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NEWS MEDIA USE AND KNOWLEDGE ABOUT THE 2006 U.S. MIDTERM ELECTIONS: WHY EXPOSURE MATTERS IN VOTER LEARNING

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ABSTRACT

Examining voter learning in the 2006 US midterm elections, this study explores the relationships among motivation, media exposure, attention, elaboration, and knowledge gain in an expanded cognitive mediation model. The model characterizes voter learning from the news as a process driven by motivation, necessitated by exposure, and enhanced by attention and elaboration. With data collected from a sample of 455 respondents, the study tested the proposed model. Media exposure was found to have direct and indirect effects on attention, elaboration, and knowledge about the elections. The model was basically supported. Theoretical implications of the findings are discussed.

News media play an important role in political socialization (Chaffee, Nass, & Yang, 1990), which refers broadly to 'all political learning' (Greenstein, 1968, p. 551). The political knowledge that voters acquire from the media is subject to political information available to them in the media (Delli Carpini & Keeter, 1996). Decades of research in political communication have examined effects of news media use on political knowledge such as political affairs and elections (Chaffee & Schleuder, 1986; Robinson & Levy, 1986; Norris, 2000; Sotirovic & McLeod, 2004). Findings support the role of media exposure in learning about politics (Perloff, 1998; Weaver, 1996).

However, critics argued that much of the research examining the impact of news media on political knowledge was guided by a simple approach, where media exposure was believed to have direct effects on public affairs knowledge (Garramone, 1983; McLeod, Kosicki, & McLeod, 1994; Eveland, 2001, 2002). They contended that the learning effects of news media exposure

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are complex, mediated by cognitive variables because knowledge gain from media exposure involves active information processing. The cognitive measures that function as information-processing variables include attention and elaboration (Eveland, 2002). Attention refers to mental and perceptual focus on particular messages or stimuli to which one has been exposed (McGuire, 1978), while elaboration was defined as the inclination to think about the content of a message (Petty & Cacioppo, 1986). It functions as a means to learning (McLeod et al., 1999). According to the cognitive mediation model (CMM; Eveland, 2001, 2002; Eveland, Shah, & Kwak, 2003; Eveland, 2005), when people are motivated to process information about an event, they will be more attentive to messages in the news and more likely to engage in an elaborative processing, thus should learn more from the news.

One of the limitations to the cognitive mediation approach is that it simply assumes media exposure as a precondition of attention and elaboration, failing to integrate exposure into the learning process. Related to but different from attention and elaboration, exposure matters because one cannot attend to and elaborate on media content without it. Theoretically, exposure to media itself is an important media effect (Chaffee, Zhao, & Leshner, 1994; Sotirovic & McLeod, 2004; Drew & Weaver, 2006). Media exposure and attention were found to have differential effects on voter learning from news about elections (Drew & Weaver, 1990). Thus, the combined effects of exposure and attention, and exposure and elaboration on information processing will likely lead to greater learning effects than attention or elaboration alone. Examining voter knowledge in the 2006 midterm elections in the United States, this study aims to address the limitation by proposing a full model of learning from news to explore the relationships among motivation, exposure, attention, elaboration, and knowledge. The proposed model will bridge the gap between the direct learning approach and the cognitive mediation model.

THEORETICAL PERSPECTIVES ON LEARNING FROM NEWS

Voter Learning from the News Media: The Role of Exposure and Attention

Political communication research focusing on the learning effects of news media in elections dated back to the 1940s when Lazarsfeld, Berelson, and Gaudet (1948) conducted the milestone Erie County study. Past studies identified several key antecedents that affect one's exposure to news, including demographics, motivational factors, and interest or involvement in politics (Eveland, 2005; Liu & Eveland, 2005). Motivations of news media use, which include the dimensions of surveillance and guidance (Blumler, 1979; Eveland, 2001; Eveland et al., 2003; Beaudoin & Thorson, 2004), were found to be

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strongly correlated with use of the media to learn about political news (Robinson & Levy, 1986; Chaffee & Frank, 1996).

