

USES AND GRATIFICATIONS OF ONLINE INFORMATION SOURCES:
POLITICAL INFORMATION EFFICACY AND THE EFFECTS OF INTERACTIVITY

By

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To all who nurtured my intellectual curiosity and love of learning, you made this
milestone possible

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Abstract of Dissertation Presented to the Graduate School
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USES AND GRATIFICATIONS OF ONLINE INFORMATION SOURCES:
POLITICAL INFORMATION EFFICACY AND INTERNET CHANNEL EFFECTS
AMONG DIGITAL NATIVES

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There are two distinct purposes to this investigation: to develop the predictive power of the theory of political information efficacy and to determine how exposure to political information formats on the Internet under distinctly different interactive conditions affects cognitive and affective processes. Examined in the first section of this inquiry, then, are the relationships among information efficacy and political interest, knowledge, participation, and party affiliation. Second, the differential effects of exposure to news websites or social network sites and three levels of interactivity on young adults' political attitudes and learning levels in the context of the 2010 gubernatorial campaign in Florida are explored. Grounded in the uses and gratifications theoretical framework, the results suggest that political information efficacy predicts levels of political interest, knowledge, and party affiliation. Further, exposure to online political information sources also has significant effects on young adults' levels of political information efficacy, issue and image learning, and candidate evaluations. Specifically, exposure to both online political information sources results in significantly higher levels of political information efficacy; exposure to news web sites results in

differentially significant issue learning; exposure to social network sites results in both differentially significant candidate image learning and evaluations. The implications of young citizens' social orientation toward news consumption and preference for using social network sites as portals for political information seeking are also explored.

CHAPTER 1 INTRODUCTION

Problem Statement

Since the 26th amendment to the U.S. Constitution lowered the voting age to 18 in 1971, young citizens have lagged far behind their older cohorts in nearly all measures of political participation. Scholars point to the low rates of voter turnout, dismal levels of political knowledge, and sense of civic disconnection among young citizens as evidence of the marginalization of young Americans in our political system (Bennett, 1998; Iyengar & Jackman, 2003; Plutzer, 2002). Even when participation rates among the young have increased, they have been labeled anomalies or credited to short-term forces such as candidate image appeal, issue voting, closely contested elections, or the mobilization efforts of get-out-the-vote organizations (Kirby & Kawashima-Ginsburg, 2009). This lack of civic participation, particularly among the young, is cause for concern in terms of both normative democratic theory and because the continued legitimacy of our government depends upon an engaged citizenry (Hyland, 1995).

While young voters were the only age group to achieve statistically significant increases in turnout in both the 2004 and 2008 presidential elections, the fact remains that less than 60% of citizens between the ages of 18 and 24 were registered and less than half actually voted in either election (U.S. Census Bureau, 2009). When examining midterm elections, young citizens' voting rates fall far below their high point in 2008. In 2006, for example, more young voters turned out at the polls than in any midterm election since 1992, but less than half reported that they were registered to vote, and only 22% reported they actually did so (U.S. Census Bureau, 2009). The celebration of a 22% voting rate as evidence of increasing civic engagement among citizens between

the ages of 18 and 29 speaks volumes about the low standards used for judging the political engagement of this age group. Further, in closely contested, relatively salient off-year gubernatorial races in November 2009, young voters failed to maintain voting rates anywhere near their 22% level in 2006; there was a drop-off in young voter turnout of two-thirds in New Jersey and three-quarters in Virginia (ISS, 2009; Barone, 2009).

Young citizens' relatively low turnout rates are a chronic problem. Explanations for this predicament include the lack of political socialization, ineffective civics education, and low levels of political interest (Delli Carpini, 2000; Gans, 2004). Due to their focus on life-stage issues such as getting an education, finding a job, and starting a family, politics simply seem irrelevant to many young citizens' daily lives and immediate concerns (Wolfinger & Rosenstone, 1980). Should the habit of voting and participating in politics not be developed early in life, however, scholars contend that disengaged young citizens are very likely to become disengaged older citizens (Putnam, 2000).

In the first couple of decades after modern voter participation rates peaked in 1960, the issue of young voter apathy was treated as an enigma awaiting an innovative solution or explanation. More current analyses of the declining rates of civic participation, however, are phrased in nearly strident terms (Brody, 1978; NASS, 1999; Teixeira, 1992). One of the major reasons for this change in tone is the discovery that the trending in political apathy continues to be concentrated among the young, making the future look even bleaker (Niemi & Weissberg, 2001). Although increasing levels of education and affluence along with less stringent registration requirements should be pushing rates of civic participation upward, it is apparent that there are overwhelming and countervailing forces depressing turnout (Cho, 1999; Teixeira, 1992).

The most common reason given by young citizens in focus groups at universities across the country for abstaining from politics is their lack of confidence in their ability to participate meaningfully in the process (Kaid, McKinney, & Tedesco, 2007). Those newly eligible to vote are not only unfamiliar with registration and polling practices, but they more frequently express concerns over their low levels of information about the candidates and issues being contested in the upcoming election (Delli Carpini, 2000). This sense of doubt about their ability to cast an informed vote has been measured using the construct of political information efficacy. The underlying theory driving this research is that individual levels of information efficacy are closely related to other political cognitions, attitudes, and behaviors (Kenski & Stroud, 2006). Thus, scholars contend, analyses of both media usage patterns among those with high levels of information efficacy and the effects of different media channels and content on individual levels of efficacy may provide suggestions for increasing political participation (Sweetser & Kaid, 2008).

In addition to the lack of political information efficacy among the young, other factors cited as contributing to the declining rates of civic participation are the rise in influence of the electronic media and the weakening of the political parties (Wattenberg, 1996). Indeed, since the television became the major source of political information for Americans in 1963, voter participation rates have continued their steady decline (Patterson, 1994; 2002). With the development of digital media technology, many early analyses of the effects of the Internet on political cognitions, attitudes, and behaviors have also been distinctly negative (e.g., Margolis & Resnick, 2000; Sunstein, 2001).

Background of Study

The extent to which citizens in contemporary western democracies experience politics through the mass media has led to its characterization as not merely mediated, but “mediatized” (Stromback & Esser, 2009). While interpersonal communication continues to play an integral role in shaping political cognitions and attitudes, the majority of the political information consumed by citizens today comes from ubiquitous media sources in the form of both news coverage and strategic campaign communications. Although most research on media effects has focused on the ways in which exposure affects receivers, investigations into the ways in which citizens use specific media channels and content may be required before appropriate questions about their effects can be formulated. Such analyses of media usage among young citizens may not only offer insights into the causes of differing levels of political interest, knowledge, and participation among age groups, but they may also provide opportunities for engaging the young in the political process. Recent research, for instance, reveals that large segments of young citizens are turning to the Internet for their political information as well as participating in politics through this medium, more so than are older citizens (Smith, 2009).

The increasing generational differences in both the amount and nature of citizens’ political information sources are clear examples of how young citizens differ from older citizens in their political attitudes and media orientations. An appropriate theoretical framework for investigating the patterns of media usage among any group of consumers - especially when focusing on emerging technologies and platforms - is the uses and gratifications approach. In response to Berelson’s indictment of the persuasion model in studies of media effects, Katz (1959) pointed to “the program that asks the question, not

‘What do the media do to people?’ but, ‘What do people do with the media’” (p. 2). He made clear his belief that answers to questions about motivations behind patterns of media usage must be answered before the effects of these channels can be fully understood. That is, in order to understand how media affect people, we must first understand how people use media.

The development and widespread adoption of new, interactive media platforms provides scholars with an opportunity to analyze this medium’s usage as well as effects. For instance, emerging media channels heavily relied upon by the younger generation may also possess interactive features lessening the costs of information gathering required to gain confidence in one’s ability to cast an informed vote. By reducing the costs of political information gathering, one of the most frequently cited reasons among young citizens for abstaining from the politic process might also be addressed. Indeed, recent elections offer grounds for hope that features of online digital platforms may not only appeal to the young, but may also activate their political interest.

Since online political information and interactive media platforms have become more accessible in recent years, more young voters have been turning out to vote. In the 2004, 2006, and 2008 elections, young citizens turned-out at the polls in increasingly larger numbers. The future, however, is not so promising, and there remains much to learn about young citizens’ online behaviors in terms of political information seeking and processing . Further, the emergence of the Internet as a major source of political information provides a rich source for investigating the effects of this medium’s uniquely interactive features on political cognitions, attitudes, and behaviors during an election campaign.

Focus and Significance of Research

A great deal of research has examined the effects of information on the political engagement of different age groups during U.S. presidential elections, but far fewer studies have focused on the patterns of media effects and rates of civic participation in midterm contests. Still smaller numbers of examinations have investigated the effects of exposure to different online media platforms on young citizens' levels of confidence in being able to cast an informed vote, or political information efficacy, in statewide midterm elections. Although the last two midterm elections witnessed increases in participation among young voters, the outlook for the 2010 cycle is uncertain at best and dismal at worst. On the other hand, the ascendance of the Internet as an information source and the adoption of online platforms allowing users to interact with this medium have continued their unprecedented arc. Thus, there is an urgent need for research that may answer questions about the cognitive and affective effects of exposure to different online political information sources and content. Further, there is hope that the results of such investigations may offer some suggestions for activating young citizens politically.

While the mobilization efforts of get-out-the-vote organizations have been credited with a great deal of the success in increasing young voter turnout in recent presidential elections, such efforts during midterm elections have, for the most part, failed to yield similar results. Further, compared to the amount of research on voting patterns during presidential elections, relatively few analyses have focused on the effects of information on young voters in midterm elections. Presidential elections, by their very nature, are highly salient events that capture a great deal of media and public attention. Midterm elections, on the other hand, are limited to a specific geographic location and receive limited national media coverage. Clearly, rates and patterns of participation in midterm

elections are different from and generally much lower than those in presidential elections (Wolfinger, Rosenstone, & McIntosh, 1981). A major reason for this dramatic drop-off in midterm participation is the increased opportunity costs required to cast an informed vote (Jackson, 1993).

One purpose of the theory of political information efficacy is to explain how young citizens process political information differently from members of older age groups (Kaid, McKinney, & Tedesco, 2007). Another purpose of the theory of political information efficacy is to explain how those who lack confidence in their information levels about political issues and actors become politically disengaged (p. 1101). This theoretical construct has also been used as a dependent variable in experimental investigations into the effects of exposure to various information sources during political campaigns (for summary, see Tedesco, 2007). By adopting a broader uses and gratifications approach, this investigation, on the other hand, tests the predictive value of the theory of political information efficacy in terms of its relationships with other political cognitions and attitudes as well as patterns of media usage.

Following unprecedented use of Internet resources by the historic 2008 presidential campaigns, the 2010 gubernatorial election in Florida provides a compelling context for investigating the use of these online resources during subsequent elections. Not only did this closely contested election receive a great deal of attention from the regional news media, but it was also characterized as the election in which social media came of age to play a breakthrough role (Sachs, 2010). From the beginning, however, there were clear signals that this race would be especially compelling. Indeed, some

analysts asserted, “were it not for the Florida Senate race, the Florida Governor's race would probably win the nod for the strangest election of 2010” (*RCP*, 2011, p. 1).

Although the three-way 2010 senate campaign in Florida may have been more novel, it was not nearly as close as the gubernatorial contest. Insurgent Tea Party favorite, Marco Rubio (R), beat the sitting governor, Charlie Crist (who became an Independent when it became clear he could not win the Republican primary) by over one million votes, and the Democratic nominee, Congressman Kendrick Meek, by over 1.5 million votes, to win the Senate seat vacated by Mel Martinez (R) (Stacy & Sedensky, 2010). The difference in votes between the winner and the loser in the gubernatorial race, on the other hand, was less than 70,000 votes (p. 1). With the sitting governor campaigning for the Senate, however, these two races became inexorably linked more than a year before the campaigning began.

On May 12, 2009, Governor Charlie Crist (R), announced that he would not run for re-election, but that he planned to run for the Senate seat held by Mel Martinez (R), who also did not plan to seek re-election and subsequently announced his resignation three months later. With the sitting governor not seeking re-election, the resulting open race was hotly contested in the Republican primary between the Florida Republican Party establishment favorite and state Attorney General, Bill McCollum, and the insurgent Tea Party favorite and former CEO of Columbia/HCA, Rick Scott. The tone of this race became distinctly negative early, making it one of the nastiest nomination fights of 2010 (Mills, 2010). McCollum repeatedly hammered Scott for being forced to resign after his hospital corporation was found guilty of committing 14 felonies and forced to repay the federal government nearly \$2 billion in the largest Medicare fraud case in American

history (Deslatte, 2010). Scott, on the other hand, used his vast wealth to funnel over \$30 million of his own money into the most expensive primary campaign in the state of Florida's history (p. 1). He branded McCollum a "career politician" and repeatedly accused him of misusing taxpayer dollars with frivolous plane trips and self-serving public service announcements (p. 2). Although polls showed McCollum leading Scott heading into primary Election Day, low voter turnout and early voting results allowed Rick Scott to narrowly capture the GOP's nomination for governor of Florida by a three-point margin (FDOE, 2010).

Apparently rewarded for his negative tactics, the Republican nominee and eventual election winner, Rick Scott, continued to pour money into attack advertising, outspending his Democratic opponent, state Chief Fiscal Officer Alex Sink, by a margin of 10 to 1 (Mills & Hale, 2010). Scott also continued to portray himself as a political outsider, a successful businessperson trying to reform the system. He spent over \$70 million of his own money and made this gubernatorial campaign both the most expensive in Florida's history and second only California's governor's race in terms of spending during the 2010 cycle (p. 1). His opponent, Alex Sink, was not a particularly strong candidate, committing frequent and costly missteps during her campaign. For example, she repeatedly referred to the University of Central Florida (in Orlando) as USF (University of South Florida in Tampa) during a commencement address (ABC News, 2011). Perhaps even more costly, exactly one week prior to Election Day, Sink accepted a smart phone from her make-up artist to read a text message from an aide during a commercial in a CNN televised debate with Scott. This communication with her campaign staff violated the debate agreement that stipulated the candidates would not

use notes nor receive any coaching during commercial breaks in the encounter. Upon returning to the broadcast, Scott immediately labeled Sink a cheater. "First Alex, you say you always follow the rules," he said. "The rule was no one was supposed to give us messages during the break, and your campaign did" (CNN, 2010). In sum, both the particularly weak nature of his opposition and the anti-Democratic sentiment sweeping the country played in Scott's favor. Unlike Meg Whitman and other self-funded, big-spending, insurgent Republican candidacies in 2010, however, Rick Scott's campaign was a success. In addition to the heavy use of negative television advertising, both Scott and his Democratic opponent, Alex Sink (D), also maintained a significant presence on social network sites (Sachs, 2010).

Since the variety and sophistication of online platforms as well as their formats proliferated during the run-up to the 2010 gubernatorial race in Florida, this campaign provides an opportunity for exploring a variety of informational uses and their effects. Specifically, this investigation attempts to: (1) test the predictive power of the theory of political information efficacy; (2) explore the manner in which the purposes, sources, and uses of Internet sources shape the cognitive and affective processes of those exposed to the information; and (3) analyze the effects of interactive features distinctive of Internet communications on political cognitions and attitudes. Grounded in the uses and gratifications approach, the results of this investigation may not only inform analyses of political communication in our rapidly evolving media environment, but they may also offer insights into practices offering the potential for increasing political participation among the younger generation.

CHAPTER 2 THEORETICAL BACKGROUND

Rational Voting Behavior and Political Efficacy

It is important to remember that the act of voting requires making two choices: first, whether or not to participate; and second, which candidates or propositions to support. When analyzing the first part of this equation, scholars have met with difficulty when using purely mathematical or rational analytical approaches. Indeed, attempts to explain why some people vote (and others do not) have embroiled political scientists in a dispute over the legitimacy of rational choice theories for decades. Anthony Downs (1957), the father of the economic model of democracy, contended that: "Every rational man decides to vote just as he makes all other decisions; if the returns outweigh the costs, he votes; if not, he abstains" (p. 260). The paradox of rational voting behavior is that the costs of voting (in terms of the time and effort required for information gathering, registering, and completing a ballot) are greater than the potential benefits (i.e., victory by preferred candidate) because the probability that one vote will change the electoral outcome is minuscule. Since an individual vote holds little chance of determining the electoral outcome, then, many rational behavior theorists conclude that voting is largely an irrational act. If the act of voting were not susceptible to the rules of reason, however, academic analyses would be moot and there would be no observable systematic, patterns, explanations, or theories of voting behavior.

