The Mediating Role of Knowledge and Efficacy in the Effects of Communication on Political Participation

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This study explicates the indirect process through which news media use influences political participation. Specifically, it investigates the role of political knowledge and efficacy as mediators between communication and online/offline political participation within the framework of an O-S-R-O-R (Orientation-Stimulus-Reasoning-Orientation-Response) model of communication effects. Results from structural equation modeling analysis support the idea that political knowledge and efficacy function as significant mediators.

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In addition, results expound the increasing importance of the Internet in facilitating political participation. Implications of findings, limitations of this study, and suggestions for future research are discussed.

**INTRODUCTION**

Because citizen participation is considered a core element of a healthy democracy (Lazarsfeld, Berelson, & Gaudet, 1944; McLeod, Kosicki, & McLeod, 2002), what facilitates citizens' political activities has long been a central interest for scholars. In the field of communication, the theoretical development of political participation has been centered on the influence of informational media use and interpersonal discussion about politics (Gil de Zúñiga, 2002). Although a sizable body of research has demonstrated significant effects of those two types of political communication on engagement in political activities, specific processes by which those effects take place still remain relatively unexplored.

Recently, communication researchers have turned to the indirect effects paradigm in media effects studies, which suggests that media effects are strong but largely indirect through their impact on many personal-psychological outcomes (Cho et al., 2009; McLeod, Schaufele, & Moy, 1999; Shah, Cho, Eveland, & Kwak, 2005; Shah et al., 2007). In this paradigm, Cho and his colleagues (2009) proposed an O-S-R-O-R (Orientations-Stimulus-Reasoning-Orientations-Response) model of communication effects in prediction of political engagement. It posits that the effects of news media use (S) on political engagement (second R) are mediated by reasoning behaviors (first R) and individuals’ psychological variables (second O). Within this framework, research has attempted to identify what specific variables work as reasoning and a set of second orientations. However, little research explicates what mediates communication and political participation. Identifying mediators is central to understanding how political communication facilitates political participation. For this reason, Cho et al. called for future research that explores "especially the second O" (p. 81). Present research responds to this request. Particularly, it concentrates on the role of political knowledge and efficacy as second orientations that mediate communication and participation (McLeod et al., 1999). By doing that, this study contributes to and expands the understanding of the O-S-R-O-R model of communication effects and how news exposure influences political participation.

In addition, the current study explores the role of the Internet in facilitating political participation. The Internet not only allows for exchanging political opinions but also provides an avenue for political activities for
significantly less time, money, and physical efforts than traditional ways of political participation (Best & Krueger, 2005). As a result, it is likely that individuals’ intention to participate in politics, mediated through news use and political discussion, may manifest more so in low-cost online settings rather than high-cost offline settings. Noticing the potential of online activities, and based on recent accounts that argue for a distinction between online and offline political participation (Gil de Zúñiga, Veenstra, Vraga, & Shah, 2010), this research includes online participation in parallel with offline participation as an ultimate outcome of communication behaviors.

THE THEORETICAL DEVELOPMENT OF O-S-R-O-R MODEL OF COMMUNICATION EFFECTS

In earlier research, media effects were examined in a basic “Stimulus-Response (S-R)” framework. Then, the “Orientation-Stimulus-Orientation-Response (O-S-O-R)” model substituted the overly direct and universal effect framework of S-R, as researchers began to acknowledge the role of preexisting orientations (first O) and personal-psychological factors (second O) in conditioning media use (S) and ultimate effects of media use (R). Within this framework, McLeod et al. (2001) and Sotirovic and McLeod (2001) proposed a “communication mediation model,” which posits that communication behaviors (i.e., media use and interpersonal communication) mostly mediate the effects of structural-objective factors on cognitive and behavioral outcomes (Rojas, Pérez, & Gil de Zúñiga, 2010).

Later, Cho et al. (2009) developed an O-S-R-O-R model by introducing a new additional mediating step, a “reasoning,” between stimulus (S) and second orientations (second O). Derived from a “cognitive mediation model” (Eveland, 2001) idea, the model suggests that the reasoning process, which refers to mental elaboration and collective consideration of a topic, is a critical condition for news media use to produce political outcomes (Eveland, 2004; Eveland & Thomson, 2006). It also theorizes that interpersonal political discussion is a reasoning behavior because exchanging opinions inherently entails mental elaboration (Cho et al., 2009; Shah et al., 2007).

THE FIRST ORIENTATIONS: SOCIODEMOGRAPHIC VARIABLES—INCOME, EDUCATION, AGE, AND GENDER

Research following a sociological approach has focused on structural-objective variables in explicating determinants of political participation. In this
framework, socioeconomic status has been identified as the most important predictor of political participation (Cohen, Vigoda, & Samorly, 2001; McLeod et al., 1996; Nowak, Rickson, Ramsey, & Goudy, 1982). Generally, those with high socioeconomic status tend to be higher in the level of news media use, political knowledge, efficacy, and political participation than those low on it.