Controlling for these antecedents, media exposure is perhaps the most important predictor of learning from news (Rhee & Capella, 1997; Sotirovic & McLeod, 2004). Voters learn about issues, candidates, and traits of candidates (Weaver, 1996). Numerous studies have indicated that media exposure, such as reading newspapers, listening to news on radio, and viewing news on national or local TV, is positively related to voter knowledge about an election. In a comparative analysis of six elections in various states from 1984 to 1992, Zhao and Chaffee (1995) found that TV news was consistently informative regarding issue differences among candidates. A survey of North Carolina voters during the 1992 campaign found that TV news was the most significant predictor of knowledge of issue differences among candidates (Chaffee et al., 1994). Weaver and Drew (1995) also found exposure to TV news as a significant predictor of knowledge of candidate's issue positions. Sotirovic and McLeod (2004) reported viewing campaigns on TV contributed to voters' knowledge in the 2000 presidential election.

Since the mid-1990s, the internet has emerged as a new channel for political campaigns (Johnson, Braima, & Sothirajah, 1999; Kaye & Johnson, 2002). Past studies have found that online exposure to political information was related to political knowledge (Shah, McLeod, & Yoon, 2001). The linkage between exposure to campaign news online and knowledge of political leaders and parties was found in the 1998 midterm (Norris, 2000) and the 2000 presidential election (Kenski & Stroud, 2006; Sotirovic & McLeod, 2004). Drew and Weaver (2006) reported exposure to internet news as a significant predictor of voter learning in the 2004 presidential election.

Although previous research shows that exposure is a major predictor of learning from the news media about elections, it is not necessarily the most powerful predictor to explain the variance of knowledge acquisition (Graber, 1994). Other predictors such as attention also matter (Chaffee & Schleuder, 1986; Drew & Weaver, 1990; 1991; Weaver & Drew, 1995). As a mental activity, attention occurs after exposure (McGuire, 1978) and may enhance the impact of mediated messages (Stephan, 1985; Chaffee & Schleuder, 1986). Therefore, attention enables an individual mentally to focus on specific content after exposure and enhances the learning effect (Perse, 2001).

Drew and Weaver (1990) differentiated the construct of media attention from that of media exposure, which led to differential effects in learning from news about elections (Chaffee & Schleuder, 1986; Weaver & Drew, 2001; Moy, McCluskey, McCoy, & Spratt, 2004; Drew & Weaver, 2006). Specifically, past research found that attention was a better predictor of knowledge than media exposure. Chaffee et al. (1994) reported that attention to TV news was a significant predictor of knowledge about candidates in the

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1992 presidential election. Sotirovic and McLeod (2004) found attention to campaign news in newspapers and on national TV significantly predicted knowledge in the 2000 presidential election. Drew and Weaver (2006) examined the relationship between exposure and attention to various news media with information learned about the positions candidates held on issues in the 2004 presidential election. They found that attention to news on TV and online were significant predictors of voter learning about candidates' positions on issues.

A Full Model of Learning from the News: Integrating Exposure into the Cognitive Mediation Model

Recent research in processing of political information focused on additional factors that influence voter learning from the news because critics (Garramone, 1983; Eveland, 2002) argued that much of the research examining the impact of news media on political knowledge used a simple, direct-effects approach. The paradigm was characteristic of a passive audience learning from the news media. McLeod et al. (1994) characterized it as the simple stimulus-response perspective of direct effects. Critics argued that the learning effects of news media use are complex and subject to the influences of mediating variables such as cognitive variables, which in turn affect learning from the media. In other words, the impact of learning from news media on knowledge gain is mediated by information processing variables such as reflections on news that one is exposed to. The CMM offers such an approach (Eveland, 2001, 2002; Eveland et al., 2003). CMM proposes that when people are motivated to process information about an event, they tend to employ two types of information processing strategies: attention and elaboration. Attention and elaboration in turn will lead to a higher level of learning from the news.

CMM offers a useful approach to examine voter learning from the news, but it does not include media exposure. As a result, the model failed to specify the linkage between motivation and media exposure. It also failed to examine the relationships among exposure, attention, and elaboration. As reviewed earlier, decades of research consistently demonstrated that media exposure is an important prerequisite for learning from the news. Although media exposure accounted for only certain amount of variance in learning about politics (Graber, 1994), it is a necessary condition for learning. Lo and Chang (2006) contended that a full model of learning from the news should include media exposure. Thus, we propose an expanded CMM that incorporates the linkages among motivations of news media use, exposure, attention, elaboration, and knowledge.