In their endeavor to make rational behavior models more descriptive of actual voting behavior, Riker and Ordeshook (1970) revised the calculus of voting to include a wider range of potential benefits for individuals who participate in the political process. While granting that the prerequisite information and opportunity costs for participating in

elections are considerable, these authors argue the rewards of participation may include more than potentially changing the outcome of the election. For example, “the satisfaction of affirming one’s efficacy in the political system” may also be one of the benefits of voting (p. 28). Since democratic theory holds that the citizens are responsible for their governmental institutions, actors, and policies, voting may be the only opportunity most people have for fulfilling their civic obligations and responsibilities. Affirming the belief that one plays a vital role in the political process may not only be considered a reward for voting behavior, however, but this sense of political efficacy may also influence individual level decisions whether to participate in the process.

Although one’s sense of political efficacy, or the feeling that individual political action does have, or can have, an impact upon the political process, has been studied since the 1950s, scholars came to realize that there were two distinct components of this construct in the late 1970s (Nieme, Craig, & Mattei, 1991). This political attitude has been divided into (1) external political efficacy, which refers to “beliefs about the responsiveness of governmental authorities and institutions to citizen demands;” and (2) internal political efficacy, which refers to “beliefs about one’s own competence to understand and to participate effectively in politics” (1407-1408). The value of these constructs is found in their relationships with other political cognitions, attitudes, and behaviors. For example, if one believes that the government is responsive to citizen demands (high level of external political efficacy), then one will be more likely to participate in the political process than a person who does not believe his or her actions have the potential for influencing the government (low external political efficacy).

Likewise, if one feels confident in his or her understanding of the candidates and issues being contested in the election as well as one's ability to physically participate (high internal political efficacy), then one will also be more likely to vote than a person who feels less competence (less internal political efficacy). Thus, levels of both internal and external political efficacy have been correlated with one's probability of voting and level of civic participation over the past several decades (Aberbach, 1969; Abramson & Aldrich, 1982; Clark & Acock, 1989; Miller & Miller, 1975; Morrell, 2003; Pollock, 1983; Verba & Nie, 1972).

Scholars have also noted the reciprocal nature of the relationship between efficacy and participation and their recursive effects. The results of various investigations show that efficacy influences decisions whether to vote which, in turn, affect one's sense of political competence and probability of participating in politics (Finkel, 1985, 1987; Norris, 2004). Alternately, one of the major differences in research results between these two constructs is their relationship with the calculus of voting equation in which electoral victory by the preferred candidate has clear implications.

Unlike studies of external political efficacy, levels of internal political efficacy have not been shown to be affected by election outcomes. That is, while there is a documented tendency for levels of external efficacy levels to rise when one's preferred candidate is elected, a similar relationship between internal political efficacy and electoral victory has yet to be established (Karp & Banducci, 2008). In fact, many voters who support losing candidacies credit their losses to a lack of information among the public (Kuklinski & Quirk, 2000). Further, scholars have shown that misinformation may have even greater effects on electoral outcomes than a lack of information (Bartels,

1996) Since the public's number one source of political news is the media, many scholars have focused on media coverage and campaign communications in their investigations of information effects on voting decisions(for summary, see Kaid, 2004). While media coverage may provide information about precinct locations and instructions for ballot completion, the more important questions about the effects of information on voting decisions are also one of the most common explanations given for failing to participate: How does exposure to mediated information affect an individual's sense of competence in being able to cast an informed vote?

Although low levels of political knowledge are a problem common to all generations in the United States, the shockingly dismal levels among the young have been of particular concern for a number of years (Delli Carpini & Keeter, 1996). Further, the disparity in political knowledge levels between those ages 18 to 29 and those over the age of 30 has been growing significantly in recent years (Pew, 2007). While the lack of political knowledge in general is considered a sign of an unhealthy democracy, it also appears to be a cause of civic disengagement among the young (Bennett, 1997). Specifically, young citizens, even more so than older citizens, have frequently cited the lack of political knowledge as their reason for not voting (Delli Carpini, 2000). In order to understand how low levels of political knowledge among those between the ages of 18 and 29 may cause them not to participate in the political process, scholars have drawn conceptual links between internal political efficacy and political information efficacy.

Political Information Efficacy

While internal political efficacy refers to beliefs about one's competence to understand and participate in the political system in a general sense, political information efficacy refers more specifically to one's level of "confidence in his or her

own political knowledge and its sufficiency to engage the political process (to vote)” (Kaid, McKinney, & Tedesco, 2007, p. 1096). Thus, while it may be appropriate to measure internal political efficacy at any stage in the processes of the polity, measuring political information efficacy is largely appropriate only during election cycles. Methodologically, a clear distinction between these two constructs is found in the differences between the measures.

Three of the four items used to measure internal political efficacy and political information efficacy are identical. The items used to measure both constructs are: (1) I consider myself well qualified to participate in politics; (2) I feel that I have a pretty good understanding of the important political issues facing our country; and (3) I think that I am better informed about politics and government than most people. The fourth item for measuring internal political efficacy taps into an individual’s sense of competence in being able to perform in public office: “I feel that I could do as good a job in public office as most other people. For political information efficacy, on the other hand, the goal is to measure an individual’s sense of competence in being able to participate meaningfully in the political process. Thus, the fourth item in this construct is worded: “If a friend asked me about the upcoming election, I feel I would have enough information to help my friend figure out who to vote for.” While scale analyses of both these measures have repeatedly shown high levels of reliability, verifying their internal consistency in measuring a single construct, this difference in the fourth measure makes a clear distinction between internal and information efficacy.

Broadly, the concept of self-efficacy refers to one’s belief in his or her ability to complete specific tasks (Bandura, 1986). When looking at the difference between

internal efficacy and information efficacy, it is clear that these two constructs are designed to measure individual confidence levels in one's ability to perform two distinctly different tasks. Indeed, as many teachers, coaches, parents, and professors are very aware, belief in one's ability to perform specific tasks is much different from one's belief in his or her ability to evaluate others' abilities to perform those same role-specific functions.

Both internal and political information efficacy have been used as dependent variables in investigations into the effects of exposure to mediated information. Unlike political information efficacy, however, internal political efficacy has also been used as an independent variable to predict other political cognitions, attitudes, and behaviors. Thus, research into the predictive power of the theory of political information efficacy would strengthen the theoretical underpinnings of this analytic framework (Chaffee & Berger, 1987). Further, since research also suggests that different information sources affect political cognitions and attitudes in ways distinguishable by age group, the increasing use of the Internet as a source for political information invites investigation of this medium's effects on young citizens' sense of political information efficacy.

Market Penetration of the Internet

It is no exaggeration to say that the Internet is the fastest growing technology invented by man; that its growth rate far exceeds that of any previous technology. By way of comparison with other technological innovations, Dessauer (2004) explained that "it took electricity 50 years to reach 50 million users in the United States, whereas it took radio 38 years, it took computers 16 years, it took television 13 years, and it took the Internet just four years" (p. 122). The geometric and frequently exponential growth curve of the Internet has been measured according to several criteria: numbers of users, size

of bandwidth, processing power, and functionality. In terms of providing information upon which political cognitions, attitudes, and behaviors are formed, the rapid market penetration of the Internet has also been unprecedented.

The growing importance of the Internet as a source of political information is illustrated by a comparison of survey results from October 2004, when 10% of the public mentioned the Internet as either their first or second most important source of political news to October 2008, when 33% of the public did so (Pew, 2008a). In fact, 2008 is the year that “more than half of the adult population were online political users” and the Internet surpassed newspapers as an information source during presidential campaigns (Smith, 2009, p. 3). When looking more specifically at younger adults, survey results show that this age group is much more reliant on the Internet for political information than are older citizens (Pew, 2008b).

While 2008 was heralded as the first year that a majority of Americans went online to get political information, 2010 may well be remembered as the year “the Internet replaced newspapers as the third most popular news platform, behind local television news and national television news” (Smith, p. 1). In fact, at present, the Internet rivals all forms of television news as the main information source for younger adults. Due to the nature of this new technology, however, this shift in media reliance has not only allowed people to diversify their political information sources, but it has also reshaped the relationship between the news media and its consumers.

No longer required to assume a passive role when consuming information, at present Americans’ orientation toward the news at present is largely based on “foraging and opportunism” (Smith, p. 3). That is, political information is sought when an event is

signaled which piques one's interest and the timing for an information search is convenient. Thus, when online, media exposure and information gathering are not only active processes, but they are also interactive in that feedback and channels allowing for user content creation are much more immediately and widely available than among traditional media. Unlike the unidirectional, linear process of consuming news from the television or radio, the acquisition of political information from the Internet is characterized as a social process. With the rising market penetration and interactive nature of the Internet, scholars today are called upon to re-examine and adapt long-standing theoretical frameworks to allow for more holistic analyses of media effects.

Uses and Gratifications Theoretical Framework

Origins of the uses and gratifications approach to media studies date back to Laswell's (1948) functional approach to communications research. Around the same time as Lasswell, Lazarsfeld and Stanton (1942) also adopted this analytic framework in their research on the motivations driving the spectacular demand for media content such as daily radio soap operas and newspapers. After the Columbia studies in Erie County Ohio during the 1940 presidential race and in Elmira, New York during the 1948 race failed to yield evidence of direct media effects in electoral decisions, the Two-Step flow model was developed to explain how interpersonal influence mediated the effects of exposure to the media (Katz & Lazarsfeld, 1955). Klapper (1963) fueled this shift away from the traditional persuasion model of communications research toward a more limited effects paradigm when he asserted that "what people do and can be brought to do with mass communication may largely determine what mass communication does and can be brought to do to people" (p. 523). Credited with ushering in the cognitive revolution, Klapper also argued that a more functional approach to media studies would

restore the audience member to “his rightful place in the dynamic, rather than leaving him in the passive, almost inert role to which many older studies had relegated him” (p. 527). Thus, the uses and gratifications analytic framework views an active audience as a mediating factor in studies of media effects.

Emphasizing the functional "uses" approach of media studies, Katz (1959) argued that scholars should ask "what do people do with the media?" rather than "what do the media do to people?" (p. 2). Since the discussion of a medium's effects is relatively meaningless if no one is exposed to or attends it, he advocated a "uses" approach to media studies that could better inform analyses of specific media channel, content, and information consumption. Katz (1959) assumed that individuals' values, interests, and associations or social roles were the factors determining one's selective uses of the media. In this uses and gratification tradition, audiences are active: they are not merely receiving messages provided by the media, but they are also actively searching for information to meet specific needs (Kaye & Johnson, 2002; Rubin, 1993).

The uses and gratifications approach to analyzing the mass media focuses research on the psychosocial influences shaping individuals' media consumption patterns: the “perceived satisfactions, needs, wishes, or motives of the prospective audience member” (McQuail, 2005, p. 423). The main objective of the uses of gratifications theory is to explain the psychological motives shaping media usage in a behavioral attempt to fulfill intrinsic needs (Rubin, 1984). According to Katz, Blumler, and Gurevitch (1974), the basic assumptions underlying this theory are that media users are goal-directed, active, and aware of their needs such that they purposefully select media channels and content to satisfy them. The concept of an active audience

has strengthened the basis for adopting a uses and gratifications analytical framework in research on Internet communications. Online communication is distinct from traditional media communications in two ways: first, because it requires greater user activity to access specific content from a relatively unlimited menu of options; and second, because each subsequent choice is highly contingent upon a series of earlier responses (Fredin & David, 1998). That is, even at its most basic level, accessing information on the Internet requires performing an active search and the user must “click” a series of hyperlinks using the attendant technology.

Since technological innovations and media fragmentation make it difficult for any one framework to explain audience formation across all channels, uses and gratifications scholars argue it may be premature to assess the impact of new media platforms prior a robust understanding of their usage. Perse and Dunn (1998), for instance, suggest that using the uses and gratifications approach is appropriate for explaining changes in media use patterns upon introduction of new technology that displaces old media platforms. In contemporary settings, then, the scope of uses and gratifications analyses of communications activities may also need to be narrowed from an “exaggerated emphasis on using mass media to meet social deficits, to the function it fulfills” (Blumler, 1985, p. 41). Additionally, such research may be best suited to analysis of specific channels of mediated communications, such as the Internet (Newhagen & Rafaeli, 1996). While most uses and gratifications research is centered on analyses of the motivations shaping overall media usage (Vincent & Basil, 1997), analyses of the needs driving consumption of specific content such as news (Levy,

1977) and politics (Blumler & McQuail, 1968) have been identified as distinctly appropriate within this tradition.

Typically, research in the uses and gratifications tradition has focused on “(1) the social and psychological origins of (2) needs which generate (3) expectations of (4) the mass media or other sources which lead to (5) differential exposure (or engaging in other activities), resulting in (6) need gratification and (7) other consequences” (Katz, Blumler, & Gurevitch, 1974, p. 510). Finn (1997), for instance, developed a five-factor model of personality traits (extroversion, neuroticism, openness to experience, agreeableness, and conscientiousness) which motivated engagement in various communications activities (p. 508). While the results from the regression analysis in this study indicated that examinations across all five personality trait dimensions and all media usage may yield less than robust results, this framework allowed for comparisons between patterns of engagement in both mediated and non-mediated or interpersonal communications activities. At present, however, uses and gratifications is animated by explorations into the motivations for consumption of specific media content on specific media channels in an attempt to narrow the scope of the analytic framework.

While past uses and gratifications research has been oriented toward explaining the use of media as an alternative to interpersonal communication, the widespread adoption of computer technology and growth in use of interactive Internet sites has blurred the distinction between computer-mediated and interpersonal communication. Further, the role of “interpersonal interaction as a complementary and competitive means of gratifying motivations... (and) interactive links between uses or motivations, gratifications or consequences, and media and content need to be explored” (Rubin,

1981, p. 159). By examining affective orientations toward mediated communications, then, we may also provide insight into relationships between people and media channels. Finally, the development and popularity of new media platforms such as social network sites have re-invigorated the uses and gratifications approach to media analysis as these Internet formats facilitate interactions not associated with traditional media usage (Ruggiero, 2000).

Online Information Formats Uses and Gratifications

The nature of the Internet allows its users to do more than passively consume news in a one-way flow of information. Large numbers of U.S. citizens are now using this media platform to become part of the online political participatory class. Not surprisingly, survey results reveal that the young are much more engaged in this process than older Internet users. “Online political users under the age of 30 are much more likely than other age groups to: get customized political or campaign news; post their own original content online; (and) take part in political activities on social networking sites” (Smith, 2009, p. 13). Overall, Smith concludes Internet users under the age of 30 were significantly more likely than their older cohorts to be “online political users; watch online political videos; engage politically on a social networking site; post original content related to the campaign; and customize political or election news” (p. 14).

The uses and gratifications approach to media studies holds that personal goals, at least in part, shape individual patterns of media usage. Viewed as active communicators, media consumers are aware of their motivations, evaluate available media content, and then choose a channel from a wide array of options to satisfy specific needs. Research in this tradition has shown that wide varieties of demographic,

attitudinal, and behavioral characteristics are associated with patterns of media usage (Johnstone, 1974; Rubin & Rubin, 1982; McLeod & Becker, 1981). These media usage patterns however, do not develop in a vacuum. Pre-existing knowledge of media channels, contents, or formats affects perceptions and thus cognitions and attitudes in a measurable manner.

Perceptions of a media channel's utility in satisfying specific needs is an important aspect of uses and gratifications research because previous experience with media channels may shape perceptions of how well they fulfill various needs (Becker & Schoenbach, 1989). Specifically, research has shown that continued use of specific media platforms over time to gratify specific needs may develop into expectations of the purpose of the information content (Perse & Courtright, 1993). In line with schema theory, these expectations may affect information processing because source knowledge influences how information is organized, categorized, and delimited. Based on the perceived purpose, motivation, and past use in terms of need gratification, the content, format, and preconceived purposes of different media channels may exert distinct effects (Axelrod, 1973; Graber, 1984). For the purposes of this study, the differential cognitive, attitudinal, and behavioral effects between those exposed to online news and social network sites is of particular concern. By limiting the focus of this investigation to two distinct online information formats, many of the criticisms of the uses and gratifications approach may be addressed.