Beside socioeconomic status, gender and age have been found to be significant factors in political variables. Gender differences in political involvement have been shown to be persistent over time and across different countries (Delli Carpini & Keeter, 1996). Research has also shown a positive correlation between age and political involvement (Han, 2008; Kaid, McKinney, & Tedesco, 2007; McLeod et al., 1996).

Because these demographic variables can affect all the political variables treated in this model, they are residualized for all statistical tests of relationships. In this way, the present article can focus on the process in which communication variables produce their political outcomes without influence of demographic variables.

INDIRECT EFFECTS OF NEWS MEDIA USE ON POLITICAL PARTICIPATION

Numerous empirical studies in mass communication and political science have provided evidence that news media use is positively associated with individuals' involvement in political activities (e.g., S. H. Kim & Han, 2005; Norris, 2000; Shah et al., 2007; Wolfinger & Rosenstone, 1980). However, literature suggests that the influence of news media use on political participation is rather indirect. For example, news media can facilitate political participation by enhancing individuals' levels of knowledge in politics (Chaffee & Frank, 1996; Delli Carpini & Keeter, 1996; Eveland, 2002; Junn, 1991; McLeod et al., 1999) and perceived competence to understand and deal with politics (Hoffman & Thomson, 2009), and these in turn exert substantial influence on political participation (Cohen et al., 2001; Kenski & Stroud, 2006; Valentino, Gregorowicz, & Groenendyk, 2009).

Research also suggests that mental elaboration is a critical mediator between news exposure and cognitive, attitudinal, and behavioral political outcomes (Cho et al., 2009; Eveland, 2001, 2004; Shah et al., 2007). Research in social psychology has documented that elaborative information processing on given information is a prerequisite for strong and persistent psychological and behavioral outcomes (Petty, Priester, & Briñol 2002; Todorov, Chaiken, & Henderson, 2002). Based on this idea, Eveland (2001) proposed the “cognitive mediation model” (Eveland, 2001, 2004), which holds that elaborative information processing mediates the effects of communication
on political outcomes. Supporting this logic, subsequent research found that elaboration on news content exerted significant positive influence on political knowledge, whereas simple amounts of exposure to television and newspaper news did not (Eveland, 2004; Eveland & Hively, 2009).

EXPLICITATING REASONING: POLITICAL DISCUSSION AND ONLINE POLITICAL MESSAGING

The relationship between media use and interpersonal communication was first brought up by the idea of "two-step flow" of media effects (Katz & Lazarsfeld, 1955). Contemporary communication scholars also argue that interpersonal discussion is a critical component of a wide range of media effects (J. Kim, Wyatt, & Katz, 1999; Lee, 2009). Despite the similar phenomenon, there are two significant differences between old and new media effects paradigms. First, the "two-step flow" model, which focused only on direct effects of media, advocated a minimal media effects paradigm, whereas contemporary research trends advocate a powerful effects paradigm, taking into account indirect effects through interpersonal discussion as well.

Second, scholars now focus on the deliberative nature of interpersonal discussion. Such deliberation entails elaborative and collective consideration, whereas the two-step flow paradigm emphasized the role of opinion leaders. Researchers suggest that when engaged in discussion, individuals often exert significant efforts to comprehend topics of discussion, organizing their thoughts into articulate expressions and weighing the pros and cons of diverse arguments provided by diverse discussion partners (Benhabib, 1996). As a sign of an elaboration, individuals who are engaged in interpersonal discussion become able to use complex concepts, make deep logical connections among them, and create consistent and reasoned argumentations (Cappella, Price, & Nir, 2002; J. Kim et al., 1999). Elaborative and collective thinking produce strong political orientations that subsequently lead to increased political knowledge (Eveland, Hayes, Shah, & Kwak, 2005), efficacy (Min, 2007), and political participation (Eveland, 2004; McLeod et al., 1999). For this reason, researchers in communication define interpersonal discussion as a reasoning behavior that is a critical condition in producing outcomes of news exposure (Cho et al., 2009; Shah et al., 2007).

Recently, researchers began exploring the role of online political messaging as a new type of political discussion (Price & Cappella, 2002; Shah et al., 2005; Shah et al., 2007). Online messages can be widely distributed and shared without temporal or geographical limitations. Further, as interactive features of the Internet were substantiated and expanded by the development of Web 2.0 technology, new online methods of opinion sharing emerged. For
example, in addition to well-established online interactive methods such as e-mail, discussion boards, or instant messaging, newer online methods of opinion sharing such as multimedia blogs and podcasts are becoming popular (Evans, 2008; Mayfield, 2004).