The expanded model starts with motivations, which leads to exposure, which leads to attention, which in turn leads to elaboration. Elaboration leads to knowledge acquisition. In other words, the learning process is

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conceptualized as a process driven by motivations, necessitated by exposure, and enhanced by attention and elaboration. The most learning occurs after news has been attended to and elaborated on (Perse, 2001). In this study, we anticipate that voters motivated in using news media to be informed about the 2006 elections would devote considerable attention to election news, engage in elaborative processing, and then comprehend the content of the news. Accordingly, we expect that this learning process will result in knowledge gain about the elections.

To test the expanded model, we propose the first hypothesis concerning the role of motivations for using the media about the 2006 midterm elections in influencing exposure to election news. Motivation is an important determinant of information processing (Eveland, 2001, 2002). As Eveland (2002) argued, motivations are 'what drive the processing of information' (p. 27). Past research found that media motivations, particularly the surveillance motivation to stay informed about events, affected exposure (Levy, 1977; Rubin, 1983; Vincent & Basil, 1997; Beaudoin & Thorson, 2004) and had a positive impact on attention to and elaboration of news (Eveland, 2001; Eveland et al., 2003). Thus, we hypothesize that

> H1: Surveillance motivation will be positively related to exposure to, attention to, and elaboration of the 2006 midterm election news.

As the most important precondition for learning from the news (Rhee & Capella, 1997), media exposure was found to be a positive correlate of attention (Chaffee & Schleuder, 1986; Drew & Weaver, 1990), elaboration (Lo & Chang, 2006), and election knowledge (Bennett, Flickinger, Baker, Rhine, & Bennett, 1996; Chaffee & Frank 1996; Weaver & Drew, 2001; Norris & Sanders, 2003; Drew & Weaver, 2006). Theoretically, attention and elaboration represent two important forms of postexposure activity (Levy & Windahl, 1984). Thus, we propose that

> H2: Media exposure will be positively related to attention to, elaboration of, and knowledge about the 2006 midterm elections.

Concerning the effects of attention on elaboration and knowledge gain, we formulated the third hypothesis. Attention is seen as an important variable in the processing of media messages and is particularly important in affecting what people learn from the news (Chaffee & Schleuder, 1986; Eveland, 2001, 2002). According to the theory of selective attention (Zillmann & Bryant, 1985), audiences are more likely to pay attention to subjects relevant to their interests or congruent to their information goals. Attention comes before the elaborative processing of information. As Eveland (2001) noted, in 'essence, those who engage in elaborative processing must first pay attention to the content to bring it to consciousness where elaboration may then take place as an additional process' (p. 577). Past studies found that attention was positively

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related to elaboration and political learning (Perse, 2001; Eveland, 2001, 2002; Lo & Chang, 2006). We hypothesize that

> H3: Attention to the 2006 midterm elections will be positively related to elaboration of the elections news and knowledge about the elections.

Finally, concerning the role of elaboration on knowledge gain, we formulated one hypothesis. Elaboration was considered as an important mental process that relates incoming information into existing knowledge (Eveland, 2002; Perse, 2001) because it represents one form of activity after media use (Levy & Windahl, 1984). For instance, after reading an election news story, a voter may evaluate the implications of the story and think about the consequences of the elections. These elaborations help create additional ways of integrating the new information with prior knowledge (Perse, 2001) as 'a central determinant' of learning from the news (Eveland & Dunwoody, 2002, p. 41). Numerous studies have found that elaboration was positively related to political learning (McLeod et al., 1999; Eveland, 2001; Beaudoin & Thorson, 2004). Consequently we expect:

> H4: Elaboration of 2006 midterm elections news will be positively related to knowledge about the elections.

METHOD

The 2006 midterm elections in the United States received extensive media coverage because they involved 36 gubernatorial races, the complete election of the House of Representatives, and more than 150 state and local referenda, measures, and initiatives. The data were collected in a survey conducted in the last week of October 2006 prior to the elections. Young voters were sampled because they belong to the net generation. The sample included college students enrolled in three classes in mass communication and political science at a public university in the Southeast. Prior approval was sought and anonymity was assured before distributing the questionnaire. No credit was given; the survey was self-administered and conducted at the end of class. The enrollment of the three classes totaled 656, among which 455 completed the survey successfully.