One of the criticisms leveled at uses and gratifications research on all types of media consumption is the requirement that the audience actively evaluate all available media contents and formats prior to selecting a specific channel. Some scholars argue

that this requirement places too heavy a burden upon individuals who may simply select specific media channels based on force of habit, with little thought given to all the available alternatives (Donohew, Nair, & Finn, 1984). Since many rational behavior theorists also maintain that humans are cognitive misers that use shortcuts or heuristics in decision-making, the explanations for patterns of media consumption by uses and gratifications research may neglect to account for the strength of habitual media usage (Severin & Tankard, 2001). This criticism, however, does not apply to the present investigation for two reasons. First, experimental manipulation of media usage eliminates concerns over habitual behavior because participants are randomly assigned to treatment conditions. Second, this potential shortcoming actually becomes a strength when analyzing the media usage patterns of citizens between the ages of 18 and 29. In fact, scholars have long recognized the importance of studying the media habits of the young because it is during the young adult life stage that most individuals' habits in terms of media consumption, political information seeking, decision-making, and participatory behaviors are formed (Henke, 1985; Faber, Brown, & McLeod, 1979; Rubin, 1985). Further, by limiting the focus of this research to analysis of the effects of media exposure on young citizens during an election campaign, the results allow for comparison of gratifications expected in terms of the perceived purposes of two distinct online information formats, and gratifications received in terms of influence on political cognitions and attitudes.

Other criticisms of uses and gratifications research lie at its functional core: a lack of predictive power based on theoretical principles. Many scholars argue research using this analytic framework does not have the ability to do more than provide descriptions of

media use patterns among different groups of people, making it difficult to extrapolate research results beyond the sample (Baran & Davis, 2009). Similarly, some also claim that uses and gratifications research is purely descriptive, that it is limited to providing typologies of media usage among specific demographic or ideological groups (Swanson, 1977, 1979). As the analysis in this study is derived from an experimental investigation, however, this criticism is not as compelling as it would be had the analysis been based on survey results. By adopting a functional approach in an experimental setting, by exercising control over the participants' exposure to the stimuli in the research laboratory, and by using random principles for participant assignment to one of the six experimental conditions, most of these concerns are addressed. Finally, the larger purpose of experimental studies is theory testing, thus the applicability of research results to larger populations is a secondary concern (Shrout & Bolger, 2002).

Probably the most compelling criticism of uses and gratifications research is that its explanatory apparatus is frequently compartmentalized, individualistic, and lacks clarity and consistency in the use of central constructs such as motivations, gratifications, and needs (Elliott, 1974; Lometti, Reeves, and Bybee, 1977). Indeed, it becomes apparent upon a review of the literature that there is a great deal of variation in the operationalization of the motivations shaping media usage. The most common early classifications of motivations for media usage included surveillance, correlation, entertainment, and cultural transmission (Lasswell, 1948; Wright, 1960). Depending on the scope and purpose of the study, however, over time researchers have developed typologies that included diversion, personal relationships, personal identity, and surveillance (McQuail, Blumler, & Brown, 1972). More recently, communications

scholars in the uses and gratifications tradition have employed classifications of motivations for media usage that included surveillance, entertainment, escape, boredom, and vote guidance (Diddi & La Rose, 2006; Kaye & Johnson, 2003; Rubin, 1983; Vincent & Basil, 1997).

While these differences in classifications of media usage motivations may make meta-analyses more challenging, this study employs the uses and gratifications approach in three distinctly specific ways. First, the theory of political information efficacy is placed in the larger uses and gratifications tradition by testing its predictive power in terms of other political cognitions, attitudes, and media use patterns. Second, the distinct purposes of different online information formats create the theoretical dichotomy between online news and social network sites so that the cognitive and affective effects of these sources can be compared meaningfully. Third, the criticism that uses and gratifications research neglects to examine gratifications obtained by usage of specific media channels is circumvented by an experimental design that both functionally defines interactivity and the measures the effects of exposure to the stimuli. Fourth, this analysis is focused on how exposure to different Internet formats impacts cognitive, affective, and behavioral variables in the context of a political campaign. Therefore, concerns about accounting for various motivations for media usage beyond those that satisfy vote guidance needs are moot. Although few would dispute the purpose, function, and motivation for much media usage is entertainment, diversion, or emotional release, the more compelling question in this investigation is how exposure to different online information platforms impacts learning and attitudes in regard to participating in the political system.

Online News

Research using the uses and gratifications approach has a long tradition of examining the functions fulfilled by different news sources. Due to the physical variations among media channels, profound differences in content, and wide-ranging disparities in effects, there has been a great deal of research into the factors driving individuals' usage of print and television news sources (Althaus & Tewksbury, 2000; Becker & Dunwoody, 1982; Culbertson, Evarts, Richard, Karin, & Stempel, 1994; Holbert, 2005). While past research has shown that surveillance needs appear to be driving most news media use, print media usage has been more closely associated with vote guidance needs and television news has been linked more closely with entertainment and escape needs (Henke, 1985; O'Keefe & Spetnagel, 1973).

In a time of media convergence, however, the distinction between print and electronic news has become much less meaningful, especially considering the market penetration of computer technology and the Internet (Pew, 1998; 2006). Survey research specifically focused on the motivations driving college students' use of the news media has shown that this group reports much less urgent surveillance and vote guidance needs than other age groups (Pew, 2010a). Additionally, research has shown that the young are also much more likely to consult Internet sources than traditional media sources both overall and in relative to those in other age groups (Diddi & LaRose, 2006). Indeed, many college students today are digital natives; they are unable to recall a period in their lives when the Internet was not accessible – and soon many will not be able to remember when they could not access the Internet through a handheld device. These digital natives may not be particularly interested in reading an entire news story. The young today are characterized as news grazers, scanning

headlines and activating links to stories about which they find personally compelling, not necessarily those stories the news media place at the top of their agenda.

This changing media landscape in addition to the wide spread use of the Internet's interactive features have revitalized the uses and gratifications approach to news media studies. Functional similarities between the television and the Internet have led some researchers to conclude that they may satisfy similar needs (Kaye & Medoff, 2001). While online news websites present stories in a more traditional media format with a narrative directing a unidirectional flow of information, most also allow for some form of immediate feedback such as the posting of comments. Many online news sites may also be linked to social network and bookmarking sites. Thus, similarities in content notwithstanding, structural and technological differences between television and the Internet indicate that they may also satisfy distinctly different needs (Kaye & Johnson, 2003). In addition to satisfying surveillance and vote guidance needs in the form of online news sites, there are also innumerable Internet sites dedicated to satisfying needs that are more personal.

Social Network Sites

Social network sites have been defined as “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (Boyd & Ellison, 2008, p. 211). While the technology and terminology may differ across the various sites, social network sites generally require users to register and answer a series of demographic and interest questions so that the answers can be used to build one's profile. Typically, users are also prompted to identify other members with whom

they may share a connection or relationship so that a list of friends, fans, or contacts can be developed. These lists of online relationships are usually visible to others who have access to one's profile; thus, social network sites are unique because they allow users to articulate and make visible their social networks (p. 213). Most sites also allow "friends" to leave both public and private messages on each other's pages. Beyond building a profile, locating friends, posting comments and sending private messages, the capabilities of the various social network sites may vary in terms of permitting photograph/video sharing and instant messaging.

The history of social network sites extends back to the development and launch of *SixDegrees.com* in 1997. Considered ahead of its time, this site managed to attract millions of users, but the service shut down in 2000. A variety of other social network sites developed between 1997 and 2003, but most were geared toward niche users in terms of geographic location, common ethnicities, and a focus on building business or dating networks (Chafkin, 2007; Cohen, 2003). Although *Friendster* enjoyed a brief period of popularity in 2002 and 2003, technical difficulties with site maintenance and a perception that the company and users were at cross-purposes led to a mass exodus. This crossover occurred at about the same time that teenagers fueled the meteoric growth of *MySpace* in 2004. *Facebook*, initially launched to serve college networks beginning with Harvard in 2004, opened up its membership to the general public in 2005 and today about 40% of total Internet users log on to this site on a daily basis (Alexa.com, 2011). The video sharing social network site, *YouTube*, was also launched in 2005, and experienced greater growth than *MySpace* over the same period of time. Currently, *YouTube* draws about 26% of global Internet users to the site on a daily basis

(Alexa.com, 2011). At present, there are literally thousands of social network site, including Twitter, which launched in 2006 and draws about 10% of the daily Internet users (Alexa.com, 2011). Awash in a sea of social network sites, the two that stand out in terms of market penetration and potential for interactivity are *Facebook* and *YouTube*. Further, these two sites have consistently ranked among the most visited on the worldwide Internet worldwide for the past several years and are extraordinarily popular among our target population of college students (Alexa.com, 2011).

Analyses of young citizens' orientations toward online information sites reveal both a preference for social network sites and a perception that these sites are more interactive than other sites (Beer, 2008; Stromer-Galley, 2000; Sweetser, & Weaver-Lariscy, 2007; Trammel, Williams, Postelnicu, & Landreville, 2005). This preference for social network sites is based on the format's unique ability to fulfill social utility needs (Raacke & Bonds-Raacke, 2008). Social network sites allow the user to forage for interesting topics and investigate those perceived to be the most personally appealing; to watch videos; to activate links to other sites for different points of view and original sources. Further, the computer-mediated communication between and among users facilitated by social network sites allows for testing the influence of different types of interactions on the young citizens' political cognitions, attitudes, and behaviors.

Interactivity

The study of how people interact with online content extends back about a decade when scholars began systematically analyzing the mechanisms by which the Internet allowed for high-speed, non-hierarchical and horizontal communication; increased user input, feedback, or interactivity; and relative low-cost as a digital reception and production medium (Rheingold, 1995; Selnow, 1998). The nature of interactivity and its

use as a variable in empirical investigations, however, has led to considerable debate as to its definition and the manner in which it is operationalized (see Kioussis, 2002). Some scholars have argued that interactivity can be analyzed in all types of communication settings and that it is measured by the extent to which sender and receiver roles are reciprocal in a communication transaction (Pavlick, 1983). These scholars view interactivity as a process-related variable based on the contingency of messages relating to previous messages (Rafaeli, 1988; Rafaeli & Ariel, 2007). Others claim interactivity is a quality of mediated communication that can be measured on a continuum based on users' perceptions of the synchronicity of communication allowed by the medium (Newhagen, 1998). Still others claim that interactivity is an inherent characteristic of new media technology that requires inclusion in studies of Internet channels' effects (Hanssen, Jankowski, & Etienne, 1996; Williams, Rice, & Rogers, 1988).

Numerous scholars have defined interactivity, but three major approaches to this construct have developed over the past couple decades. First, some early studies adopted a perceptual view of interactivity and provided valuable information about the manner in which users evaluated their experiences with new media technologies and contents based on their perceptions of the transactions (Wu, 1999). Continuing to base research solely on participants' perceptions, however, creates difficulties in operationalizing experimental conditions based on differing levels of interactivity. Although the perceptual approach to analyzing the effects of interactivity may continue to produce valuable results among heterogeneous populations who perceive objectively similar stimuli in much different ways, this current investigation uses a more

homogenous and technologically sophisticated sample as well stimuli familiar to the participants.

Second, proponents of the contingency view of interactivity hold it is a process-related variable determined by the extent to which subsequent messages are contingent upon previous messages. These scholars argue that interactivity may be measured in all types of communication settings; that it is not a function of any specific technology (Rafaeli, 1988; Rafaeli & Ariel, 2007). Indeed, Rafaeli (1988) provided one of the earliest and most widely cited definitions of interactivity. He argued that interactivity was “an expression of the extent that, in a given series of communication exchanges, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to even earlier transmissions”(p. 11). Although defining interactivity as a process related variable has produced some very fruitful content analyses, the value of adopting a contingency view of this variable in an experimental investigation is much less informative relative to a more functional view of interactivity. Similar to the case when examining the perceptual view of interactivity, the classification of interactivity levels in an experiment using the contingency view would require post-hoc analysis to determine which interactivity level participants individually assigned themselves. Although this determination could be made based on the posttest questionnaire in a perceptual-based experiment, a content analysis would be required to determine the level of interactivity in a contingency-based experimental investigation.

Last, the functional view of interactivity was adopted by scholars who contended that interactivity was dependent upon the extent to which technology usage allows for two-way communication. These researchers argue interactivity is a medium-specific

variable which affects cognitive, attitudinal, and behavioral variables. Scholars taking the functional view question the value of determining the extent to which messages are contingent upon one another. They argue that the process-related approach to interactivity serves more as a basis for developing typologies; that it is not a theoretical proposition concerned with media effects (Bucy & Tao, 2007). Similarly, the perceptual view of interactivity has been credited with providing valuable information in the early phases of research into the effects of computer-mediated communications, but such a view does not allow for experimental manipulation. Thus, this study adopted a functional view of interactivity with three levels manipulated by the assignment of specific tasks to complete dependent upon the participant's randomly assigned interactivity level.

In her examination of interactivity in political candidates' websites in 1996 and 1998, Stromer-Galley (2000) made a distinction between computer-mediated human interaction and media interaction. In later work, Stromer-Galley (2004) clarified this distinction by developing a classification of "interactivity-as-process, which entails a research focus on human interaction" and "interactivity-as-product, which entails a research focus on interactions with technology" (p. 391). While this classification is in line with Bucy's (2004) definition of interactivity wherein he distinguishes between interpersonal interactivity and content interactivity, other scholars have used a finer gradient in their definitions of interactivity. Szuprowicz (1995), for example, identified user-to-user, user-to-documents, and user-to-computer activities as the distinguishing features of the three levels of interactivity. Similarly, Chung and Yoo (2009) delineated three levels of interactivity on a continuum: medium, human/medium, and human interactivity. Others have identified comparable and more fully explicated constructs

defining interactivity levels at a minimum of three levels (Barker & Tucker, 1990; Haeckel, 1998; Jensen, 1998). Kayany, Wotring, and Forrest (1996), for instance, suggested that within these three types of interactivity users exert three types of control: relational (or interpersonal), content (or document-based) and process/sequence (or interface-based) controls. Based on her synthesis of these frameworks for analyzing different types of interactivity, McMillan (2002) developed a typology of interactivity that allows for distinctions based on the use of a websites' features allowing for user-to-system, user-to-document, and user-to-user interactions.

McMillan describes user-to-system interactivity as the interface between people and the computer itself. She argues that the interaction between a single human and a single computer is the most elemental form of interactivity. Research on user-to-system interactivity focuses on the human's ability to issue commands to and interface with the computer directly; illumines the processes by which people develop relationships with computers when utilizing them in a variety of ways, including searching for information. User-to-document interactivity describes the interaction between people and the content of a website. Research on this mid-level form of interactivity focuses on the user's interactions with online content as well as the creation of content displayed on a webpage. Feedback on webpage content in the form of comments and relationships among users and the information they consume are explored at the user-to-document level of interactivity. User-to user interactivity is defined as the computer-mediated communication (CMC) between people over the Internet. Research in the CMC tradition describes the interaction among humans as the highest level of interactivity and assumes that the computer and its networks serve primarily as a conduit or channel for

communication flow back and forth among any number of participants over time. Relationships between CMC and interpersonal communication are explored at the user-to-user level of interactivity.

When applied to political campaigns' and news organizations' use of the Internet, researchers have described the evolution of these political information websites over time in terms of the level of interactivity facilitated by their communications platforms. For instance, activities such as activating hyperlinks to access information and then consuming that information are considered forms of user-to-system interactivity. Examples of activities falling under the user-to-document interactivity classification include commenting on stories in news websites and "liking" wall posts on candidates' *Facebook* pages. Last, forwarding news stories to others by email and re-posting candidates' wall posts on the participant's own *Facebook* page are considered types of user-to-user interactivity.

Analysis of political campaigns' use of the Internet in the 2002 and prior elections characterized candidates' websites as virtual billboards or online brochure-ware. These websites provided little more than one-way communication of candidates' biographical information and issue stances, information that was also available offline (Schneider and Foot, 2006). The success of the Howard Dean campaign's use of blogs in its website during the 2004 primaries, however, revolutionized candidates' use of the Internet. The Dean for America campaign was the first to utilize this medium's features that provided the potential for human interaction as well as links to external informational websites (Stromer-Galley & Baker, 2006). The Howard Dean campaign's successful use of its website for the mobilization of volunteers and solicitation of

donations has been documented in numerous scholarly works and set the standard for political candidate websites in the years to follow (Hindman, 2009; Jenkins, 2006). Indeed, the successful uses of the mobilization and donation functions on the 2008 presidential candidates' websites were surely modeled after the "Dean for America" site in 2004.