The various modes of online political messaging can also result in important political outcomes. In their piece proposing a "citizen communication mediation model," Shah et al. (2005) found that online political messaging through e-mails and online forums exerted substantial influence on political participation. Online political communication mediated some of the effects of news exposure on political participation. Subsequent empirical tests supported the positive relationship among them (Cho et al., 2009; Shah et al., 2007). The theory suggested that online political messaging shared the deliberative nature of interpersonal discussion and defined online political messaging as a reasoning process. Supporting this view, Cho et al. (2009) also argued that online political messaging, which was largely text based, could produce an even stronger degree of elaboration due to the compositional effects. Other researchers also supported this idea by suggesting that the reasoning process could occur without face-to-face exchanges of opinions if individuals could actively express, justify, and defend their opinions (Delli Carpini, 2004; Gundersen, 1995; Lindeman, 2002). Accordingly, the model of this study embedded online political messaging in the reasoning process along with interpersonal discussion.

EXPLICIT THE SECOND ORIENTATIONS: POLITICAL KNOWLEDGE AND EFFICACY

The second set of orientations in O-S-R-O-R communication effect model comprises any cognitive and attitudinal outcomes of news media use that lead to political participation (McLeod et al., 2002). Reviewing the literature suggests that political knowledge and efficacy are potential mediating variables (McLeod et al., 1999).

Political Knowledge

Political knowledge has been hypothesized and tested in many studies as a consequence of media use and political conversation. Literature has taken for granted that news media are important sources of political information for the general public (Delli Carpini & Keeter, 1996). Eveland et al. (2005) stated, "In practice, knowledge of politics is dependent on communication, and in particular mass communication through news media" (p. 425). Considerable empirical findings provide substantial evidence of a positive relationship
between the level of political knowledge and news media use (e.g., Chaffee, Zhao, & Leshner, 1994; Eveland & Scheufele, 2000; Weaver & Drew, 1995).

Much research has been devoted to the relationship between political knowledge and participation. Numerous works in political science demonstrated positive associations between levels of political knowledge and political engagement. (Jennings, 1996; Kaid et al., 2007; Klingemann, 1979; Neuman, 1986; Rosenstone & Hansen, 1993; Sotirovic & McLeod, 2001; Verba, Schlozman, & Brady, 1995). Political knowledge can also spur political participation through feelings of efficacy. Kaid et al. (2007) noted that college students largely attributed their lack of political participation to a lack of political knowledge. A perceived level of knowledge directly influences political efficacy, which in turn enhances political participation. In this sense, Semetko and Valkenburg (1998) argued that political efficacy should be understood in a context of political learning. Accordingly, the present study hypothesizes that political knowledge directly influences political participation, and it also indirectly influences political participation via the mediation of political efficacy.

Political Efficacy

Political efficacy is defined as "the feeling that individual political action does have, or can have, an impact upon the political process" (Campbell, Gurin, & Miller, 1954, p. 187). Among the various factors influencing political behaviors, political efficacy has been considered one of the most important psychological constructs closely related to political participation (Cohen et al., 2001; Delli Carpini, 2004; Gans, 1967; Kenski & Stroud, 2006).

Political efficacy comprises two dimensions: internal and external efficacy. Internal political efficacy concerns feelings of self-competence to understand and to participate effectively in politics. External efficacy refers to the perception of the responsiveness of political officials to citizens' demands (Craig, Niemi, & Silver, 1990; Hoffman & Thompson, 2009; Morrell, 2003). Findings from empirical studies suggest that political efficacy is closely related to various types of political participation, such as political campaigning and contacting political officials and voting (Pollock, 1983).

The present study focused only on internal political efficacy in prediction of political participation for two reasons. First, we assume that internal efficacy, a feeling of confidence and self-qualification, is more likely to be an outcome of communication than external efficacy (Shah et al., 2007). Second, because political participation in this study was mostly measured with items regarding campaigning and contacting political officials, internal political efficacy was more relevant than external efficacy to the research context (see Pollock, 1983).
The perceived self-ability to influence politics (i.e., internal political efficacy) can be obtained by various means of communication. Many empirical studies assert that news media use stimulates individuals' perception that they are cognizant of political affairs, which encourages efficacious feeling about politics (Delli Carpini, 2004; Hoffman & Thompson, 2009; Kenski & Stroud, 2006; McLeod et al., 1999). In a longitudinal study, Semetko and Valkenburg (1998) demonstrated a causal relationship from news use to a subsequent political efficacy.