Of the sample, 32.7 percent were males and 67.3 percent were females. The mean age was 19.64 years, ranging from 17 to 41 years. More than two-thirds (68.2 percent) of the respondents were freshmen or sophomores, while 23.0 percent were juniors, and 8.8 percent were seniors. Among the 455 respondents, 43.2 percent identified themselves as supporters of the Democratic Party, 32.8 percent of the Republican Party, and 21.9 percent of independent candidates. In terms of race, 84.8 percent were white. African Americans accounted for 11.2 percent of the sample, while Hispanics and

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Asian Americans accounted for 1 percent each. The sample was not homogeneous, but the demographics may not reflect the profile of the student population of the university.

Measures of Motivation of News Media Use

To assess the surveillance motivation of news media use, respondents were asked to rate the helpfulness of news media (i) to understand what is going on in politics, (ii) to keep up with main political events of the day, (iii) to judge what political leaders are really like, (iv) to see how the candidates stand on issues, and (v) to judge who is likely to win in the 2006 elections. The scale ranged from 1 (strongly disagree) to 5 (strongly agree). Results of exploratory factor analysis showed that the five items were loaded on a single factor. With an eigenvalue of 2.52, the one-factor solution explained 50.42 percent of the variance. A composite measure of surveillance motivation was constructed by adding the five items and dividing by five ($M = 3.51$, $SD = 0.70$, $\alpha = .75$).

Measures of Media Exposure

Respondents were asked to indicate the number of days per week that they (i) read newspapers ($M = 3.05$, $SD = 1.83$), (ii) watched local/national TV news ($M = 3.20$, $SD = 2.04$), and (iii) read news on the internet ($M = 3.73$, $SD = 2.60$).

Measures of Attention to Election News

Respondents were asked to indicate how much attention they paid to news about the 2006 elections when (i) reading the newspaper, (ii) viewing TV news, and (iii) using the internet. A 5-point scale was used, where 1 meant 'little attention' and 5 meant 'a lot of attention'. Results of exploratory factor analysis showed that the three items were loaded on a single factor. With an eigenvalue of 2.10, the one-factor solution explained 70.14 percent of the variance. A composite measure of attention to election news was constructed by adding the three items and dividing by three ($M = 2.67$, $SD = 1.07$, $\alpha = .79$).

Measures of Elaboration about Election News

To assess elaboration, respondents were requested to indicate the extent to which the following statements applied to them: (i) I often think about the 2006 election stories that I have seen or read in the news; (ii) I often interpret 2006 election stories in a way that helps me make sense of them; (iii) Often when I've learned something about the 2006 elections, I will recall it later and think about it; (iv) I often tie what I see on TV news or read in newspapers to

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ideas I have had before about the 2006 elections, and (v) I often try to relate what I get in the media about the 2006 elections to my own experiences. The scale ranged from 1 (does not apply at all) to 5 (applies very much). A single factor solution emerged from exploratory factor analysis, showing that the five items measured the same underlying construct. The eigenvalue was 3.81; the one-factor solution explained 76.82 percent of the variance. A composite measure of elaboration was constructed by adding these five items and dividing by five ($M = 2.62$, $SD = 1.02$, $\alpha = .92$).

Measures of Knowledge about the 2006 Midterm Elections

Five questions were used to measure respondents' knowledge of candidates in the race and their positions on some hotly debated issues, which were covered in local media. The first question was about the frequency of mid-term elections, and the second was about the total of gubernatorial races in the country. Then, in a state that held a gubernatorial race in 2006, respondents were requested to identify the opponent of the incumbent Lt Governor. Four choices were provided. In addition, two questions about issue positions of the candidates for governor were asked. Specifically, on the issue of school choice, they were asked to identify which candidate was more likely to oppose tuition tax credit plans. On the issue of taxes, they were also asked to identify which candidate was more likely to favor reduction of personal income taxes. One point was awarded for each correct answer. A knowledge index was created by adding the three items. The index ranged from 0 to 5 for each respondent ($M = 1.32$, $SD = 1.24$, $\alpha = .62$).