In a broader meta-analysis of 38 studies examining the relationship between Internet use and political engagement, Boulianne (2009) concluded that "there is little evidence to support the argument that Internet use is contributing to civic decline" (p. 205). Contrary to Putnam's (2000) contention that the Internet may have negative impacts on citizens' civic engagement, Boulianne urged future research to focus on political interest and the direction of causality in terms of Internet use and political engagement. In his investigation of the effects of web exposure and interactive features on the political information efficacy of young adults during the 2004 presidential election, Tedesco (2007) found "strong support that interactivity significantly increases young adults' perceptions that their opinion is important to our political process and that their voice is meaningful" (p. 1190). In the context of a presidential election, Tedesco's (2007) results also support the prediction that interactive features on political information websites positively impact young adults' level of confidence in casting an informed vote, or political information efficacy, thus increasing their likelihood of participating in the political process. Further, when applied to political campaigns' use of the Internet, researchers have also found that the more interactive the website, the more favorable the impression made by the sponsoring candidate (Sundar, Kalyanaraman, & Brown, 2003).

Expression Effects

Results supporting the contention there is a positive association between interactivity and effects resulting from exposure to political information on the Internet suggest that the inclusion of expression effects in analytical models may better inform analyses of computer-mediated communications . Studies testing a bidirectional model of communication effects may also advance the academy's progression toward addressing the more interactive, de-massified, and asynchronous media environment in which we presently find ourselves (Ruggiero, 2000). Moreover, many scholars argue that replicable experimental investigations comparing the relative effects resulting from exposure to various online stimuli under conditions with differing levels of interactivity are the best method for testing these effects (Cho, et al., 2009; Kim, 2006). Efforts to explicate the theoretical mechanisms underlying these effects, however, have only recently begun to be fully developed.

Scholars at least since Socrates have recognized that dialogic teaching methods compelling students to verbalize their reasoning processes are more effective than lectures involving solely a one-way flow of information. Thus, educators have long believed that greater cognitive effects result from more interactive instructional techniques. More recently, one of the earliest findings among media scholars was that interpersonal communication had a much greater impact on cognitions and attitudes than did exposure to mediated information from traditional media with a linear flow of information (Lazarsfeld, Berelson, & Gaudet, 1948; Katz & Lazarsfeld, 1955; Klapper, 1960). With the development of digital media platforms, however, comparing the results of exposure to different online information platforms may not capture the effects of interactivity in the transaction. Since online media facilitate two-way communication and

user content creation, researchers must control the manner in which participants interact with online information or they run the risk of deriving confounded results and spurious conclusions.

Pingree (2007) argues that the expectation of future expression may be manipulated as an independent variable with participants randomly assigned to either control or experimental exposure conditions. He predicts that those who expect to express themselves during the exposure will pay closer attention to and process messages more elaborately than will those who do not expect they will have to express themselves. Similar to the theory underlying the elaboration likelihood model, the cognitive and affective effects of information would be greater among those who expect to express themselves than among those who do not have such an expectation. Pingree's model predicts that: "the expectation of future expression can improve attention to, cognitive processing of, and memory for received messages" independent of the nature of the expected expression (p. 446).

In addition to the expectation of future expression effects, Pingree's bidirectional model also includes composition effects and release effects. According to self-perception theory, composition (or encoding) effects occur regardless whether a message is actually expressed because the simple act of composing the message may lead one to make inferences about his or her attitudes, traits, or feelings. Message release effects, on the other hand, may occur independently of composition effects dependent upon the type of message sent. For example, relatively anonymous comments posted on a webpage in the user-to-document condition may not involve be perceived as making a personal commitment and the re-posting of previously composed

material on a webpage would require no original composition. Thus, while the release of the message may have consequences, the nature of the message may affect the extent to which one's sense of social commitment, ego-involvement, or feeling heard is engaged.

Similar to Pingree's bidirectional communication model, political communication scholars have also proposed a theoretical framework for analyzing the effects of citizens' communication processes on relationships between elite-driven campaign communications and political outcomes (Huckfeldt, Sprague, & Levine, 2000; Just et al., 1996; Page, 1996; Pan, Shen, Paek, & Sun, 2006). By re-conceptualizing citizens as active processors of information, this line of research suggests that communication among citizens may significantly mediate the effects of news consumption on political participation, particularly when the communication occurs over the Internet (Shah, Cho, Eveland, & Kwak, 2005). These researchers theorize that computer-mediated communications may encourage greater elaboration during interactions with political information platforms on the Internet and mediate cognitive and behavioral effects.

The O-S-O-R model is the theoretical basis supporting scholars' contentions that computer-mediated communications may mediate the effects of information exposure on resulting behaviors. Borrowed from social psychologists Markus and Zajonc (1985), the first O in this model stands for Organismic (or pre-Orientations) and represents an individual's core values and personal attributes that affect information processing during exposure to a stimulus, the S in the model. The second O stands for post-Orientations, or the beliefs and attitudes formed after exposure to the stimulus. These post-Orientations influence the resulting behavioral responses, the R in the model. Recently,

many political communication scholars have amended various elements of this model to better specify the manner in which intervening variables may influence post-exposure orientations and thus, the resulting beliefs, attitudes, and behaviors. Researchers have suggested, for example, that the direct effects approach to the analysis of political campaign communications may be too simplistic. Such an approach, it is argued, neglects to account for the manner in which these communications may stimulate citizens' information seeking and expressive behavior, influencing their responses to the information (Cho, et al, 2009).

When investigating the effects of exposure to political information over the Internet, a functional approach to interactivity allows experimental researchers to measure the main effects of this variable. That is, the quantity and quality of participants' interactions with the communications technology, the content displayed, and communication with other individuals, may be controlled during exposure to the stimulus by randomly assigning participants to specific experimental conditions. By manipulating interactivity as an independent variable, this approach eliminates the need to analyze these behaviors in terms of their mediating. Thus using a functional approach allows for examination of main effects based on the O-S-O-R communication mediation model since both frameworks hold that increasing interactivity through expression should magnify cognitive and attitudinal exposure effects.

Hypotheses and Research Questions

Information costs are clearly greater in midterm elections than in presidential races, but the benefits, in terms of affirming one's efficacy in the political process, are cited by rational behavior scholars as an incentive for participating in the political process. Additionally, investigating young citizens' use of features lessening the costs of

gathering information on new media platforms such as the Internet are worthy endeavors in and of themselves. But first, this research attempts to strengthen the theory of political information efficacy by empirically testing its power to predict relationships among other cognitive and affective political variables as well as media usage patterns.

Considered broadly, the concept of efficacy, or belief in one's abilities to accomplish a task, has been conceptualized as one of the self-esteem needs in Maslow's hierarchy (Bandura, 1977; 1982). In regard to political attitudes and behaviors, efficacy has also been linked to the need for personal control over one's environment when political events are salient in his or her life (Renshon, 1974). Thus, levels of political information efficacy may be treated as a personality characteristic that is predictive of other cognitive, affective, and behavioral traits. Formally stated, these predictions are:

- **H1:** Those with high levels of political information efficacy will express more interest in politics than will those with low levels of political information efficacy.
- **H2:** Those with high levels of political information efficacy will have higher levels of political knowledge than will those with low levels of political information efficacy.
- **H3:** Those with high levels of political information efficacy will report stronger political party affiliations than will those with low levels of political information efficacy.
- **H4:** Those with high levels of political information will report more civic participation than will those with low levels of political information efficacy.

When placing the theory of political information efficacy in the broader uses and gratifications tradition, its predictive power in terms of media usage may also be measured. Intuitively, one would expect those high in political information efficacy to use media for vote guidance information in a more goal-directed manner than those with

low levels of political information efficacy. Specifically, this need for efficacy should motivate media usage such that political information efficacy levels predict both overall and specific Internet usage in terms of fulfilling the vote guidance function. This postulation leads to the last prediction associated with political information efficacy as well as a research question.

- **H5:** Those with high levels of political information efficacy will report using all media sources for vote guidance more often than will those with low information efficacy.
- **RQ1:** How well does political information efficacy predict usage of traditional media and Internet sources to fulfill vote guidance needs?

By adopting a functional approach to the manipulation of interactivity, this research is also in line with the uses and gratifications analytical framework. Although traditional uses and gratifications research has probed for relationships between individual characteristics and the amount of time spent with different media channels and content, communications over interactive, digital media platforms require more specific examinations of what people actually do with the media. Not only is the amount of time spent with the medium important, but an individual's information seeking and expressive behaviors during that time may also affect resulting responses to the exposure. While both uses and gratifications and the O-S-O-R model allow scholars to predict that increasing levels of interactivity will result in increasing cognitive and affective effects, they also allow for the examination of the main effects of the online format on cognitions and attitudes. Therefore, the following hypotheses are posed based on a pertinent review of the literature.

- **H6:** The main effect of format will result in those exposed to news websites reporting greater issue learning than those exposed to candidates' social network sites.

- **H7:** There will be a positive association between interactivity level and amount of issue learning.
- **H8:** The interaction between format and interactivity will result in those exposed to news websites in the user-to-user condition reporting the greatest issue learning.
- **H9:** The main effect of format will result in those exposed to social network sites reporting greater image learning than those exposed to news websites.
- **H10:** There will be a positive association between interactivity level and amount of image learning.
- **H11:** The interaction between format and interactivity will result in those exposed social network sites in the user-to-user condition reporting the greatest image learning.
- **H12:** The main effect of format will result in those exposed to news websites reporting greater gains in political information efficacy than those exposed to social network sites.
- **H13:** There will be a positive association between interactivity level and gains in political information efficacy.
- **H14:** The interaction between format and interactivity will result in those exposed to news websites in the user-to-user condition reporting the greatest gains in political information efficacy.

The experimental design in this investigation allows for comparison of the relative cognitive and affective effects of exposure to online news and social network sites under three distinct interactive conditions in the context of the 2010 gubernatorial campaign in Florida. One of the benefits of placing this investigation in the context of this election was to allow for exploration of “real world” uses of Internet information sources to satisfy vote guidance needs. In an attempt to gauge the manner in which exposure to these stimuli may affect voting behavior, participants’ evaluations of the candidate evaluations and perceptions of the saliency of the upcoming election may also be measured across both online information formats as well as interactivity levels. At present, there is no prior research comparing the relative effects of exposure to these

sources on affect toward candidates or perceptions of the election's importance to make predictions, thus research questions are more appropriate. When looking beyond the campaign to those who actually participate in midterm elections, some data is available that may better inform analyses of the electoral outcome.

Results from political behavior research suggest that those who participate in midterm elections typically form a subset of presidential election voters and they are distinctly different from those who do not vote or participate in politics (Wolfinger, Rosenstone, & McIntosh, 1981). When focusing specifically on electoral contexts similar to 2010, researchers have also found that midterm elections held two years after the election of a Democratic president are frequently more conservative than those who do not participate in the process (Kernel, 1977; Abramowitz & Saunders, 1998). Thus, examining not only the effects of exposure to the stimuli, but also the effects of political party affiliation on affect toward candidates and perceptions of the importance of the upcoming election may provide some valuable information. Further, early research on the effects of exposure to mediated information on voting intentions are a guide suggest that the results of such an investigation into individual characteristics such as political party identification may also better explain the electoral outcome (Campbell, Converse, Miller, & Stokes, 1960). Therefore, in addition to testing for main and interaction effects among online format and interactivity levels, this investigation also attempts to gauge the effects of individual characteristics such as political party affiliation and candidate preference on affect toward the election itself by asking four more research questions.

- RQ2: How do online format and interactivity level affect candidate evaluations?
- RQ3: How does political party affiliation affect candidate evaluations?

- RQ4: How do online format and interactivity level affect the saliency of the election?
- RQ5: How do political party affiliation and candidate preference affect the saliency of the election?

CHAPTER 3 METHOD

Participants and Procedure

Between October 11-14, 2010, the hypotheses were tested and the research questions were answered using a between-participants pretest-posttest two (news websites and social media sites) by three (user-to-system; user-to-document; and user-to-user interactivity level) experimental design. These four days were selected for experimentation as they fell in the last weeks of the 2010 midterm campaign during the hot phase of Florida's 2010 gubernatorial election, when media coverage and strategic campaign communications efforts began to peak. Two hundred and ninety one participants were recruited from undergraduate mass communications courses fulfilling general education requirements at a large southeastern research institution. The participants were offered extra-credit for participation; were randomly assigned to one of the six conditions; and completed the project in the research laboratory.

All participants completed an online pretest questionnaire that included measures of political information efficacy, political knowledge, political interest, strength of political party affiliation, civic participation; media usage; and demographic and candidate evaluation items. Upon completion of the pretest, participants were directed to one of the six conditions, exposed to the stimulus, and instructed to engage in activities appropriate for the level of interactivity to which they were assigned. After completing the tasks in the assigned condition, participants were directed to the online posttest questionnaire that included items reassessing political information efficacy and candidate evaluations, measuring issue and candidate image learning, and perceptions of the saliency of the upcoming election.

All participants were instructed that they were required to remain in the research laboratory for a minimum of 60 minutes and a maximum of 75 minutes, regardless of how long they required to complete the project. Participants were also instructed that should they fail to follow all experimental directions carefully, the *MediaLab* software would automatically delete their responses and they would not receive extra-credit for participation. Two monitors remained in the back of the research laboratory at all times to supervise participants and to answer any questions about the directions. Following completion of the project, participants were debriefed and dismissed.

Stimuli

News Websites

Four types of news websites were selected for presentation to participants: an Internet service provider's news aggregator, a newspaper, a television station, and an online-only nonpartisan news source. After a search for objective and even-handed stories on each of these site types was conducted, a *Yahoo News* story; a *St. Petersburg Times* story; a story from the NBC affiliate in Miami; and a *Grist* story were selected (see Appendix A). Participants were instructed to spend a minimum of 10 minutes interacting with each news source by completing tasks appropriate for their randomly assigned condition or level of interactivity. The order of the online news stimuli presented to participants was randomized by *Qualtrics* software.

Social Networking Sites

Each major party candidate's *Facebook* page and each campaign's *YouTube* channel home page were selected for presentation to participants (see Appendix A). Participants were instructed to spend a minimum of 10 minutes interacting with each source by completing tasks appropriate for their randomly assigned level of interactivity.

The order of social network site stimuli presented to participants was randomized by *Qualtrics* software.

Variables

Levels of Interactivity

Theoretical analyses have categorized Internet communications activities into one of the three levels of interactivity: user-to-system, user-to-document, and user-to-user. In order to assure the functional validity of these determinations, this investigation also conducted a survey administered to a sample of 100 college student cohorts to determine which activities are classified as falling into each of the three interactivity levels. Based on the results of this pretest survey, participants in each experimental condition were instructed to engage in activities identified as meeting the criteria for each level of interactivity both theoretically and functionally. These results of this pre-experiment survey and assignment of activities appropriate to each interactivity level are provided in Appendix B.

Participants in the all of the interactivity conditions were instructed to spend a minimum of 10 minutes interacting with each of the four randomly assigned and ordered websites. Each of these websites provided information about the two major party candidates in the 2010 Florida gubernatorial contest. In order to keep track of the time spent on each website, participants noted the time they entered each site and the time exited each site (from the numerical display on the bottom-right-hand corner of the computer screen) on the document provided and located beside each computer keyboard.

Political Information Efficacy

Participants' level of political information efficacy was measured in both the pretest and posttest questionnaires. As in previous studies (i.e., Kaid, et al, 2007; Tedesco, 2007), four items from the American National Election Study (ANES, 2009) survey were used to construct the political information efficacy index. The items included: (a) I consider myself well qualified to participate in politics, (b) I think I am better informed about politics and government than most people, (c) I feel that I have a pretty good understanding of the important political issues facing our country today, and (d) If a friend asked me about Florida's 2010 midterm elections, I feel I would have enough information to help my friend figure out who to vote for. Participants rated their level of agreement with each statement on a five-point Likert scale. This scale received a Cronbach's Alpha score of 0.86 in the pretest and 0.87 in the posttest.

