

News Media Use, Citizen Communication, and Civic Participation: A Communication Mediation Model*

Jisuk Woo** and Min-Gyu Kim***

Abstract: The present study examined the structural relationships among news media use, interpersonal communication, and civic participation and how these relationships differed across educational backgrounds. The data from the sample of 1, 215 South Koreans adequately fit the hypothesized model. Television news watching and Internet news searching positively influenced the level of civic participation, while newspaper reading did not. Being engaged in political talk with family, friends, and colleagues was related to a higher level of civic participation. The effect of newspaper reading on civic participation operated through the effect of newspaper reading on everyday talk. Finally, Internet news searching played a different role in influencing interpersonal communication depending on the person's educational background. The results suggest that those with different educational backgrounds have different paths by which they engage in communication and civic participation.

Keywords: civic participation, news media use, political talk, online discussion, mediation, education.

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INTRODUCTION

Citizenship is thought to be the foundation of a democratic society. Although citizenship is comprised of various attributes, active participation in political and civic affairs has been considered one of its essential elements (Delli Carpini and Keeter 1996). Civic participation is understood as citizens' efforts to pay attention to the issues of the society or community that they belong to, seek relevant information to learn about problems and possible solutions, and act in order to influence processes and their outcomes. Thus, different from direct political participation such as voting in elections and affiliating with political parties, civic participation encompasses various collective activities such as affiliating with local social organizations and attending neighborhood meetings. How actively citizens participate in organized activities, how often they attend social meetings, and how strongly they are affiliated with social and local organizations are considered indicators of their level of civic participation (Shah, Kwack, and Holbert 2001).

What are the main factors that influence the level of civic participation? How can we anticipate or encourage civic participation? These are important questions, considering the importance of civic participation in sustaining meaningful democracy (Scheufele 2002). Putnam (2000) has pointed out that civic engagement as seen in club memberships and attendance at neighborhood meetings has decreased markedly in the past years. In an effort to explain this decreased level of civic participation, Putnam noted that factors such as the lack of money or leisure time do not seem to explain the decrease in civic participation, that longer labor hours often relate to higher level of civic participation, and that media use patterns, especially an increase in television viewing and a decline in newspaper reading, seem to be the culprits behind the erosion of civic culture (Putnam 1995, 2000).

The relationship between media use and civic participation has frequently been studied. As news media contribute to a rich information environment, they could help increase the level of participation rather than decrease it, but studies of the relationship between media use and civic participation have provided inconclusive results and it is not yet clear exactly how civic participation is related to mass media use. This study examines the relationship between civic participation and different kinds of news media use—newspaper reading, television viewing, and Internet news searching.

Civic participation has also been found to be related to communication behavior, including not only media use but also interpersonal communication (Brehm and Rahn 1997; Norris 1996). Previous research in political communication has focused on how news media use and interpersonal communication about politics play complementary roles in civic participation (McLeod, Daily, Guo, Eveland, Bayer, and Yang 1996;

Shah, McLeod, and Yoon 2001; Chaffee and Mutz 1988). It has often been argued that interpersonal communication largely mediates the effects of news media use on civic engagement (McLeod, Zubric, Keum, Deshpande, Cho, and Stein 2001; Sotirovic and McLeod 2001). Thus, this study examined how the effects of each news medium on civic participation are mediated by interpersonal communication among family and friends and by participation in online discussions. In addition, previous studies have found that education seems to be the most important indicator of the level of civic participation. This study examined how the relationship among use of news media, interpersonal communication, and civic participation differs in groups with different education levels.

LITERATURE REVIEW

Political scientists and sociologists considered civic participation and engagement as a necessary condition for a healthy and functioning democracy (Scheufele 2002). Civic participation has also been discussed in relation to Putnam's (1993, 1995, 2000) concept of social capital, which is often used to explain that basic elements of community life such as interpersonal trust and communication networks provide means for citizens to cooperate on collective problems. Social capital research involves diverse and interrelated concepts, among which civic participation is considered an important individual-level indicator of social capital (Shah, Cho, Eveland, and Kwak 2005). This section of the paper outlines previous literature on civic participation and other elements such as news media use, interpersonal communication, and educational background of citizens.