Political discussion is also positively associated with political efficacy. Research on deliberative democratic theories suggests that citizens' discussion about politics facilitates rational political decisions while forming orientations and attitudes that are supportive of political participation (Gutmann & Thompson, 1996; Morrell, 2005). In addition, as noted earlier, elaboration that takes place during interpersonal communication leads to strong political outcomes, such as political efficacy. Empirical support for the positive effects of political discussion and deliberation on increased political efficacy is solid (Fishkin, 1999; Min, 2007).

Taken together, this study hypothesizes that political efficacy is a function of news media use and political discussion, at least partially (both online and offline), and it positively predicts political participation.

ONLINE POLITICAL PARTICIPATION

Although researchers differentiate online and offline political discussion, few studies consider online political activities an independent form of political participation (Gil de Zúñiga & Rojas, 2010). However, online political participation should be examined separately from offline participation because of the disparity in the cost required for online and offline activities. On the Internet, people now can donate money; contact public officials through e-mail and bulletin boards; and participate in online public hearings held by government officials at municipal, state, and federal levels. These online activities require less cost (i.e., time and physical inconvenience) than those in offline settings. Online participation primarily requires only a small degree of technical competency (Best & Krueger, 2005). As a result, people who otherwise may not participate in politics due to cost barriers may engage in political activities over the Internet (Mossberger, Tolbert, & McNeal, 2007). Research found that the Internet raised the number of politically active people by encouraging those inactive or less active in offline political activities (Gibson, Lusoli, & Ward, 2005). The reduced cost required for political participation also means that citizens have more personal control over their participatory actions. As a result, it is expected that an individuals'
participatory orientation, particularly those arising from news exposure and political discussion, better predicts political participation.

**MODELING POLITICAL PARTICIPATION**

As previously noted, the present piece focuses on (a) explicating mediators between communication variables (news use and political discussion) and political participation, and (b) differentiating online and offline political participation to better understand the process of citizen political participation. Grounded in a recently proposed “Orientation-Stimulus-Reasoning-Oriention-Response (O-S-R-O-R)” framework of communication effects, the model in this study proposes structural relationships in which news exposure serves as stimuli, interpersonal discussion, and online political messaging as a reasoning process; political knowledge and efficacy as a set of second orientations; political participation as a response; and four demographic variables as the preexisting orientations. In addition, those variables included in our model are examined in terms of their relationships with both online and offline political participation (see Figure 1). Thus, this study poses the following hypotheses:

H1: News exposure will be positively associated with the level of political knowledge and political efficacy.

H2: Interpersonal discussion will be positively associated with political knowledge and political efficacy.

H3: Online political messaging will be positively associated with political knowledge and political efficacy.

H4a: Political knowledge will be positively associated with political efficacy.

![Diagram](image-url)

**FIGURE 1** Proposed hypothetical model: O-S-R-O-R model of communication effects with political knowledge and efficacy.
H4b: Political knowledge will be positively associated with both online and offline political participation.
H5: Political efficacy will be positively associated with both online and offline political participation.

H6 taps into the role of political knowledge and efficacy as significant mediators between communication and political participation. However, it is assumed that there may be other personal-psychological orientations that connect communication to participation. This possibility leaves a direct path from political discussion to participation variables.

H6: Political knowledge and efficacy will significantly mediate the relationship between communication and political participation.

METHOD

Procedure

To test the proposed model, an online survey was administered on geographically diverse American adults shortly after the 2008 presidential election. The data used in this investigation is based on an online panel provided by the Media Research Lab at the University of Texas. Because the proposed model in the present study incorporated online political messaging and participation as important endogenous variables, a sample taken from the online population and the use of an online survey were deemed appropriate. Study participants were randomly selected and received the survey URL through an e-mail invitation. This invitation provided respondents with a time estimate to complete the survey and included an explanation of compensatory money incentives (to learn more about the Media Research Lab panel data, see Choi & Lee, 2007; Daugherty, Lee, Gangadharbatla, Kim, & Outhavong, 2005; McMillan, Avery, & Macias, 2008).

To assure a more accurate representation of the U.S. population, the Media Research Lab based this particular sample on two U.S. census variables, gender (50.2% for male, 49.8% for female) and age (30% for 18–34, 39% for 35–44, 31% for 55+). Based on the demographic characteristics, 10,000 participants listed in the panel pool were randomly selected and the survey’s URL was provided to them. A first invitation was sent December 15, 2008, and three reminders were submitted in the following 3 weeks to improve response rates. A concluding reminder was sent January 5, 2009. There were 1,432 addresses that were invalid. Of the remaining
8,568 participants, 1,159 responded to all items and 205 had missing values for some of the variables of interest in this analysis.

To ensure validity of the samples, the general characteristics of the respondents are compared to Pew Research Center and U.S. Census data. Although our sample had more female participants and was slightly better educated compared to U.S. Census data, it seems that the general characteristics of our sample are not significantly different from those of Pew Research Center and U.S. census.¹ Most important, there was no evidence that our sample was skewed in regard to political participation. Turnout levels were similar to those reported by the Pew Research Center 2008 postelection survey—the most comparable to our study because it was conducted at roughly the same time.