FINDINGS

To test the four hypotheses, partial correlations were used. H1 predicted that the surveillance motivation would be positively correlated with exposure to, attention to, and elaboration of the 2006 election news. Results show that the surveillance motivation was significantly related to media exposure ($pr = .13$, $p < .01$ for newspapers; $pr = .17$, $p < .001$ for TV news; and $pr = .13$, $p < .01$ for the internet), attention ($pr = .37$, $p < .001$), and elaboration ($pr = .41$, $p < .001$) after controlling for gender, age, race, and political party preference. H1 was supported.

H2 predicted a positive relationship between exposure, attention, elaboration, and knowledge about the 2006 midterm elections. As expected, exposure was significantly related to attention ($pr = .33$, $p < .001$ for newspapers; $pr = .33$, $p < .001$ for TV news; and $pr = .23$, $p < .001$ for the internet), elaboration ($pr = .26$, $p < .01$ for newspapers; $pr = .30$, $p < .001$ for TV news; and $pr = .26$, $p < .01$ for the internet), and knowledge ($pr = .23$, $p < .01$ for newspapers; $pr = .24$, $p < .001$ for TV news; and $pr = .06$, $p > .05$ for

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the internet) after controlling for gender, age, race, and political party preference. H2 was basically supported.

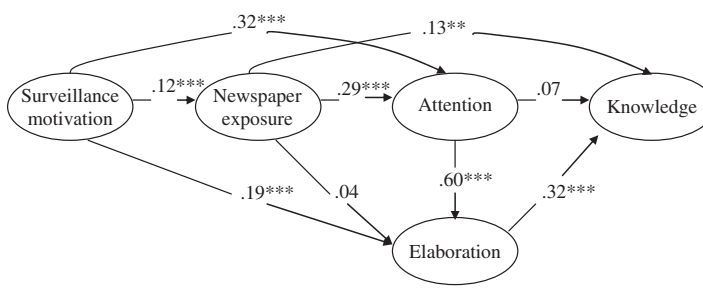
H3 predicted that attention would be positively correlated with elaboration and knowledge about the 2006 midterm elections. Results show that attention was strongly related to elaboration ($pr = .71$, $p < .001$) and knowledge ($pr = .24$, $p < .001$) after controlling for gender, age, race, and political party preference. H3 was supported. H4 predicted a positive relationship between elaboration and knowledge about the 2006 midterm elections. Results show that elaboration was positively related to knowledge about the 2006 midterm elections ($pr = .40$, $p < .001$) after controlling for gender, age, race, and political party preference. H4 was supported.

Path Analysis

To further test the proposed model, three path analyses were performed with each including four regression analyses. The three path analyses were run respectively for exposure to newspapers, TV news, and the internet. In the first regression analysis, exposure was regressed on the surveillance motivation and the four control variables (e.g., gender, age, race, and political party preference). As Figures 1–3 show, the surveillance motivation was a significant predictor of exposure after the influences of gender, age, race, and political party preference were taken into account.

In the second regression analysis, attention was regressed on the surveillance motivation, exposure, and the four control variables ($R^2 = .21$ for newspapers; $R^2 = .20$ for TV exposure; and $R^2 = .16$ for internet exposure). Results show that the surveillance motivation held predictive power over attention after the influences of exposure and the four control variables were taken into consideration. As expected, newspaper exposure, TV exposure, and internet exposure were significant predictors of attention after the influences of the surveillance motivation and the four control variables were accounted for.

Figure 1 **Path analysis testing the expanded CMM (newspaper exposure).**



Note: The path coefficients are standardized β's controlling for previous variables plus the four control variables of age, gender, race, and political party preference ($N = 436$).