Political Interest

Participants' level of political interest was measured in the pretest questionnaire. Items used to measure political interest included: (a) If I had more free time, getting involved in some political activity would be high on my list; (b) I would rather do something that is detached from politics than something that requires me to engage in politics (reverse score); (c) The idea of participating in some political activity appeals to me; (d) I want to know the details about current political events. Participants were asked to rate their level of agreement each items on a five-point Likert scale (Shani, 2010). This scale received a Cronbach's Alpha score of .81.

Political Knowledge

Participants' level of political knowledge was measured in the pretest questionnaire administered using eight questions. The first five questions were drawn

from the American National Election Studies (ANES, 2009) questionnaire and Delli Carpini and Keeter (1993): (a) Do you happen to know what job or political office is now held by Joe Biden? (b) What are the first ten amendments to the U.S. Constitution called? (c) How much of a majority is required for the U.S. Senate and House to override a presidential veto? (d) Which one of the parties is more conservative than the other at the national level? (e) Whose responsibility is it to nominate judges to the Federal Courts? Since college students would be expected to score higher on these questions than the general public, however, three more items were added to this scale: (a) Do you happen to know who is Majority Leader in the U.S. Senate? (b) With which party is Alex Sink affiliated? (c) With which party is Rick Scott affiliated?

Political Party Affiliation

In the pretest, participants were asked to identify their political party affiliation as: (a) Strong Republican; (b) Weak Republican; (c) Independent who leans Republican; (d) Strong Independent; (e) Independent who leans Democratic; (f) Weak Democrat; (g) Strong Democrat; or (h) Other (Converse & Pierce, 1985).

Civic Participation

Eighteen items asking participants whether they had ever engaged in specific activities were used to measure participants' civic participation in the pretest questionnaire. These items included questions about the participants' status in regard to: voter registration; frequency of voting in past elections; intentions to vote in the upcoming midterm election; past and prospective campaign volunteer work; donations of money or time to organizations with political goals; membership in political and social groups or nongovernment organizations; attendance at political functions or meetings; political campaign rally attendance; and participation in organized boycotts or protests.

Political Information Sources

Participants' use of all mediated political information sources to fulfill vote guidance needs were measured in the pretest questionnaire. Participants were asked to indicate how frequently they use 16 media sources to gather information about political candidates: local TV news, national TV news, TV talk shows, morning TV news shows, and satirical news shows; how frequently they read the newspaper and news magazines, listened to radio news or political radio talk shows, discussed politics with others, and consulted news websites, blogs, *Twitter*, *Facebook*, *YouTube*, and other online sources.

Candidate Evaluation

Participants completed candidate evaluation items in both the pretest and posttest questionnaires. These items included a feeling thermometer ranging from 0 to 100 points to measure participants' evaluations of Rick Scott (R) and Alex Sink (D). Participants will be asked to indicate how unfavorable-cold/favorable-warm they felt toward the candidates. This thermometer is similar to the one traditionally used by the National Election Studies to measure attitudes toward the candidates (Rosenstone, Kinder, & Miller, 1997).

Saliency of Election

Participants were asked to state how salient they perceived the 2010 Florida governor election using six items previously shown to be valid measures of involvement (Zaichowsky, 1985). The items included: the upcoming election has prominent value in society; the upcoming election has significant value in society; the upcoming election has important value in society; the upcoming election is well known in society; the

upcoming election has fundamental value in society; and I am concerned about the upcoming election. This scale received a Cronbach's Alpha score of 0.81.

Learning

Participants' self-reported amount of learning about the (a) candidates and (b) issues at stake in Florida's 2010 gubernatorial election were measured using a five-point Likert scale in the posttest questionnaire.

CHAPTER 4 RESULTS

Demographics and Manipulation Check

Before proceeding to the data analysis testing the hypotheses and answering the research questions, some descriptions of the participant sample and a check on the manipulation of interactivity are in order. Two hundred and ninety-one undergraduate students participated in this experiment, but thirteen entries were deleted due to missing data, so 278 responses were analyzed. Sixty-six percent of participants were female and all were between the ages of 18 and 29. Sixty percent of participants were non-Hispanic Whites; 17% were Hispanic; 9% were African-American; 6% were Asian-American; 3% were multi-racial; and 5% identified their ethnicity as “other.” These demographic characteristics, albeit marginally higher for females, are very similar to those reported by the UF Student Health Center in their 2010 *Healthy Gators* survey report when removing graduate and professional students from that sample.

In terms of participants' political party affiliations, 30% identified as Republican; 33% as Independent; and 37% as Democratic. Both the ethnic characteristics and political party affiliations of the participants in this investigation and those reported by the Pew Research Center (2010a) in their analysis of the millennial generation are also nearly identical. While some of these demographic characteristics were shown to affect the dependent variables in the analyses to follow, however, there were no significant differences among experimental conditions in the distribution of gender, $\chi^2(2, 278) = 1.0, P > .05$; ethnicity, $\chi^2(12, 278) = .356, p > .05$; or political party affiliation, $\chi^2(4, 278) = .692, p > .05$. Thus, the principles of random assignment should account for any influence exerted by demographic variables across the six conditions.

The manipulation of interactivity was measured in terms of self-reports of the number of activities performed by participants assigned to each condition. The differences between the three conditions were significant: user-to-system ($M = 37.41$, $SD = 3.21$); user-to-document ($M = 38.26$, $SD = 2.36$); and user-to-user ($M = 40.95$, $SD = 3.55$), $F = 23.526$, $df = 2$, $p < .01$. Thus, the manipulation of the three levels of interactivity level was satisfactory.

Predictive Power of Political Information Efficacy

The first hypothesis predicted that those with high levels of political information efficacy would express more interest in politics than would those with low levels of political information efficacy. The results of a bivariate correlation analysis revealed there was a moderately strong, positive, and significant association between levels of political information efficacy from the pretest questionnaire ($M = 12.14$, $SD = 3.46$) and political interest ($M = 12.21$, $SD = 3.32$), $r(276) = .453$, $p < .01$. Based on this result, further investigation was conducted by creating a dichotomous variable for political information efficacy using a median-split technique: 123 participants with scores between 4 and 11 were designated as having low, and 155 participants with scores between 12 and 20 were designated as having high levels of political information efficacy. This median-split technique was also used to test predictions regarding differences between those with high and low levels of political information efficacy in hypotheses two through five. As shown in the first row of Table 4-1, the results of an analysis of variance revealed that those with high levels of political information efficacy expressed significantly more interest in politics ($M = 13.10$, $SD = 3.14$) than did those with low levels of political information efficacy ($M = 11.18$, $SD = 3.20$), $F(1, 276) = 27.94$, $p < .01$. Thus, hypothesis one was strongly supported.

The second hypothesis asserted that those with high levels of political information efficacy would have higher levels of political knowledge than would those with low levels of political information efficacy. The correlation between political information efficacy and political knowledge ($M = 5.87$, $SD = 1.39$) was moderate, positive, and significant, $r(276) = .30$, $p < .01$. Additionally, as shown in row two of Table 4-1, the results of an analysis of variance revealed that the difference in political knowledge between those expressing high levels of political information efficacy ($M = 6.10$, $SD = 1.39$) and those expressing low levels of political information efficacy ($M = 5.56$, $SD = 1.33$) was significant, $F(276) = 10.67$, $p < .01$. These results provided strong support for hypothesis two.

The third hypothesis stated that those with high levels of political information efficacy would report closer political party affiliations than would those with low levels of political information efficacy. To test this prediction, the political party affiliation variable was re-coded to create a strong partisanship variable. Those who identified as strong Democrats, strong Republicans, or strongly Independent were coded “3”; those who identified themselves as weakly affiliated with the Democratic or Republican parties were coded “2”; and those who identified themselves as Independent leaners toward either party were coded as “1”. The correlation between political information efficacy and partisanship strength was moderate, positive, and significant, $r(276) = .263$, $p < .01$. Further, as shown in the third row of Table 4-1, the results of an analysis of variance revealed that those with high levels of political information efficacy identified their political party affiliation ($M = 2.05$, $SD = .82$) significantly more strongly than did those

with low levels of political information efficacy ($M = 1.85$, $SD = .68$), $F(1,276) = 4.24$, $p < .05$. Thus, hypothesis three was strongly supported.

The fourth hypothesis predicted that those with high levels of political information efficacy would report more civic participation than would those with low levels of political information efficacy. The correlation between political information efficacy and civic participation was moderately strong, positive, and significant, $r(276) = .480$, $p < .01$. Further, as shown in the fourth row of Table 4-1, the results of an analysis of variance revealed that those with high levels of political information efficacy reported significantly more civic participation ($M = 17.35$, $SD = 1.70$) than did those with low levels of political information efficacy ($M = 15.30$, $SD = 1.65$), $F(1, 276) = 51.74$, $p < .01$. These results provided strong support for hypothesis four.

The fifth hypothesis predicted that those with high levels of political information efficacy would report using the media for vote guidance more often than would those with low levels of political information efficacy. The correlation between political information efficacy and media usage for vote guidance was moderately strong, positive, and significant, $r(276) = .314$, $p < .01$. Further, the results of an analysis of variance revealed that those with high levels of political information efficacy ($M = 46.59$, $SD = 11.74$) reported using all media sources to gather political information significantly more often than did those with low levels of political information efficacy ($M = 40.35$, $SD = 11.13$), $F(1, 276) = 20.56$, $p < .01$. Thus, hypothesis five was strongly supported.

To identify more specifically which media platforms were used, the first research question asked how well political information efficacy levels predicted use of traditional media and Internet sources to satisfy vote guidance needs. To answer this question,

two dependent variables were created. The traditional media variable was calculated by summing responses to items asking how often: (1) local television news; (2) national broadcast news; (3) cable news; and (4) newspapers were consulted for vote guidance. The Internet sources variable was created by summing responses to items asking how often: (1) news websites (2) social network sites; (3) campaign websites and (4) other online sources were consulted for vote guidance.

Using traditional media usage as a dependent variable, a multiple regression model was constructed with traditional media usage as the dependent variable. Political interest, knowledge, participation, information efficacy; partisan strength; and two demographic variables were entered as independent variables. The demographic variables accounted for ethnicity and gender differences through the creation of a dichotomous dummy variable for “Caucasian” (with non-Hispanic Whites coded “1” and all others coded “0”) and “Female” (with females coded “1” and males coded “0”). As shown in Table 4-2, the results of the regression analysis revealed that the model, albeit significant, did not account for much of the variance in the usage of traditional media sources, $R^2_{adj} = .07$, $F(7, 268) = 3.94$, $p < .01$. Further, political information efficacy was not a significant predictor of traditional media use for vote guidance, $\beta = .10$, $t(268) = 1.4$, $p > .05$.

Alternately, a regression model was constructed using Internet sources as the dependent variable with the same independent variables used in the previous analysis. As displayed in Table 4-3, the results of the regression analysis showed that this model, although not particularly strong, still accounted for more of the variance than did the traditional media model, $R^2_{adj} = .21$, $F(7, 268) = 9.35$, $p < .01$. Further, not only was

political information efficacy a significant, albeit moderate, predictor of Internet use, but it also had the largest marginal impact of all the independent variables in the model in terms of the frequency that Internet sources were consulted for vote guidance, $\beta = .24$, $t(268) = 3.70$, $p < .01$. Thus, political information efficacy predicts Internet use moderately well, but it is not a good predictor of traditional media use to satisfy vote guidance needs.

Online Format and Interactivity Effects

The sixth hypothesis predicted that those exposed to news websites would report greater issue learning than would those exposed to social network sites. The results of this analysis are displayed in the first three rows of Table 4-3. First, an overall issue learning variable was created by summing scores to questions asking how much participants learned about the issues important to Rick Scott and Alex Sink. The results of an analysis of variance showed that those exposed to news websites ($M = 8.30$, $SD = 1.49$) reported that they learned significantly more about the issues important to both of the candidates than did those exposed to social network sites ($M = 7.22$, $SD = 1.91$), $F(1, 276) = 27.10$, $p < .01$. Second, the amount of issue learning by each candidate and online format was examined individually. The results of an analysis of variance showed that those exposed to news websites ($M = 4.07$, $SD = .88$) reported learning significantly more about the issues important to Rick Scott than did those exposed to social network sites ($M = 3.62$, $SD = 1.05$), $F(1, 276) = 15.18$, $p < .01$. Similarly, those exposed to news websites ($M = 4.23$, $SD = .78$) reported learning significantly more about the issues important to Alex Sink than did those exposed to

social network sites ($M = 3.60$, $SD = 1.17$), $F(1, 276) = 28.91$, $p < .01$. These results provided strong support for hypothesis six.

The seventh hypothesis asserted that there would be a positive relationship between interactivity level and issue learning. The results of this analysis are displayed in the first three rows of Table 4-4. When looking at total issue learning, the results of an analysis of variance revealed that the differences among those in the user-to-user ($M = 8.05$, $SD = 1.65$), user-to-document ($M = 7.83$, $SD = 1.86$), and user-to-system ($M = 7.34$, $SD = 1.93$) interactivity levels were significant, $F(2, 276) = 3.83$, $p < .05$. The differences among interactivity levels in learning about the issues important to Rick Scott, however, not significant, $F(2, 276) = .71$, $p > .05$. In regard to learning about the issues important to Alex Sink, on the other hand, the differences among those in the user-to-user ($M = 4.14$, $SD = .87$); user-to-document ($M = 3.96$, $SD = 1.09$); and user-to-system ($M = 3.61$, $SD = 1.11$) conditions were both significant and in the predicted direction, $F(2, 276) = 6.82$, $p < .01$. These results provided moderately strong support for hypothesis seven.

The eighth hypothesis declared that those exposed to news websites in the user-to-user condition would report the greatest issue learning. The results of an analysis of variance, however, revealed that the interaction between format and interactivity level on total issue learning was not significant, $F(2, 276) = 1.56$, $p > .05$. Similar to the results from the previous hypothesis, when looking at each candidate, however, a mixed picture emerged. The interaction between format and interactivity on learning about the issues important to Rick Scott was not significant, $F(2, 276) = .91$, $p > .05$. In regard to learning about the issues important to Alex Sink, on the other hand, the results of an

analysis of variance revealed that the interaction between format and interactivity was significant, $F(2, 276) = 4.23, p < .05$. As shown in Figure 4-1, however, closer inspection revealed that the differences in learning about the issues important to Alex Sink were only significant among those exposed to social network sites, $F(2, 276) = 8.24, p < .01$. Therefore, these results failed to provide support for hypothesis eight because the interaction effect occurred among those exposed to social network sites, not online news, in the user-to-user condition.

The ninth hypothesis stated that those exposed to social network sites would report greater image learning than would those exposed to news websites. The results of this analysis are displayed in the last three rows of Table 4-3. When examining total image learning, the results of an analysis of variance showed that those exposed to social network sites ($M = 7.63, SD = 1.87$) reported learning marginally more about the candidate's personal qualities than did those exposed to news websites ($M = 7.34, SD = 1.86$), but that this difference was not significant, $F(1, 276) = 1.79, p > .05$. When looking at each candidate, however, a familiar pattern emerged. In regards to Rick Scott, the difference in image learning between those exposed to social network sites ($M = 3.69, SD = 1.10$) and those exposed to news websites ($M = 3.36, SD = .99$) was not significant, $F(1, 276) = .165, p > .05$. The difference in learning about Alex Sink's image qualities, on the other hand, between those exposed to social network sites ($M = 3.94, SD = 1.03$) and those exposed to news websites ($M = 3.71, SD = 1.0$) was significant, $F(1, 276) = 3.97, p \leq .05$. These results provided partial support for hypothesis nine.

The tenth hypothesis predicted that there would be a positive relationship between interactivity level and amount of candidate image learning. As shown in rows four through six of Table 4-4, however, the results of an analysis of variance test revealed that the differences in learning about the image qualities of both candidates were not significant, $F(2, 276) = 1.53, p > .05$. When examining learning about the image characteristics of each candidate individually, the differences between those in the social network sites and online news conditions in learning about the image qualities of Rick Scott, $F(2, 276) = 2.63, p > .05$, and Alex Sink, $F(2, 276) = 2.0, p > .05$, were also not significant. Thus, hypothesis ten was not supported.

The eleventh hypothesis declared that those exposed to social network sites in the user-to-user condition would report the greatest image learning. The results of an analysis of variance showed that the differences in total image learning, $F(2, 276) = .55, p > .05$, and Rick Scott's image learning, $F(2, 276) = .30, p > .05$, however, were not significant. As shown in Figure 4-3, on the other hand, when examining the amount of learning about the image qualities of Alex Sink, there was a significant interaction effect in the predicted direction, $F(2, 276) = 3.39, p < .05$. Thus, these results provided partial support for hypothesis eleven.