Based on the American Association of Public Opinion Research’s (2008, pp. 34–35) RR3 calculation, the response rate for our study was 23.8%. This response rate was within the acceptable range for panel Web-based survey (Göritz, Reinhold, & Batinic, 2002; Sax, Gilmartin, & Bryant, 2003) and similar to those reported by the Pew Research Center and its Internet & American Life Project (Pew; 2009) as well as by other organizations that employ random digit dialing.

Measures

Sociodemographic variables. Age was measured with an open-ended question asking, “What was your age on your last birthday?” (M = 45.76, SD = 12.45). A survey question that measured income asked, “What was your family’s total household income last year?” Answers ranged from 1 (under $20,000) to 15 (over $150,000) (M = 6.05, SD = 4.03). Education was measured with a 7-point scale ranging from less than high school to doctoral degree (M = 4.11, SD = 1.50). As for the gender variable, male participants were assigned value “1” and female participants assigned “2” (male = 33%, female = 67%).

News media use. This variable was created by combining nine items (α = .72, M = 3.51, SD = .99), including watching network, local, and cable TV news; listening to radio news; reading traditional and online newspapers and magazines; and visiting a site with news reports generated by regular people. Each item asked respondents, “How often do you watch network TV news to get information about events, public issues and politics?” with a 7-point scale ranging from every day to never.

¹Demographic profile of study survey and other comparable surveys is available upon request to the authors.
Offline interpersonal discussion. This variable was created by adding scores of 11 items that tapped the frequency of individuals' conversation with others: friends and family; coworkers and acquaintances; strangers; people who agree with me; people who disagree with me; people who are more knowledgeable about politics; people who are less knowledgeable about politics; people outside my family who do not share my ethnicity, socioeconomic status, or gender; people who back up their arguments with evidence; people who are unreasonable and illogical when stating their point of view; people who propose alternatives or policies for problem solving ($\alpha = .92$, $M = 4.8$, $SD = 2.07$).

Online political messaging. This variable was measured with three items such as posting comments on political blogs, posting video about current events and public affairs, and posting articles for my own blog about current events and public affairs ($\alpha = .86$, $M = 5.23$, $SD = 5.09$).

Political knowledge. This variable was created by adding the scores of four open-ended questions regarding political facts. Those questions include, “Who is the British prime minister?” “Who is the Speaker of the U.S. House of Representatives?” “Who is the vice president of the United States?” and “Which state is Sarah Palin the governor of?” For each correct answer, respondents received 1 point, with the number of correct answers summed up to construct the variable of political knowledge.

Internal political efficacy. We measured political efficacy with a question: “I think people like me can influence government” ($M = 5.02$, $SD = 2.74$). Political efficacy was measured with only one item because there is still disagreement among scholars on the valid measure of political efficacy. For example, researchers suggest that some items used to measure internal efficacy, such as “Sometimes politics is so complicated that someone like me just cannot understand what’s going on” and “People like me don’t have any say about what the government does,” are problematic because they measure both internal and external efficacy (see Morrell, 2003). In addition, there are a fair number of published articles in which internal efficacy was measured with a single item (Anderson & Tverdova, 2001; Bennett, 1997; Kenski & Stroud, 2006; Michelson, 2000). For this reason, controversial items were dropped in favor of a single relatively valid item, “People like me can influence government,” which closely tapped into Campbell et al.’s (1954) original definition of political efficacy.

Offline political participation. This was made into a composite variable by adding the scores of 11 items: whether respondents voted in the 2008
presidential election; spoke with public officials in person; called or sent a letter to elected public officials; participated in demonstrations or protests; attended a political meeting, rally, or speech; encouraged someone to vote; wore a campaign button or T-shirt; displayed a campaign bumper sticker or yard sign; worked for a political party or candidate; was involved in political action groups, party committees, or political clubs; participated in any local actions \((\alpha = .81, M = 2.49, SD = 2.53)\).

**Online political participation.** This construct was measured by aggregating into a composite index six items, including sending e-mails to politicians, visiting a campaign or candidate advocacy Web site, making contributions to a political campaign online, subscribing to political listserv, and signing up to volunteer for the activities of political parties \((\alpha = .88, M = 5.54, SD = 4.01)\). To create an index of each construct, measures were standardized and averaged. Please refer to Appendix A to learn about specific static descriptions for all variables in this study.

