilities — from staying on task to standing in line and doing simple math — during the first six weeks.

The assessment helps teachers group students by ability and get extra help for those who need it.

And it gives the state a better idea of how well prepared 5- and 6-year-olds are to learn to read, write and do math by the time they finish kindergarten.

At Bennion’s school, Campbell Hill Elementary in the poorest corner of the Renton School District, the three kindergarten teachers spend the first two days of the school year meeting with parents before regular class begins.

For the past two years, the third day of school has been much more productive, Bennion said.

“It really did make a difference, to group kids more quickly and approach their individual needs,” Bennion said. “A lot of the parents I met with didn’t know how much we expected at the end of kindergarten. ... Kindergarten is like first grade was seven or eight years ago.”

Her goal is to identify children who will need extra help and to intervene before they fall behind.
The fall 2012 statewide kindergarten data showed many 5- and 6-year-olds do not have the skills expected for entering school.

The biggest deficit was in math. Only 52 percent of the 21,811 kids tested have the math abilities they should have.

“What this data is showing us is that some of these challenges begin very early,” said Kathe Taylor, director of early learning at the Office of the Superintendent of Public Instruction (OSPI).

Representatives of Thrive by Five Washington, a nonprofit focused on improving early learning, believe this information is just the beginning of an expected avalanche of new data to help improve public schools.

“We have to, as a community, be thinking about this,” said Molly Boyajian, policy director at Thrive by Five.

**Race to Top grant**

Washington was one of nine states to get a federal Race to the Top grant in late 2011 for early learning, in large part because of its work with WaKIDS.

The $60 million will be used to expand both the kindergarten-readiness assessments and a quality-rating system for private preschool programs.

Teachers already using this new kindergarten-readiness test say all their students are benefiting from the way teachers can now quickly differentiate students’ needs.

Kristi Dominguez, who coordinates the WaKIDS program in the Bellingham School District, told lawmakers at a hearing last month that the immediacy of the information has allowed teachers to get fast, specific help for kids.

The greatest challenge is how much time it takes, she said.

**Preschool needs**

It also makes it obvious that kids need some instruction before kindergarten, because some are scoring at the 3-year-old level when they enter school, said Krissy Para, kindergarten teacher at Helen B. Stafford Elementary in Tacoma.

This information will be useful to many people, including parents of future kindergartners, as well as to preschool and child-care teachers, said OSPI’s Taylor.

“As we move down this path, we’ll be thinking about parent-friendly materials that will help parents think about the ways they can be of assistance to their children and what is typical to expect,” Taylor said.

The WaKIDS program also encourages preschool teachers to participate in the before-school conversations between parents and kindergarten teachers.
Including preschool teachers also helps them learn what public-school teachers are seeing in their students and where preschool could help fill in gaps, said Bob Hamilton, deputy director of the state Department of Early Learning.
For Certain College Students, This Test Calls for a Plunge
Most Schools Have Thrown in Towel, But Some Require Swim Skills to Graduate

With graduation approaching this spring, Jessica McSweeney has a sinking feeling. A senior Human Development major at Cornell University, she has completed her required science and writing classes and looks forward to traveling this summer.

But one thing stands between the 21-year-old Ms. McSweeney and her diploma: three lengths in the school's 25-yard swimming pool.

Cornell students must take the plunge in order to graduate, either by passing a swim test or enrolling in a beginner's swim class. Ms. McSweeney, who hasn't been in a pool much since grade school, is less than lukewarm on the tradition.

"I guess it's a noble skill to have," she says, "but I don't intend to be a water-going person."

Cornell's century-old requirement is among the last remaining at colleges. The tests, which generally require students to prove they can paddle a few lengths of the pool, are among the more unusual graduation requirements in academia. But as schools focus more on career skills than on life skills, support for the requirements has been drying up.

The latest to throw in the towel is the University of Chicago, which announced this fall that it would retire its nearly 60-year-old requirement that students swim 100 yards or take a swim class.

Evan Cudworth, a 2009 Chicago graduate, isn't sorry to see the test go. Now 26 and working in the school's admissions office, he says most students were "pretty embarrassed that they had to get up in front of their classmates and strip down" into swimwear during freshman orientation.