The twelfth hypothesis asserted that those exposed to news websites would report greater gains in political information efficacy than would those exposed to social network sites. First, as shown in Table 4-5, the results of a paired-samples t-test revealed that the differences between pretest political information efficacy ($M = 12.14, SD = 3.46$) and posttest political information efficacy scores ($M = 13.36, SD = 3.23$) were significant across all conditions, $t(277) = -9.36, p < .01$. Second, a PIE change

variable was created by subtracting pretest political information efficacy scores from posttest scores. Third, an analysis of variance was conducted comparing the mean PIE change values between the two conditions, but the results revealed that the difference between those exposed to news websites ($M = 1.10$, $SD = 2.37$) and those exposed to social network sites ($M = 1.33$, $SD = 1.99$) was not significant. Thus, hypothesis twelve was not supported.

The thirteenth hypothesis stated that there would be a positive relationship between level of interactivity and gains in political information efficacy. The results of an analysis of variance, however, revealed that differences between those in the user-to-user ($M = 1.48$, $SD = 2.04$); user-to-document ($M = 1.13$, $SD = 2.57$); and user-to-system ($M = 1.07$, $SD = 1.82$) were not significant, $F(2, 276) = .964$, $p > .05$. Thus, hypothesis thirteen was not supported.

The fourteenth hypothesis predicted that those exposed to news web sites in the user-to-user condition would report the greatest gains in political information efficacy. Graphically displayed in Figure 4-3, the results of an analysis of variance test revealed that there was a significant interaction between format and interactivity on political information efficacy gains, $F(2, 276) = 3.79$, $p < .05$. Specifically among participants exposed to news websites, this analysis revealed that the differences in political information efficacy among those in the user-to-user ($M = .93$, $SD = 2.00$); user-to-document ($M = 1.48$, $SD = 3.11$); and user-to-system ($M = .91$, $SD = 1.81$) conditions were not significant. Among participants exposed to social network sites, on the other hand, the differences in political information efficacy gains among those in the user-to-user ($M = 2.05$, $SD = 1.94$); user-to-document ($M = 1.22$, $SD = 1.84$); and user-to-

system ($M = 0.85$ $SD = 2.01$) conditions were significant, $F(2, 141) = 4.73$, $p = .01$.

Thus, while the interaction between online information format and interactivity level was significant, hypothesis fourteen was not supported because the effect on political information efficacy gains was observed among those exposed to social network sites, not online news sites.

The second research question asked how online formats and interactivity levels affected candidate evaluations. First, as shown in Table 4-6, the differences between the candidate's pretest and posttest feeling thermometer scores between online formats were examined. The results of paired-samples t-tests showed that Alex Sink's feeling thermometer scores were significantly higher in the posttest ($M = 58.47$, $SD = 26.18$) than in the pretest ($M = 42.68$, $SD = 20.81$) across formats and interactive conditions, $t(277) = -11.33$, $p < .01$. Rick Scott's feeling thermometer scores, on the other hand, actually decreased from the pretest ($M = 43.28$, $SD = 20.94$) to the posttest ($M = 40.39$, $SD = 27.29$), and this difference was also significant, $t(277) = 2.17$, $p < .05$.

Second, an evaluation change variable was created for each candidate by subtracting pretest feeling thermometer scores from posttest thermometer scores. Then, all negative evaluation change values were converted to positive numbers to calculate the mean evaluation change scores by candidate accurately. A total evaluation change variable was then calculated by summing the candidate's individual feeling thermometer change scores. When examining the changes in evaluations of Rick Scott, the results of an analysis of variance test showed that the main effect of format, $F(1, 276) = .042$, $p > .05$; the main effect of interactivity, $F(2, 276) = .244$, $p > .05$; and the interaction effect between the two, $F(2, 276) = .307$, $p > .05$, were not significant. Similarly, in

regard to changes in evaluations of Alex Sink, the main effect of format, $F(1, 276) = .318$, $p > .05$; the main effect of interactivity, $F(2, 276) = .479$, $p > .05$; and the interaction between the two, $F(2, 276) = .276$, $p > .05$, were not significant. Finally, in regard to total changes in candidate evaluations, the main effect of format, $F(1, 276) = .633$, $p > .05$; the main effect of interactivity, $F(2, 276) = .544$, $p > .05$; and the interaction between the two, $F(2, 276) = .049$, $p > .05$, were also not significant. Therefore, changes in both individual and aggregate candidate evaluations were statistically equivalent across online formats and interactivity levels; resulting in positive outcomes for Alex Sink and negative outcomes for Rick Scott.

Partisanship, Candidate Preference, Saliency of the Election

The third research question asked how political party affiliation affected changes in candidate evaluations. Similar to the analysis in the previous research question, the differences between each candidate's pretest and posttest feeling thermometer scores were examined. In this case, however, the net gains in candidate evaluations, instead of the absolute changes in evaluations, were examined by participants' political party affiliation. The results of an analysis of variance test showed that the net gains in Rick Scott's feeling thermometer scores were significantly different dependent upon whether the participant identified as a Democrat ($M = -12.79$, $SD = 20.0$), an Independent ($M = -2.76$, $SD = 21.36$), or a Republican ($M = 10.02$, $SD = 18.47$), $F(2, 268) = 29.07$, $p < .01$. Along the same lines, the net gains in Alex Sink's feeling thermometer scores were also significantly different dependent upon whether the participant identified as a Democrat ($M = 25.31$, $SD = 20.38$); an Independent ($M = 17.08$, $SD = 23.93$); or a Republican ($M = 3.21$, $SD = 19.60$), $F(2, 268) = 24.07$, $p < .01$. Thus, while participants' political party affiliation exerted a significant effect on candidates' net gains in feeling

thermometer scores, Alex Sink's scores increased across all three party categories while Democrat's and Independents' mean evaluations of Rick Scott decreased.

The fourth research question asked how online format and interactivity levels affected perceptions of the saliency of the election. The results of an analysis of variance showed that the effects of format, $F(2, 276) = 1.23, p > .05$; interactivity level, $F(2, 276) = 1.75, p > .05$; and the interaction between the two, $F(2, 276) = 1.52, p > .05$, were not significant. Thus, it would appear that these variables exerted no influence on perceptions of the saliency of the election.

The fifth research question asked how political party affiliation affected perceptions of the saliency of the election. The results of an analysis of variance revealed that the differences in perceptions of the election's importance between those who identified as Republicans ($M = 32.74, SD = 4.95$); Independents ($M = 30.32, SD = 6.49$); and Democrats ($M = 31.18, SD = 5.03$) were significant, $F(2, 268) = 4.14, p < .05$.

The sixth research question asked how candidate preference affected perceptions of the saliency of the election. First, when asked for whom would they vote if the election were held today, across all experimental conditions, 32% indicated they would vote for Rick Scott; 59% for Alex Sink; and 9% for neither. The results of an analysis of variance, on the other hand, revealed that those who preferred Rick Scott ($M = 32.89, SD = 4.90$) perceived the election to be significantly more salient than did those who voted for Alex Sink ($M = 30.80, SD = 5.08$) and those who voted for neither ($M = 28.27, SD = 7.05$), $F(2, 276) = 8.16, p < .01$. Thus, those who perceived the election to be the most salient were those who stated they would vote for Rick Scott.

Table 4-1. Differences in political characteristics by information efficacy levels

	Low PIE (n = 123)	High PIE (n = 155)	F-value	df	p
Political interest	11.08	13.10	27.94	1	.000
Political knowledge	5.56	6.10	10.67	1	.001
Partisan strength	1.85	2.04	4.28	1	.039
Civic participation	15.30	17.35	51.74	1	.000

Table 4–2. Predictors of traditional media use for vote guidance*

	B	SE	β	t	p
(Constant)	15.93	3.4		4.64	.00
Political Interest	0.20	0.09	0.16	2.28	.02
Political Knowledge	-0.15	0.19	-0.05	-0.79	.43
Strong Partisans	-0.64	0.53	-0.07	-1.01	.23
Civic Participation	0.26	0.11	0.16	2.32	.02
Political Information Efficacy	0.13	0.09	0.10	1.40	.16
Caucasian	0.11	0.51	0.01	0.21	.83
Female	0.25	0.53	0.03	0.47	.64

*(n = 278; Model $R^2_{adj} = 0.07$)

Table 4–3. Predictors of Internet usage for vote guidance*

	B	SE	β	t	p
(Constant)	8.03	2.31		3.47	.00
Political Interest	0.08	0.60	0.08	1.29	.20
Political Knowledge	0.22	0.13	0.10	0.69	.08
Strong Partisans	-0.05	0.36	-0.08	-1.41	.16
Civic Participation	0.21	0.08	0.8	2.71	.01
Political Information Efficacy	0.19	0.06	0.24	3.70	.00
Caucasian	-0.20	0.35	-0.03	-0.32	.57
Female	-0.44	0.36	-0.07	-0.69	.22

*(n = 278; Model $R^2_{adj} = 0.21$)

Table 4-4. Learning by format, type, and candidate

	Social Network Sites (n = 144)	News Websites (n = 134)	F-value	df	p
Issue Learning	7.22	8.30	27.10	1	.00
Scott	3.62	4.07	15.18	1	.00
Sink	3.60	4.23	28.91	1	.00
Image Learning	7.63	7.34	1.79	1	.16
Scott	3.69	3.36	0.165	1	.59
Sink	3.94	3.71	3.97	1	.05

Table 4-5. Learning by interactive condition, type and candidate

	System (n = 90)	Document (n = 98)	User (n = 90)	F-value	df	p
Issue Learning	7.34	7.83	8.05	3.63	2	.03
Scott	3.73	3.87	3.90	.792	2	.49
Sink	3.61	3.96	4.14	6.26	2	.00
Image Learning	7.26	7.72	7.47	1.53	2	.22
Scott	3.73	3.87	3.90	.712	2	.49
Sink	3.67	3.87	3.94	1.81	2	.16

Table 4-6. Exposure effects on political Information efficacy by format and condition

	Social Network Sites (n = 144)		News Websites (n = 134)	
	Pre-test	Post-test	Pre-test	Post-test
User-to-System (n = 90)	11.56	12.78*	11.95	12.86*
User-to-Document (n = 98)	12.70	13.56*	11.93	13.41*
User-to-User (n = 90)	11.82	13.86*	12.72	13.65*
All Conditions (n = 278)	12.07	13.40*	12.21	13.31*

*p < .01

Table 4-7. Online format effects on candidate evaluation

	Sink		Scott	
	Pre-test	Post-test	Pre-test	Post-test
Overall (n = 278)	42.68	58.47*	43.28	40.39*
SNS (n = 144)	41.97	55.73*	42.55	41.03*
News (n = 134)	43.45	61.42*	44.06	38.63*

*difference between pretest and posttest feeling thermometer is significant at p < .01.

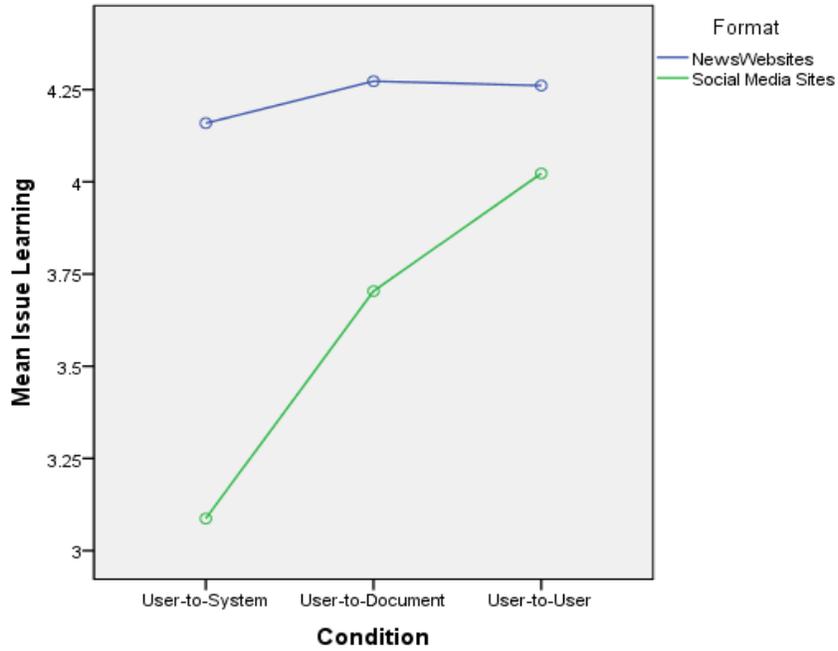


Figure 4-1. Learning about Alex Sink’s issues by format and condition

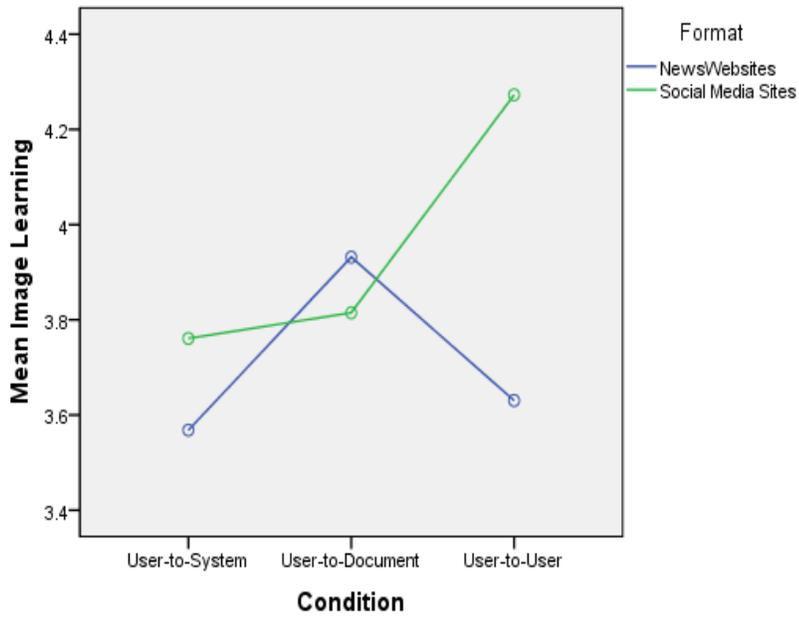


Figure 4-2. Learning about Alex Sink’s image qualities by format and condition

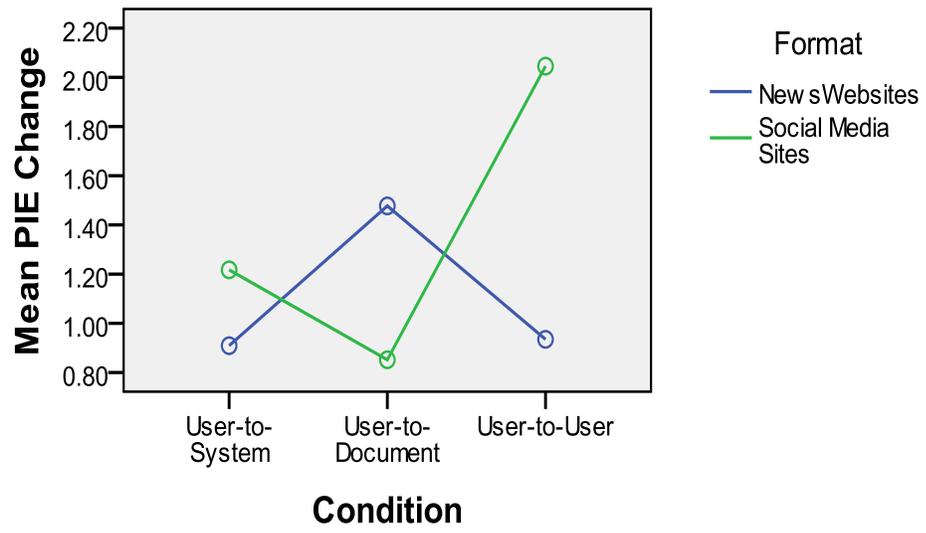


Figure 4-3. Political information efficacy gains by format and condition

CHAPTER 5 DISCUSSION

Predictive Power of Political Information Efficacy

In prior research, the theory of political information efficacy has been used to explain differences in political information processing among age groups and to gauge the effects of exposure to mediated information. The purpose underlying the first four hypotheses in this study, on the other hand, was to provide the first empirical testing of the predictive power of the theory of political information efficacy. The results of the all the hypotheses testing as well as the answers to all the research questions are summarized in Table 5-1. As shown in the first four rows of this table, the analysis revealed that levels of political information efficacy are not only closely associated with other cognitions and attitudes such as political knowledge, interest, and strength of partisan affiliation, but that they are also predictive of the frequency of behaviors in the form of civic participation. Thus, these results enhance the value of this analytic framework by measuring the predictive power of political information efficacy as an independent variable.