**RESULTS**

**Model Specification and Modification**

A structural equation model was conducted using M-plus 5.0 to test proposed relationships. Prior to testing the model, a residualized covariance matrix among the main variables was created with a partial correlation matrix controlling for demographic variables (i.e., age, gender, education, and income). Using this procedure, all of the relationships among variables can be free from the influence of the control variables. As shown in Appendix B, control variables accounted for a significant amount of variance \((2.8\%-12.8\%)\). Using the partial correlation matrix, the validity of the proposed model depicted in Figure 1 was tested. All the path coefficients are depicted in Figure 2.

**Model Fit and Tests of Hypotheses**

Results show a very good fit for the proposed model, \(\chi^2(2) = 5.652, ns\) (non-normed fit index \([\text{NFI}] = .997\), root mean square error of approximation \([\text{RMSEA}] = .04\), \(p = .522\), comparative fit index \([\text{CFI}] = .998\), Tucker–Lewis index \([\text{TLI}] = .976\), standardized root mean square residual \([\text{SRMR}] = .01\). In general, nonsignificant chi-square indicates a good model fit. The RMSEA is also a widely used criterion because it is a parsimony adjusted index \((\text{Kline, 1998})\). RMSEA’s values of less than .05 represent good fits, values between .05 and .08 indicate a reasonable error of approximation,
and values greater than .10 represent poor fit (Brown & Cudeck, 1993). As for the NFI, TLI and CFI, values higher than .90 represent adequate fit of the model to the data (Hu & Bentler, 1999). Finally, SRMR index less than .05 is considered as a good fit. The excellent model fit, combined with solid theoretical basis in the model, support the idea that news media use leads to political discussion and political knowledge and efficacy, which in turn stimulates political participation.

As suggested in H1, the frequency of news exposure was positively associated with political knowledge ($\beta = .07$, $p < .05$) and political efficacy ($\beta = .11$, $p < .001$) as well as interpersonal political discussion ($\beta = .40$, $p < .001$) and online political messaging ($\beta = .30$, $p < .001$). The results also show that as suggested in H2, interpersonal political discussion about politics fosters political knowledge ($\beta = .15$, $p < .001$) and efficacy ($\beta = .21$, $p < .001$) as well as political activities in both offline ($\beta = .19$, $p < .001$) and online setting ($\beta = .22$, $p < .001$). Online political messaging was also positively related to political efficacy ($\beta = .11$, $p < .001$), political participation offline ($\beta = .27$, $p < .001$) and online ($\beta = .50$, $p < .001$). However, online political messaging was not helpful in enhancing knowledge in politics, though the experiences of online political messaging were highly predictive of both online and offline political participation.

Results also supported H4 and H5, which predicted that political knowledge and efficacy significantly foster both offline and online political participation. Political knowledge was positively associated with political efficacy ($\beta = .12$, $p < .001$), offline ($\beta = .12$, $p < .001$), and online
political participation ($\beta = .12$, $p < .001$). Political efficacy had positive correlations with offline ($\beta = .14$, $p < .001$) and online participatory activities ($\beta = .19$, $p < .001$). To test H6, supposing the mediating role of political knowledge and efficacy, the total indirect effect between communication (i.e., news media use and political discussion) and political participation through the two orientation variables was estimated. As predicted in H6, the indirect effects between news exposure and both types of political participation through political knowledge ($\beta = .03$, $p < .001$) and political efficacy ($\beta = .073$, $p < .001$) were positive and significant. The indirect effects between reasoning behaviors and both types of political participation through political knowledge ($\beta = .042$, $p < .001$) and political efficacy ($\beta = .104$, $p < .001$) were also positive and significant. In sum, political knowledge ($\beta = .072$, $p < .001$) and efficacy ($\beta = .177$, $p < .001$) produced significant mediating effects between communication variables (i.e., news exposure, interpersonal discussion, and online political messaging) and online and offline political participation.

Model Comparisons

Because the present study employed cross-sectional data, four alternative models were tested and compared to the advocated model to demonstrate the appropriate nature of the current model and to establish the validity of the causal directions among variables specified in the model (see Table 1). The first alternative model hypothesized that political knowledge

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<th>Table 1</th>
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<td>$\chi^2/df$</td>
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<tr>
<td>Communication $\rightarrow$ Knowledge &amp; Efficacy $\rightarrow$ Participation</td>
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<td>Knowledge &amp; Efficacy $\rightarrow$ Communication $\rightarrow$ Participation</td>
<td>105.901/4***</td>
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<td>Participation $\rightarrow$ Communication $\rightarrow$ Knowledge &amp; Efficacy</td>
<td>105.901/4***</td>
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<td>Communication $\rightarrow$ Participation $\rightarrow$ Knowledge &amp; Efficacy</td>
<td>9.095/2*</td>
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<td>Participation $\rightarrow$ Knowledge &amp; Efficacy $\rightarrow$ Communication</td>
<td>455.929/4***</td>
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*Note. Root mean square error of approximation (RMSEA) needs to be less than .05 for a good fit. CFI = comparative fit index; TLI = Tucker–Lewis index; SRMR = standardized root mean square residual.