A University of Chicago spokeswoman says the changes to the physical education requirements were intended to give students more choice in how they exercise. Colgate University sank its swim requirement in 2005 with a bit more of a splash, after a faculty committee called it "arbitrary and indefensible."

There is no clear count of how many U.S. colleges still make students demonstrate swimming skills. A 1997 survey by three North Carolina State University professors found that just 5% of four-year universities required swim tests, while at least 25% had them at one time. (In decades past, male students at some single-sex schools could take the tests in the nude, colleges say.)
Schools note the importance of being able to swim. "Anything that prevents people from dying needlessly is a valuable skill," says Fred DeBruyn, director of aquatics and assistant physical education director at Cornell. Nearly 3,800 people—more than 10 a day—died from unintentional, nonboating drowning in 2010, according to the Centers for Disease Control and Prevention.

Many nonswimmers don't know how to swim because their parents never learned, so college instruction can "break the cycle" of not passing on the knowledge, says Mr. DeBruyn.

Some high schools still incorporate swim tests.

At colleges that remain swim-test stalwarts—including Massachusetts Institute of Technology, Cornell, Columbia University and the University of Notre Dame—advocates hope the practice will remain. But few can say how the requirements came into being.

A tale at several schools is that the requirement came at the behest of a wealthy benefactor. At Harvard University, for instance, the story was that the school had a swimming requirement because a donor, whose son died on the Titanic, stipulated such instruction as part of a gift. The donor's son did die aboard the ship, but the school says on its "Ask a Librarian" website that "there is absolutely no evidence" that the donor's gift was responsible for the swim test. Harvard got rid of its swim test decades ago.

At Columbia, campus lore has it that a university president wanted to ensure students' survival if Manhattan ever sank—but engineering students could build a boat, so they were exempt. The true story: About 20 years ago, engineers successfully petitioned their faculty to scrap the requirement; other students weren't so successful.

Wartime considerations in the 1940s led to swim tests at schools, amid concern young Americans were unfit for battle. According to Navy historians, 6,720 Navy and Marine Corps officers and enlisted men drowned during World War II.

Washington and Lee University spokesman Jeff Hanna says a school president from the 1910s lamented "the idleness and restless shallowness of the average undergraduate," but it is unclear whether swimming specifically was seen as the remedy for youthful malaise. The school's test now asks students to swim 50 yards in one minute, and then spend five minutes treading water.
Bryn Mawr College's historian investigated the rationale behind the swim test there, but came up dry, says Matt Gray, a school spokesman. Nearly a century after the test first appeared, Bryn Mawr students must swim for 10 minutes, float on their backs for a minute and then spend another minute treading water, or take a swim class before graduating.

"Swimming is a life skill," says Nikki Whitlock, Bryn Mawr's aquatics director.

Ken Torrey, associate athletic director at Columbia, sees no reason to throw the swim requirement overboard. "If it's not broken, why fix it?"

Because it's annoying, say some students.

"You go through four years of classes. I don't think three lengths of the pool should decide whether or not you get a diploma," says Corey Minerva, a 2010 Cornell graduate who put off his test until senior year.

Lisa Bacis, another 2010 graduate, agrees. She flunked her swim test during freshman orientation at Cornell. Twice.

"It was my first thing to do at Cornell, and I failed it," says Ms. Bacis, now 24 and a staff assistant at a cell biology lab at Harvard Medical School. She ultimately enrolled in a swim class.

Students with hydrophobia, physical limitations or religious objections can obtain waivers in some cases. Others manage to swim—or rather, not swim—under the radar.

The Rev. Edward A. Malloy, Notre Dame's president emeritus, graduated without fulfilling that school's swim requirement. An athlete, he was exempt during the basketball season, while lab sessions for his chemical engineering major kept him out of the pool the rest of his undergraduate career.

Shortly before graduation, Father Malloy says, "I had thoughts that maybe [my diploma] would be blank." But he floated right on, ultimately receiving two master's degrees from Notre Dame and serving as its president for 18 years. Now 71, he still can't swim.
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