To strengthen the predictive power of this analytic framework in terms of patterns of media usage, the theory of political information efficacy was placed in the larger uses and gratifications tradition to determine how those who feel most efficacious or confident in their ability to participate in politics use the media. This rationale allows for testing the theory's ability to predict media usage to fulfill vote guidance needs. While the results from hypothesis five showed that the most efficacious use all media more than those who are less efficacious do, the answers to research question one are mixed. As shown in rows five and six of Table 5-1, the analysis showed that levels of

information efficacy are not predictive of traditional media usage, but that they are a moderately strong predictor of Internet use to satisfy vote guidance needs. This finding is not terribly surprising given college students' orientation toward news consumption. Since most of today's college students are digital natives, they generally prefer Internet sources for political information gathering due to their familiarity with, ease of access to, and preference for this platform relative to traditional media channels. Overall, then, these results show that the theory of political information efficacy predicts Internet use moderately well, but that it is not a good predictor of traditional media use to satisfy vote guidance needs.

In this study, the intensity of one's need for political information efficacy is conceptualized as precipitating levels of political interest, knowledge, attitudes, and behaviors. The correct ordering of these variables, however, is not the sole or primary objective of this investigation. In fact, most rational behaviorists would probably contend that the effects of these variables are both reciprocal and recursive (Finkel, 1985, 1987). Thus, while it is eminently valuable to test the predictive power of relatively new political communication theories, the analytic limitations of results based on self-reports, correlations, and analyses of variance tests using a median-split technique may beg the question of cause and effect. Indeed, political scientists have long recognized that levels of political interest, knowledge, partisan affiliation, and civic participation co vary (Campbell, Converse, Miller, & Stokes, 1960). While none of these results, therefore, is terribly surprising, an intuitive outcome does not lessen the strength of these findings in both explaining and predicting other political cognitions, attitudes, and behaviors. In truth, the biggest revelation emerging from this first set of results is probably that

political information efficacy is a moderately strong predictor of young citizens' Internet usage, but that it is not a good predictor of traditional media usage, to fulfill vote guidance needs.

Cognitive Effects of Online Format and Interactivity Levels

In hypotheses six through eleven, two online information formats and three levels of interactivity were manipulated as independent variables with issue and image learning serving as dependent variables. A summary of these findings is presented in rows seven through twelve of Table 5-1. Overall, the analysis shows that exposure to news websites resulted in differentially significant learning about the issues important to both candidates, and that exposure to social network sites resulted in differentially significant learning about Alex Sink's image qualities. These findings link directly back to a uses and gratifications view of online political information formats (i.e., Ancu & Cozma, 2009; Abrahamson, 1998; Donohew, Finn, & Christ, 1988). Although exposure in the experimental setting is compelled, rather than a natural choice, the nature of the site should reflect the need it is designed to gratify. Social networking sites, for instance, are used mainly for interpersonal interaction and keeping up with the activities of one's "friends." It makes sense, then, when navigating a political candidate's social network channel, that one would be more inclined to watch videos, read comments by other users, and look for personal information; and one might be less inclined to read the "issues" section of a candidate's social network sites. Conversely, news websites are typically used to satisfy surveillance needs in terms of issue information and vote guidance needs, rather than for socialization or entertainment. In this case, it seems natural that one would lapse into an information-gathering mode while interacting with news websites.

Alternately, in regard to image learning, the uses and gratifications roles of these sites are reversed. Again, social network sites appear more personalized and prompt the gathering of information about a candidate's personal background and experiences. Alternately, news websites do not necessarily highlight personal or image information and users of such sites may have their attention more focused on issue information. Further, it must be noted that a candidate's social networking site is strictly campaign-controlled, whereas stories on a news website are not. In fact, the campaigns themselves played a particularly strong role in the findings of this study. While we observed significant gains in learning about Alex Sink's image characteristics among those exposed to social networking sites, the difference in learning about Rick Scott's image characteristics between those exposed to news and those exposed to social network sites was not significant. This finding is directly attributable to the style of campaign run by each candidate.

Typical of many insurgent Republican candidates in the 2010 midterm elections, Scott's campaign strategy was less about describing who he was, and more about declaring who he was not. Throughout the campaign, Scott attempted to build support among those who felt a growing dissatisfaction with the current national administration, and he positioned himself as an alternative to both career politicians and "Obama Democrats" (Erickson, 2010). He avoided describing himself personally, and instead attacked his opponents and the current system (Krakauer, 2011). In fact, whereas the second tab on Alex Sink's *Facebook* page is titled "About Alex" and provides personal background information about the candidate, Rick Scott's *Facebook* page does not

contain similar information. It seems clear that in terms of image learning, the campaigns themselves played a significant role.

When measuring the impact of interactivity on issue learning, campaign strategies also influenced these findings in terms of both main and interaction effects. First, the differences among interactivity levels in overall issue learning as well as learning about the issues important to Rick Scott were not significant. Second, the differences among interactivity levels in learning about the issues important to Alex Sink were significant and in the predicted direction. Thus, those in the user-to-user interactivity condition reported they learned significantly more about the issues important to Alex Sink than did those in the user-to-system interactive condition. Third, the interaction between online format and interactivity level was also only significant concerning learning about the issues important to Alex Sink. This interaction effect, however, did not occur among those exposed to news websites as predicted, but among those exposed to social network sites. Thus, the use of interactive features had a significantly greater impact on learning about the issues important to Alex Sink among those exposed to social network sites, but not among those exposed to news websites. Similarly, while interactivity level did not exert any significant main effects on candidate image learning, there was an interaction between interactivity level and online format in learning about Alex Sink's image qualities among those exposed to social network sites. Once again, the Sink campaign appeared to capitalize on the perceived purpose of the Internet format as well as the needs it fulfills by making effective use of interactivity on the candidates' social network sites. Since the concept of interactivity springs from analyses of interpersonal communications, a context in which participants switch back and forth from sender to

receiver roles throughout their transaction, it seems natural that the greatest effects of interactivity would be found among those exposed to sites designed to satisfy social utility needs.

Online Format and Interactivity Effects on Information Efficacy

Another noteworthy finding that ran counter to the prediction was that exposure to both social network sites and online news sites resulted in significantly higher levels of political information efficacy. While greater gains in political information efficacy were predicted among those exposed to news websites, significant and statistically equivalent gains across both online information formats were actually observed. As shown in rows thirteen through fifteen of Table 5-1, none of the hypotheses predicting greater effects on political information efficacy among those exposed to online news sites were supported. Although not predicted, these findings also provide further support for the weight of the evidence from the data analysis; that interactivity exerts distinct effects on specific online channels. Additional reasons for these null findings may also be due to most voters' low levels of information about the candidates in a midterm election. In such a case, exposure to any information, regardless of source, may elevate one's confidence in his or her ability to participate meaningfully in politics.

On the other hand, this experiment was conducted during the "hot phase" of the most expensive gubernatorial campaign in the history of the nation's fourth largest state. Further, the participants were college students who, as noted in the results section, correctly answered an average of 5.86 out of 8 political knowledge questions. Thus, the sample was much more knowledgeable about political institutions, events, and actors than the general public. Yet, these participants, who are relatively sophisticated in terms of both political knowledge and usage of digital media, reported increases in their levels

of political information efficacy that were statistically equivalent across both online information formats. This result speaks volumes about the power of social network sites to fulfill vote guidance needs among college students and digital natives. While politics, especially outside of presidential elections, may frequently fail to register on the perceptual radar screen of many young citizens, those who interacted with the candidates' channels on social network sites reported significant increases in their efficacy levels that equaled the increases among those exposed to news websites.

Although there were no main effects of interactivity on political information efficacy observed in this investigation, there was a significant interaction between interactivity level and online format. Among those exposed to news websites, the differences in political information efficacy gains by interactive condition were not significant. Among those exposed to social network sites, on the other hand, interactivity levels did exert a significant influence in the predicted direction. At this point, it would appear that the effects of interactivity may not only be dependent upon campaign strategies, but also upon the online information format. That is, the nature of social network sites may facilitate interactivity as well as make this online format more amenable to the effects resulting from the use of these features. Again, the finding that interactivity exerts greater influence on social network sites than on news websites may be explained by the uses and gratifications uniquely fulfilled by the specific online platform. Further, according to the communication mediation model, one's ego-involvement, sense of feeling heard, and social commitment levels may be greater when expression occurs over social network sites since such expressions may be more publicly visible on a more platform that is also more important to the participant. This

type of expression, then, may exert greater influence on cognitions, attitudes, and behaviors. Specifically, past research has shown that citizens who feel their voices are heard, that their interests are at stake, and who express their support of (or opposition to) a candidate, party, or issue are much more likely to participate in politics than are those who do not feel heard, involved, or committed (Finkel, 1985; Gerber & Green, 2000).

Candidate Evaluations and the Saliency of the Election

Practically speaking, the results of this study suggest that it is important for political campaigns to make use of both the conventional campaign function in terms of providing information subsidies through traditional channels and an expansion in the use of emergent social network sites. As shown in Table 5-1, the answers to research questions two and three suggest that the Scott campaign was unable to improve candidate evaluations in any condition. The Sink campaign, on the other hand, was able to improve her evaluations across online formats, interactivity levels, and participants' political party affiliations. Thus, even the argument that the news media was biased against Scott cannot explain why exposure to his campaign's social network sites failed to elevate his evaluations while simultaneously increasing Republicans' evaluations of his opponent. Unfortunately for Sink, however, her campaign was unable to increase the perceived saliency of the election. Regardless of how well a campaign cultivates a positive evaluation of a candidate, should those responding favorably fail to sense any urgency to participate, then the outcome is far less than assured. Indeed, by falling just 60,000 votes short of a victory, the low rate of turnout may have been critical in the election outcome.

Although this investigation did not measure perceptions of the elections' importance in the pretest questionnaire, it is clear from the last three rows of Table 5-1 that supporters of Rick Scott felt much greater urgency about participating in the election than did those favoring Alex Sink. Although midterm wins by the party in opposition to a first-term president have become a part of a familiar cycle, the Republican insurgency wins across the country was significantly greater in 2010 than any over the past generation. Indeed, the outcome of the 2010 elections was described by the Pew Research Center for the People and the Press (2010b) as "a clear rejection of the status quo, no consensus about future policies; GOP wins big despite party's low favorability" (p. 1). Popularly referred to as "the enthusiasm gap," early poll results revealed that the difference in candidate preferences between likely voters and the general public were significant and stable throughout the campaign (p. 4). Thus, the inability of the Sink campaign to motivate citizens favorable to her candidacy was fatal. Indeed, the electorate in this contest was described as significantly older, more affluent, and more conservative than both the 2008 voting pool and the general public (p. 3).

Additionally, the effectiveness of social network sites shown here may be particularly important to political campaigners because of its dual nature – both passive and active. While one has to intentionally search for a traditional campaign Website, a candidate's social network presence is highly likely to appear in a "news feed" or an advertisement on the site. This type of passive introduction to the campaign reduces the cost of seeking out information, and may be persuasive if recommended by a "friend" who has chosen to "like" the page. This social relationship may convince a person to, at minimum, view a campaign's social network page – an action he or she

may not have taken without prompting. On the other hand, social network sites can also be very active – prompting a person to comment and engage in the social nature of the format. Conventional campaigning wisdom holds that this small change from passive to active information processing also makes one more likely to become engaged with the campaign by contributing or volunteering.

Theoretical Implications

Not only do the findings about the differential exposure effects of online information formats and interactivity levels have notable practical implications for both professional political and media operatives, but they may also inform analyses of the theoretical parameters of information efficacy. Functionally defined as “a set of constructs that are linked together by relational statements that are internally consistent with each other, the most common type of theoretical statement is a prediction that 2 constructs will *covary*” (Chaffee & Berger, 1987, p. 144). The theory of political information efficacy, for example, predicts that efficacy levels are positively associated with other political cognitions, attitudes, and behaviors. As operationalized in this study, political information efficacy is distinguished from internal political efficacy by one item that measures an individual’s level of confidence in his or her ability to describe the important issues and candidacies at stake in the upcoming election, rather than perform in public office. Since the utility driving research on this theory is that higher levels of information efficacy are associated with both the number of participatory acts as well as the extent to which these acts are in line with one’s fully informed preferences, one purpose of this investigation was to provide support for this theory. The results showed that efficacy levels are indeed a moderately good predictor of levels of political interest, knowledge, party affiliations, and participation. Future researchers may wish to refine

the other three items used to measure levels of political information efficacy so that they are distinct from those used to gauge an individual's sense of internal political efficacy.

In addition to testing the predictive power of political information efficacy theory, this investigation also sought to explain how “exposure to different types of formats can, in fact, be an antecedent for enhanced levels of political information efficacy” (Kaid, McKinney, Tedesco, 2007, p. 1098). In line with uses and gratifications research, information efficacy theory also fulfills an explanatory function by informing analyses of the differential effects of exposure to various media content and channels. Previous research has shown that young citizens, more so than older citizens, use issues over personal qualities in their evaluations of political candidates (p. 1101). The results of the present inquiry, on the other hand, reveal that increasing the interactivity on sites designed to satisfy social utility needs results in issue learning equivalent to those exposed to online news sites designed to fulfill surveillance and vote guidance needs. Further, individual level gains in political information efficacy resulting from exposure to social network sites are not only equivalent to, but they may also exceed the gains experienced by those exposed to online news sites when computer-mediated communication between users occurs. By expanding the experimental design to measure the effects of interactivity during exposure to different online platforms, this present inquiry has advanced research on political information efficacy by more precisely accounting for the effects of what people actually do with the media.

While previous studies measuring the effects of exposure to televised political advertisements and debates on efficacy levels have revealed differences between demographic and ideological groups, they have also shown that exposure to Internet

sources stimulates information seeking and interpersonal communication more so than does exposure to traditional media channels (Kaid, 2002). When looking beyond studies comparing the exposure effect of the same content on different media channels, however, there is a dearth of experimental investigations comparing the differential effects of online information formats and interactivity levels extant in the literature. It seems clear that, at least for young voters, traditions of uses and gratifications of political information sources should be revised to inform our understanding of the power of social network sites more robustly. Young people use the Internet for most of their information gathering, and the use of social network sites has become a daily habit in the lives of most young people. In fact, some college students may consult sites such as *Facebook* for political information more often than news websites. All of these factors lend support to the conclusion that social network sites have a profound ability to increase young citizens' confidence in their political information levels.

The rise in the use of social network sites to satisfy needs related to not only social utility, but also surveillance, entertainment, and escape needs, illustrates the broader blurring of the distinction between information sources and entertainment witnessed across media channels. For example, the television audience viewing *The Daily Show* may be primarily motivated by entertainment needs, but the gratifications obtained from watching the show almost certainly also include surveillance, information, and vote guidance need fulfillment. When looking at computer-mediated communications, on the other hand, the uniquely interactive aspects of this media channel have facilitated use of its features to gratify needs to an extent previously achieved only by interpersonal communication. In terms of the uses and gratifications

analytical approach, the purpose of media usage and the level of interactivity in the communication interaction have been shown to impact attitudes and learning in predictable ways.

The effects of exposure to political information over Internet channels in this study are quite compelling. Ranked as a major source of mediated political information, the interactive nature of computer-mediated communication as well as the widespread use of social network sites have also made this medium a functional alternative to much face-to-face communication, the most important and influential source of political information. The results of this study also provide a starting point from which we may inform analyses of the impact of computer-mediated political information on young citizens' political cognitions, attitudes, and behaviors. One of the most important distinctions of this study, however, is the use of both a functional approach to interactivity combined with analysis focused on the effects or the gratifications obtained from exposure to experimental stimuli.