*p < .05. ***p < .001.
and efficacy affected political participation via communication variables. Results for the model yielded a poor fit to the data, $\chi^2(4) = 105.901, p < .001$ (RMSEA = .162, $p < .001$, CFI = .939, TLI = .695, SRMR = .06). Similarly, the alternative model specifying that political participation functioned as antecedents to communication variables fit poorly compared to the advocated model, $\chi^2(4) = 105.901, p < .001$ (RMSEA = .162, $p < .001$, CFI = .916, TLI = .581, SRMR = .06). The third alternative model tested the mediation effects of political participation on knowledge and efficacy. This model also failed to reach an acceptable level of model fit, specifically for chi-square and RMSEA index, $\chi^2(2) = 9.095, p < .05$ (RMSEA = .06, ns, CFI = .996, TLI = .956, SRMR = .02). The final alternative model was created by reversing the direction of all paths in the advocated model. The goodness-of-fit index was the worst among those of all alternative models, $\chi^2(4) = 455.929, p < .001$ (RMSEA = .341, $p < .001$, CFI = .628, TLI = .860, .860, SRMR = .13). Taken together, results from this series of analyses support the validity of relational directions among variables in the model theorized in this study.

DISCUSSION

In an attempt to explicate the mechanisms behind the effects of news exposure and political discussion on political participation, this study tested the mediating role of political knowledge and efficacy in the relationship within the O-S-R-O-R framework.

As hypothesized, this study found that news exposure positively influences political participation through its impact on political discussion, online political messaging, political knowledge, and efficacy. Consistent with previous research, interpersonal discussion and online political messaging (second R) largely mediated the effects of news media on political outcomes. However, as discussed later, no significant relationship was found between online political messaging and political knowledge. Also, a series of indirect effect analyses, combined with four alternative model tests, confirmed that political knowledge and efficacy are important personal-psychological variables that mediate news media use and political engagement. The present research contributes to advancing the model of communication effects on political participation by identifying important individual outcome orientations that connect communication behaviors and political engagement.

In addition, findings revealed the important role of the Internet in facilitating political activities online and offline. As shown in the Results section, online political messaging was closely related to political participation. It is
expected that citizens' online messaging may become even more active as Web technology advances further, enabling new ways of online interaction. The potential of the Internet as a facilitator of political participation can also be found in the fact that individuals can engage in political participation online for significantly less cost than offline participation (Gil de Zúñiga, Puig-i-Abril, & Rojas, 2009). Unlike other studies concerning only conventional political participation (e.g., McLeod et al., 1999; McLeod et al., 2001; Shah et al., 2007), the present study takes into consideration online political activities as a distinct form of political participation. Because the Internet widens the opportunities for political participation by significantly reducing time and effort to do so, it is suggested that the Internet increases not only the number of politically active citizens but also the frequency of participatory activities. It can be argued, then, that the communication activities and orientation variables may account for a greater portion of variance in online political participation than offline participation due to the reduced total variance in online participation explained by external suppressing factors. In other words, the antecedents in the model may generally have a stronger influence on online political participation than offline participation due to the fewer constraints involved in those relationships. As expected, no path coefficients regarding offline participation were larger than those with online participation. Also, the model explained nearly half of the variance in online participation as opposed to 20% for offline participation. These findings support that the Internet expands opportunities for political participation.

Although the data generally support our proposed model, the results bring up several points to be discussed. First, why did news exposure have such a minimal direct influence on political knowledge? On one hand, this is somewhat surprising because news media use has long been believed to be a source of political information. On the other hand, the result is understandable when considering the logic of the cognitive mediation model (Eveland, 2001). According to the model, simple exposure to news media may add a weak contribution or may not contribute at all to political learning unless individuals involve elaborative information processing on media contents (Eveland, 2004). The current study, similar to the idea of cognitive mediation model, suggests that the direct influence of news media use on the acquisition of political knowledge is somewhat weak.

Second, similar to a previous study (2004 model of Cho et al., 2009), online political messaging was not significantly associated with political knowledge, whereas interpersonal discussion produced significant acquisition of political knowledge. Based on previous literature (Cho et al., 2009; Gundersen, 1995; Lindeman, 2002; Shah et al., 2007), it was assumed that online political messaging is a reasoning process, which entails mental
elaboration and collective consideration. Thus, a positive influence of online messaging was expected on political knowledge. However, the result indicated a stark contrast to the notion that elaboration produces substantial learning effects. This may indicate that some online political messaging activities did not engender sufficient elaboration on relevant topics. Unlike interpersonal discussion, most forms of online communication possesses are asynchronous (except for instant messaging) and anonymous. That is, it is likely that political talks online are targeted at unknown others without their presence. It may be that face-to-face conversational settings place individuals under some pressure to perform quality conversation, and thus the likelihood of elaboration on issues increases. In online settings, however, individuals may face less pressure and motivation to engage in systematic processing of the discussion topics and thus exert less effort into satisfying the expectations to provide reasoned arguments. Social presence theory (Short, Williams, & Christie, 1976) suggests similar phenomenon. According to the theory, emphasizing the role of nonverbal cues in effective communication, the asynchronous and anonymous nature of online political messaging may not produce significant amount of deliberation.