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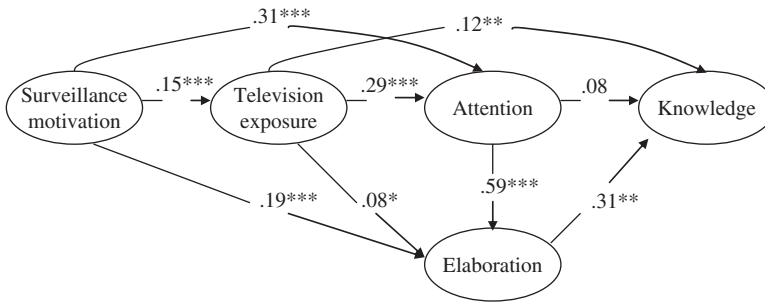
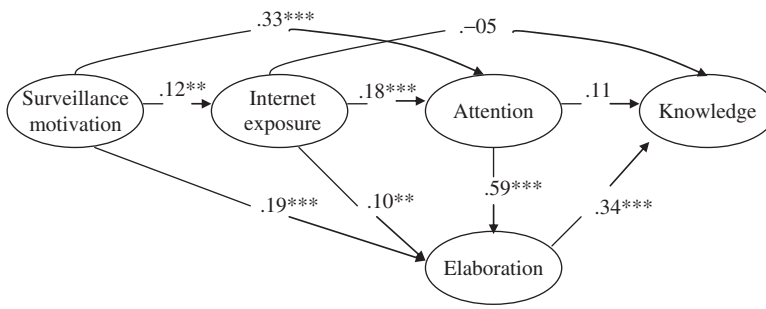
FIGURE 2 **Path analysis testing the expanded CMM (TV exposure).**



Note: The path coefficients are standardized β's controlling for previous variables plus the four control variables of age, gender, race, and political party preference ($N = 436$).

FIGURE 3 **Path analysis testing the expanded CMM (internet exposure).**



Note: The path coefficients are standardized β's controlling for previous variables plus the four control variables of age, gender, race, and political party preference ($N = 436$).

In the third regression analysis, elaboration was regressed on the surveillance motivation, exposure, attention, and the four control variables ($R^2 = .51$ for the three media types). Results show that the surveillance motivation and attention were significant predictors of elaboration after the influences of exposure and the four control variables were taken into consideration. In addition, TV exposure and internet exposure were significant predictors of elaboration. However, newspaper exposure was not.

The fourth regression analysis regressed knowledge about the 2006 midterm elections on the surveillance motivation, exposure, attention, elaboration, and the four control variables ($R^2 = .19$ for newspaper exposure; $R^2 = .18$ for TV exposure; and $R^2 = .17$ for internet exposure). When the influences of all the predictors were considered simultaneously, newspaper exposure and TV exposure together with elaboration were significant predictors of election knowledge (Figures 1–3). However, internet exposure and the surveillance motivation ($\beta = -.01$, $p > .05$) were not. These results are consistent with partial correlation results. Newspaper exposure was correlated more strongly with

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knowledge about the 2006 midterm elections ($pr = .23$, $p < .001$) than was online news exposure ($pr = .08$, $p > .05$) after controlling for gender, age, race, and political party preference. A Z-test for the two partial correlation coefficients shows that the difference was statistically significant ($Z = 2.27$, $p < .05$). Similarly, TV news exposure was correlated more strongly with knowledge ($pr = .24$, $p < .001$) than was exposure to online news ($pr = .08$, $p > .05$). The difference was statistically significant ($Z = 2.42$, $p < .01$).

Attention was surprisingly not a significant predictor of election knowledge after the influences of the surveillance motivation, exposure, elaboration, and the four control variables were accounted for. A close examination of the relationship between attention and elaboration shows that the two were highly correlated ($r = .71$, $p < .001$), indicating a problem of multicollinearity in the fourth multiple regression analysis that included attention and elaboration as independent variables in predicting election knowledge. It was multicollinearity that led to substantial reduction in the estimated standardized regression coefficient of attention on predicting election knowledge.

To get an accurate estimate of the effects of attention and elaboration on election knowledge, three separate hierarchical regression analyses were run with

TABLE 1 **Hierarchical regression analysis predicting knowledge about the 2006 US midterm elections**

Predictor	*Run 1*	*Run 2*	*Run 3*
Block 1: Demographics			
Gender	0.08	0.09	0.10*
Age	−0.02	−0.03	−0.03
Race	0.16***	0.14**	0.14**
Political party preference	−0.07	−0.05	−0.05
Adjusted R^2	0.02	0.02	0.02
Block 2: Motivation			
Surveillance motivation	0.05	0.00	−0.01
Incremental adjusted R^2	0.02	0.02	0.02
Block 3: Media use			
Newspaper exposure	0.14**	0.14**	0.13**
Television exposure	0.14**	0.12**	0.12**
Internet exposure	−0.05	−0.08	−0.08
Incremental adjusted R^2	0.07	0.07	0.07
Block 4: Attention/Elaboration			
Attention	0.24***		0.05
Elaboration		0.35***	0.32***
Incremental adjusted R^2	0.04	0.09	0.09
Total adjusted R^2	0.15	0.20	0.20

***$p < .001$; **$p < .01$; *$p < .05$.

Note: β weights are from final regression equation with all blocks of variables in the model. Variables coded or recoded as follows: gender (1 = male, 0 = female); race (1 = white, 0 = others); political party preference (1 = Republicans, 2 = others). $N = 436$.