Ironically, the results in this study disallowing rejection of the null hypotheses may provide some of the most compelling implications in terms of delimiting the theory of uses and gratifications when used to analyze interactivity effects on specific Internet platforms or formats. Put simply, the level of interactivity during exposure to online news sites exerted no significant effects on political cognitions, attitudes, or behaviors. This null finding means that none of the differences among the points on the lines representing the news websites condition in Figures 4-1, 4-2, and 4-3 is significant. Although the effect size of interactivity among those exposed to social network sites was large enough to produce a significant main effect on issue learning, the relatively

stable line representing those exposed to news websites in the Figure 4-1 clearly shows that the effect in this condition is not significant. The effect size of interactivity on image learning among those exposed to social network sites, however, was not large enough to produce a significant main effect as postulated in hypothesis ten. Graphically presented in Figure 4-2, this finding means that the only point on the lines in Figure 4-2 that is significantly different from the others is the one representing those in the user-to-user condition exposed to social network sites. Similarly, none of the differences among the points representing mean gains in political information efficacy on the lines in Figure 4-3 is significantly different, except the one representing those in the user-to-user interactivity condition exposed to social network sites.

The lack of support for a main effect of interactivity on image learning and political information efficacy suggests that the effects of what people do with the media may be limited by the specific channel format with which they are interacting. Although Internet use requires more audience activity than traditional media usage, these findings suggest that higher levels of interactivity may significantly increase the effects of exposure to social network sites on cognitive, affective, and behavioral variables. Specifically, while the lack of a significant effect of interactivity among those exposed to news websites may mask its effects among those exposed to social network sites, the interaction between interactivity level and online format exerts a significant effect among those exposed to social network sites in the user-to-user condition. Thus, the differences in issue learning among those exposed to candidates' social network sites in the condition requiring the greatest interactivity and those in the same condition exposed to news websites was equivalent. Even more significantly, those in the highest

interactive condition exposed to social network sites reported greater image learning and gains in political information efficacy than those in any of the other conditions. These findings, while not consistently in line with the hypotheses, nonetheless remain within the uses and gratifications tradition.

As explicated by Katz, Blumler, & Gurevitch (1974), uses and gratifications research appropriately investigates the differential effects elicited by exposure to various media channels and content “resulting in need gratification and other consequences” (p. 510). While the purpose and design of news websites would suggest that those exposed to this online information format would report greater gains in issue learning and levels of political information efficacy, the results of this investigation may reveal the scope of the unintended or “other” consequences resulting from exposure to social network sites. Indeed, uses and gratifications research is particularly useful in laying out the framework for analyzing the differences between gratifications sought and gratifications obtained.

Much of the criticism leveled at uses and gratifications research focuses on the typologies used to classify motivations for media use. Not only are these typologies imposed across all types of media consumers who may perceive the same media content as fulfilling different needs, but many also argue that they limit the analysis to the results of an artificially imposed schematic. By focusing on the gratifications obtained, however, the results of this investigation support the argument that the process of information gathering among digital natives may involve the use of media channels primarily designed to fulfill social utility needs.

Although the uses and gratifications typology allowed for predicting the direction of interactivity effects based on the function of the online format, the results suggest that the functional approach to interactivity allows for the use of models for analyzing expression effects. Indeed, the findings in this study show that interactivity and expression effects are greatest on social network sites, even when focusing on cognitive variables such as learning about the issues important to a candidate. Specifically, the interaction between online format and interactivity consistently occurred among those exposed to social network sites in the user-to-user condition. Not only was this interaction observed in regard to issue learning, however, but it was also observed in the analysis of exposure effects on image learning and political information efficacy. These findings suggest that expression is distinctly powerful when it occurs over social network sites.

Limitations

Despite theoretical and practical implications, this study has some notable limitations. First, participants were encouraged to interact with the websites to which they were exposed. Although they were instructed to explore the site to which they were assigned, they were also able to explore links from a candidate's social network site to a news article or vice-versa. In addition, by using real candidate social network sites and real news websites, this study was forced to give up some control over content. These differences in content, however, are the cost paid for gaining insight into the effects of computer-mediated political information in present time.

Finally, this study highlights the power of the political information on the Internet, and in particular social network sites. Social network sites appear to act as familiar, reliable, and credible portals to political information for young citizens. No longer is

Internet campaigning simply brochure-ware; candidates are beginning to make full use of this medium's interactive and networking abilities, and this seems to be particularly appealing to young people. Additionally, unlike the passive role required to consume political information through traditional media channels, the Internet requires more actively involved users. In addition to testing the differential effects of interactivity on these websites, future research may also explore how this increased level of activity among Internet users affects source credibility. Clearly, there is also the potential for stronger impacts on knowledge levels, attitudes, and behaviors among those making use of the various platforms available on this new communications medium than among those exposed to other channels as well.

Table 5-1. Summary of findings

Hypotheses/Research Questions	Results
H1: PIE predicts political interest	Strongly supported
H2: PIE predicts political knowledge	Strongly supported
H3: PIE predicts partisan strength	Strongly supported
H4: PIE predicts civic participation	Strongly supported
H5: PIE predicts media use for vote guidance	Strongly supported
RQ1: Does PIE predict traditional media and Internet use for vote guidance?	PIE does not predict traditional media, but does predict Internet use
H6: Online news exposure results in greater issue learning	Strongly supported
H7: Positive relationship between interactivity and issue learning	Moderately strongly supported
H8: Interaction occurs in online news and user-to-user interactivity condition	Not supported
H9: Social network site exposure results in greater candidate image learning	Partially supported
H10: Positive relationship between interactivity and image learning	Not supported
H11: Interaction occurs in social network sites and user-to-user condition	Partially supported
H12: Exposure to online news results in greater PIE gains	Not supported
H13: Positive relationship between interactivity and PIE gains	Not supported
H14: Interaction occurs in online news and user-to-user condition	Not supported
RQ2: How do online format and interactivity affect candidate evaluations?	Uniformly positive for Sink and negative for Scott across conditions
RQ3: How does political party affiliation affect candidate evaluations?	Across conditions and affiliations, Sink's evaluations improved; Scott's improved only for Republicans
RQ4: How do online format and interactivity affect the election's saliency?	No effect
RQ5: How did party affiliation affect perceptions of the election's saliency?	Republicans perceived the election to be significantly more salient
RQ6: How did candidate preference affect the election's saliency?	Significantly greater saliency among those preferring Rick Scott

APPENDIX A INTERACTIVE ACTIVITIES PRETEST

Instructions

When using the Internet to find information about current events and politics, people consult a wide variety of sources and engage in many different types of communications activities. For example, some people may simply read online news stories on websites while others may post their comments about the story on the website, forward the story to others by email, or post information about campaigns and elections on social network sites such as their individual wall on *Facebook*. Scholars have classified the range of activities people may engage in when interacting with online websites into three categories ranging from the least to the most interactive: user-to-system, user-to-document, and user-to-user levels of interactivity.

User to-system interactivity describes the interface between people and the computer itself and this interaction between a single human and a single computer is considered the most basic form of interactivity. These types of activities involve the human's ability to issue commands to the computer so that it access specific information requested from a menu of many options. Most scholars consider this type of activity to require the least amount of effort of the user who interacts with the computer to access the information and then merely reads or views the documents or videos provided.

User-to-document interactivity describes the interaction between people and the content of a website as it is displayed on the computer screen. Research on this mid-level form of interactivity focuses on the user's interactions with the websites' content as well as the actual creation of content itself as displayed on the webpage. Feedback

provided by readers/viewers on webpage content and relationships between users and the information they consume are explored at the user-to-document level of interactivity.

User-to user interactivity describes the computer-mediated communication (CMC) between people over the Internet. Research in the CMC tradition describes the interaction among humans as the highest level of interactivity and assumes that the computer and its networks serve primarily as a conduit or channel for communication that may flow back and forth among any number of participants over time. Key concepts include feedback between Internet users and relationships between CMC and interpersonal communication are explored at the user-to-user level of interactivity.

Below is a list of communications tasks that people may complete when looking for political information over the Internet. Please indicate which level of interaction you think each activity should be classified into:

1. **User-to-system interactivity:** people use their computer to access and consume information.
2. **User-to-document interactivity:** people access and consume information and then provide feedback on the website about the content of the information.
3. **User-to-user interactivity:** people access and consume information and then engage in communication with other people about the information over the Internet.

Results

The results from 100 undergraduates, who were directed to classify each of the following activities into one of the three levels of interactivity, were used to calculate mean scores for the following activities. Based on the mean scores, activities fell into the three levels as follows (mean scores in parentheses):

User-to-User Interactivity

1. Forwarding news story to another person by email (3.0)

2. Contacting or sending a candidate an email (2.92)
3. Forwarding a video to another person to watch (2.87)
4. Send candidate or campaign a message through a website (2.75)
5. “Recommending” news story linked to *Facebook* (2.6)
6. Re-posting a candidate’s *Facebook* wall post to your *Facebook* wall (2.49)
7. Post information about a candidate on your *Facebook* page (2.47)

User-to-Document Interactivity

8. Re-Posting a news story on your *Facebook* page (2.37)
9. Friending a candidate on *Facebook* (2.35)
10. Commenting on a video on a website (2.16)
11. “Liking” news story linked to *Facebook*. (2.14)
12. “Liking” a candidate’s *Facebook* wall post (2.10)
13. Commenting on news story on website (2.0)
14. Signing-up to receive text messages from candidates or campaign organizations (1.98)
15. Becoming a follower of a candidate, journalist, or news service on Twitter (1.92)
16. Signing-up to receive emails from candidates or campaign organizations (1.88)
17. Bookmarking, tagging, and linking news stories to *Delicious* or other social bookmarking Web services (1.81)
18. Subscribing to a candidate’s, campaign’s, or new service’s *YouTube* channel (1.75)

User-to-System Interactivity

19. Subscribing to news service’s RSS feed (1.59)
20. Following hyperlink to view candidate or political organizations’ Flickr photo galleries (1.22)

- 21 Reading about political candidates on *Facebook* (1.18)
22. Watching a video on a website (1.12)
23. “Clicking” on hyperlinks to read online stories (1.10)
24. Reading about current events on news websites (1.0)
25. Reading about political candidates on their campaign websites (1.0)

APPENDIX B
PARTICIPANT INSTRUCTIONS

Condition One: User-to-System News Websites Instructions

This project requires that you visit four news websites that provide information about the candidates in the Florida governor's race. This election will be held in a few weeks on November 2, 2010. You must spend 10 minutes reading the information on EACH website or on websites hyperlinked to it. You will need to note the time you entered the site (from the bottom-right-hand corner of the screen) and note the time you left the website on the paper provided.

DO NOT post any comments on any website or forward any information to anyone.

Condition Two: User-to-Document News Websites Instructions

This project requires that you visit four news websites that provide information about the candidates in the Florida governor's race. This election will be held in a few weeks on November 2, 2010. You must spend 10 minutes reading the information on EACH website or on websites hyperlinked to it. You will need to note the time you entered the site (from the bottom-right-hand corner of the screen) and note the time you left the website on the paper provided.

This project requires that you spend the 10 minutes on each website doing more than just reading information, watching videos, or following any hyperlinks. In addition to consuming the information, you also must interact with the documents.

Specifically, you must do a minimum of two of the following activities:

1. Re-Post a news story to your *Facebook* page
2. Comment on a video – Can be positive, negative, or neutral.

3. Comment on a news story– Can be positive, negative, or neutral.
4. “Like” news story linked to your *Facebook* page.
5. Become a follower of a news feed on Twitter.
6. Bookmark, tag, and/or link news story to Delicious or other social bookmarking Web services.

DO NOT forward any information to anyone.

Condition Three: User-to-User News Websites Instructions

This project requires that you visit four news websites that provide information about the candidates in the Florida governor’s race. This election will be held in a few weeks on November 2, 2010. You must spend 10 minutes reading the information on EACH website or on websites hyperlinked to it. You will need to note the time you entered the site (from the bottom-right-hand corner of the screen) and note the time you left the website on the paper provided.

This project requires that you spend the 10 minutes on each website doing more than just reading information, watching videos, or following any hyperlinks. In addition to consuming the information, you also must interact with others.

Specifically, you must do a minimum of two of the following activities:

1. Forward News story to another person by email.
2. Forward a video to another person by email.
3. Recommend news story linked to your *Facebook* page.
4. Contact or send a candidate an email.
5. Post information about a candidate on your Facebook page.

Condition Four: User-to-System Social Network Sites Instructions

This project requires that you visit four social networking websites that provide information about the candidates in the Florida governor's race. This election will be held in a few weeks on November 2, 2010. You must spend 10 minutes reading the information or watching videos on EACH website or on websites hyperlinked to it. You will need to note the time you entered the site (from the bottom-right-hand corner of the screen) and note the time you left the website on the paper provided.

Please spend 10 minutes on each website reading information, watching videos, or following any hyperlinks.

DO NOT post any comments on any website or forward any information to anyone.

Condition Five: User-to-Document Social Network Sites Instructions

This project requires that you visit four social networking websites that provide information about the candidates in the Florida governor's race. This election will be held in a few weeks on November 2, 2010. You must spend 10 minutes reading the information or watching videos on EACH website or on websites hyperlinked to it. You will need to note the time you entered the site (from the bottom-right-hand corner of the screen) and note the time you left the website on the paper provided.

This project requires that you spend the 10 minutes on each website doing more than just reading information, watching videos, or following any hyperlinks. In addition to consuming the information, you also must interact with the documents.

Specifically, you must do a minimum of two of the following activities:

1. Re-post a news story to your *Facebook* page

2. Comment on a video – Can be positive, negative, or neutral.
3. Comment on a news story– Can be positive, negative, or neutral.
4. “Like” a candidate’s *Facebook* wall post.
5. Become a follower of a candidate on *Twitter*.
6. Become a “fan” of a candidate on *Facebook*.
7. Bookmark, tag, and/or link news story to *Delicious* or other social bookmarking web services.

DO NOT forward any information to anyone.

Condition Six: User-to-User Social Networking Sites Instructions

This project requires that you visit four social networking websites that provide information about the candidates in the Florida governor’s race. This election will be held in a few weeks on November 2, 2010. You must spend 10 minutes reading the information on EACH website or on websites hyperlinked to it. You will need to note the time you entered the site (from the bottom-right-hand corner of the screen) and note the time you left the website on the paper provided.

This project requires that you spend the 10 minutes on each website doing more than just reading information, watching videos, or following any hyperlinks. In addition to consuming the information, you also must interact with other(s).

Specifically, you must do a minimum of two of the following activities:

1. Re-post a candidate’s *Facebook* wall post to your own *Facebook* wall
2. Forward a video to another person by email.
3. Post information about a candidate on your *Facebook* page..
4. Re-post news story on your *Facebook* page.
5. Contact or send a candidate an email

APPENDIX C STIMULI

News Sites

1. The internet service provider *Yahoo* ISP News Aggregator: *Yahoo* News Blog Newsroom Story, "2010 Florida governor's race: Alex Sink vs. Rick Scott is most expensive in Florida history," Tue Sep 14, by Carol Bengle Gilbert. Link to complete story: http://news.yahoo.com/s/ynews/20100914/pl_ynews/ynews_pl3620
2. Newspaper Website: *St. Petersburg Times'* [tampabay.com](http://www.tampabay.com) story, "Scott, Sink divided on how to create jobs." By Mary Ellen Klas, September 6, 2010. Link to full story: <http://www.tampabay.com/news/politics/elections/scott-sink-divided-on-how-to-create-jobs/1119839>
3. Television News Website: NBC affiliate in Miami's story, "When candidates attack: It's a Sink/Scott smackdown," by Steve Litz, September 9, 2010. Link to full story: <http://www.nbcmiami.com/news/politics/attack-on---candidates-swiping-at-each-other--102482849.html>
4. Online Nonpartisan News Source: *Grist* story, "Florida Governor's Race: Sink vs. Scott," by Jonathan Hiskes, posted September 9, 2010. Link to full story: <http://www.grist.org/article/2010-09-09-florida>

Social Network Sites

1. Alex Sink *Facebook* page: <http://www.facebook.com/#!/alexsink?ref=ts>
2. Rick Scott *Facebook* page: <http://www.facebook.com/#!/scottforflorida?v=wall&ref=ts>
3. Alex Sink YouTube channel: <http://www.youtube.com/user/AlexSinkFlorida>
4. Rick Scott YouTube channel: <http://www.youtube.com/user/ScottForFlorida>

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BIOGRAPHICAL SKETCH

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