On the other hand, online political messaging did produce significant and positive influence on political efficacy and political participation. Although online expression may not entail a sufficient degree of elaboration, free opinion expression in a completely open cyberspace may increase a feeling of confidence to deal with politics. It is also possible that the participation habit acquired in the course of online political expression directly led to other participatory activities, such as political participation. Future research should clarify the properties of online messaging that explain the relationships between online political messaging and political knowledge, efficacy, and participation.

Third, although this study identified political knowledge and efficacy as important personal-psychological variables that connect communication to political participation, they only partially mediated those relationships. It suggests that there may be other mechanisms underlying the impact of communication behaviors on political participation beside knowledge and efficacy. Issue opinionation (S. H. Kim & Han, 2005) and attitude strength (Kiousis & McDevitt, 2008) may be other precursors of political engagement.

There are some limitations that this study could not overcome. Analyses are based on cross-sectional data. Although we inferred causal directions among the variables treated in our model by basing our model on theories and comparing with some alternative models, this cannot guarantee causalities. Future investigations, perhaps by employing panel data, could shed more light on the causal premise with a nonrecursive model. Also, this study
deals with only one aspect of political knowledge: general political knowledge. Research suggests that there are other types and aspects of political knowledge, such as knowledge about candidates' issue stance, politicians' ideology, and structural dimension of knowledge (Eveland & Hively, 2009). Candidates' issue stance knowledge may be more relevant than general political knowledge in an election context. Structural political knowledge taps into a broad comprehension of interconnectedness among political information (Eveland, 2004). Future studies should take into consideration the role of other dimensions of political knowledge in the communication effect model.

In conclusion, the present research made theoretical advances upon the effects of communication on political participation by (a) explicating underlying mechanisms with political knowledge and efficacy and (b) exploring the role of the Internet in facilitating political participation. Based on the findings of this study, future studies should identify other constructs, which subsequently expand our understanding of how communication influences political participation.

REFERENCES


MEDIATING ROLE OF POLITICAL KNOWLEDGE AND EFFICACY


APPENDIX A

<table>
<thead>
<tr>
<th>TABLE A1</th>
<th>Descriptive Statistics</th>
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<tr>
<td></td>
<td>Minimum</td>
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<tr>
<td>Age</td>
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<tr>
<td>Gender*</td>
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<tr>
<td>Education</td>
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<tr>
<td>Income</td>
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<td>News media use</td>
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<td>Interpersonal political discussion</td>
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<tr>
<td>Online political messaging</td>
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<tr>
<td>Political knowledge</td>
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</tr>
<tr>
<td>Political efficacy</td>
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</tr>
<tr>
<td>Offline political participation</td>
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</tr>
<tr>
<td>Online political participation</td>
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</tbody>
</table>

*1 = male.
APPENDIX B

**TABLE B1**
Endogenous Variables Regressed on Control Variables

<table>
<thead>
<tr>
<th></th>
<th>Media use</th>
<th>Interpersonal discussion</th>
<th>Online messaging</th>
<th>Political knowledge</th>
<th>Political efficacy</th>
<th>Offline participation</th>
<th>Online participation</th>
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<tr>
<td>Age</td>
<td>.122***</td>
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<td>-.145***</td>
<td>.093**</td>
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<td>.148***</td>
<td>.022</td>
</tr>
<tr>
<td>Gender</td>
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<td>-.041</td>
<td>-.041</td>
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<td>.038</td>
<td>.043</td>
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<tr>
<td>Education</td>
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<td>.186***</td>
<td>.006</td>
<td>.219***</td>
<td>.170***</td>
<td>.266***</td>
<td>.218***</td>
</tr>
<tr>
<td>Income</td>
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<td>-.029</td>
<td>-.074*</td>
<td>.143***</td>
<td>-.055</td>
<td>.097**</td>
<td>-.054</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.03***</td>
<td>.038***</td>
<td>.027***</td>
<td>.122***</td>
<td>.028***</td>
<td>.128***</td>
<td>.044***</td>
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</table>

*Note. Standardized regression coefficients are reported.*

*p < .05. **p < .01. ***p < .001.