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election knowledge as the criterion variable. In the first run (see column 1 in Table 1), the first block of the regression equation entered gender, age, race, and political party preference as control variables. The second block entered the surveillance motivation. The third block included newspaper exposure, TV exposure, and internet exposure. The final block was attention. Results show that newspaper exposure and TV exposure were significantly related to election knowledge. But attention was the strongest predictor of election knowledge.

In the second run (shown in column 2 of Table 1), control variables were entered first, followed by the surveillance motivation and the three media exposure variables. The final block was elaboration. Results show that newspaper exposure and TV exposure were significant correlates of election knowledge. But elaboration was the strongest predictor of election knowledge.

In the third run (see column 3 in Table 1), the first three control blocks were unchanged. What was changed was in the final block. The final block entered both attention and elaboration. Results show that elaboration turned out to be the strongest predictor of election knowledge at the expense of attention, which became nonsignificant. These results indicate that both attention and elaboration were strong predictors of election knowledge when multicollinearity was controlled.

DISCUSSION

This study seeks to bridge the gap between the stimulus–response perspective of direct learning effects with the CMM. Our proposed model integrates media exposure into the learning process. In the context of learning about 2006 midterm elections, we hypothesized that the surveillance motivation would predict exposure, which would predict attention, which in turn would predict elaboration, which would further predict learning from the news. Results provided empirical support for the linkages. Exposure to election news was found to have direct and indirect effects on attention, elaboration, and knowledge about the elections. These results indicate that exposure, attention, and elaboration had additive effects on knowledge acquisition.

As anticipated, motivation of news media use predicted media exposure, attention, and elaboration. But it did not have any direct effect on knowledge gain, a result consistent with past research (Eveland, 2002). Further, attention and elaboration were found to be correlates of learning about the elections. The effects of attention on election knowledge appeared to be indirect, working through elaboration, which had a direct and the strongest effect on knowledge gain. These results show that the more voters were engaged, more mental resources they put into processing of election news, the more they learned about the elections.

In conclusion, our proposed model received basic support. Media exposure should be an integral part of the voter information-processing process.

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The theoretical implication is that the CMM does not need to pit against the stimulus–response perspective of direct learning effects. Rather, as we demonstrated, the two research streams can be integrated in seeking a fuller understanding of voter learning about elections from the news.

It is worth noting that results of this study suggest the effects of traditional media use on knowledge about the 2006 midterm elections were stronger than online media. Although use of traditional media is declining, users of traditional media committed more cognitive resources, such as attention, to reading newspapers, and viewing TV news. As a result, they learned more from these media. This result is consistent with past studies (Johnson et al., 1999), which reported nontraditional media contributed little to voter knowledge in the 1996 presidential campaign. It was in the 2004 presidential election that internet exposure became a significant predictor (Drew & Weaver, 2006). Our result is consistent with the conclusion of Chaffee et al. (1994) who argued that the influences of traditional media were strong and stable.

This study has several limitations. Use of a convenience sample, not a random sample from the population to which the results are generalizable, is not optimal. But it was not fatal because it was not our goal to generalize the results. Rather, the focus was on hypothesis testing. In doing so, we applied our prior theoretical knowledge about media use and political effects to the fullest extent so that the results would be valid. Still, use of a convenience sample may have presented a limitation because statistical significance level may not be appropriate for convenience samples. Further research should use a cross-sectional sample.

Another limitation is the cross-section design of the study. The relationships should not be interpreted as causal. In addition, the linkage between attention and elaboration is a limitation. The correlation was high largely due to measures used. As a result, attention became a nonsignificant predictor in multivariate analyses. A direction for future research is to refine the proposed model to ascertain whether attention works through elaboration or has a direct effect on knowledge.

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