News Media Use

Active media use has been believed to positively influence voting behavior. On the other hand, it has also been found that mass media use increases political cynicism and eventually decreases political participation and voting (Cappella and Jamieson 1997). These seemingly conflicting results may be partially attributable to different influences of different media. Newspaper reading has been found positively related to various political factors such as political efficacy and political participation (McLeod and McDonald 1985; Miller and Reese 1982). Those who watch television more have been found to have lower levels of social and civic participation (Norris 1996). It has also been argued that television promotes political apathy and cynicism (Robinson 1976). In the same vein, Putnam (1995) suggested that television viewing is the culprit

behind lowered participation, as those who watch television more show lower levels of social activity and civic engagement. On the other hand, it was found that television viewing could positively relate to knowledge of public issues, political efficacy, and participation (McLeod and McDonald 1985). Thus, it is difficult to make a decisive statement regarding the relationship between television viewing and participation. In that context, the role of newspapers is also somewhat indeterminate, as newspaper reading may take away time from participating in organizations.

Further studies regarding the role of media in civic and political participation have paid attention to motivational aspects of media use as well as the indirect nature of the influence of media on participation. For example, it was argued that any media, if it is used for informational purpose as opposed to expressive purpose, will foster interpersonal communication and online interactive communication, which contributes to civic participation (Shah et al. 2005). It is not the medium itself, this argument suggests, but the reason for using it that influences civic engagement (Shah et al. 2005). Thus rather than examining how much time was spent reading newspapers or watching television programs or navigating Internet sites, future studies should consider the purpose of such media use.

Previous studies have suggested that even if news media use has an overall positive effect on political participation, this main effect includes differences in its effect on people who talk to others about politics frequently and those who do not (Scheufele 2002). Scheufele (2002) argued that the impact of media messages on citizens' participatory behavior should be highest if they expose themselves to information in mass media and at the same time talk about it with other people, learn about different perspectives, and develop a better understanding of the ways of solving the problem. Therefore, as the effect of news media use on participation seems to be moderated by communication with others, it is important to understand the interactive relationship between mass media use and interpersonal communication in their impact on participatory behavior.

Mediation of Communication

Previous studies have indicated that interpersonal communication largely mediates the effects of news media use on civic engagement (McLeod et al. 2001; Sotirovic and McLeod 2001). The effects of media use on participation are oftentimes indirect, occurring through their effects on discussion about politics. This communication mediation effect may be well explained by the literature on deliberative democracy in political communication. Scheufele (2000, 727) said that "discussion among citizens has long been identified as a necessary condition for a healthy and functioning democ-

racity." He empirically tested this belief, finding that those who discuss national politics, local politics, and neighborhood issues more frequently with friends, family, and colleagues displayed higher levels of political knowledge and participation (Scheufele 2000). Several studies have found that large parts of private conversations in the home concerned public or political issues such as education and crime, sometimes more so than they concerned personal or family issues (Kim, Wyatt, and Katz 1999; VanLear 1987). Other studies also found that the impact of news media use on citizens' participatory behavior might be contingent on discussing politics with others (Eliasoph 1998; Scheufele, Moy, and Freidland 1999).

Therefore, frequency of political talk with family and friends was noted as not only influencing the level of civic participation but also mediating the effects of media use on civic engagement. Talking about policies, government, and social issues with people around us seems to enhance political knowledge and help us form more sophisticated opinions, which in turn enhance participation (Eliasoph 1998). In addition, it was found that news media use has a different effect on a person's participation depending on whether the majority of that person's discussions take place face to face or via online discussion forums (Scheufele 2002). Thus, interaction between mass and interpersonal communication may depend somewhat on the medium that citizens use for interpersonal communication. Future studies need to include the role of the Internet in influencing civic participation and in mediating the media effects as well.

Role of the Internet

The rise of the Internet has generated mostly positive expectations regarding its democratic potential, because of its interactive and expressive nature (Price and Cappella 2002). Online communication was expected to increase citizens' public knowledge, which in turn would result in higher political participation (Abramson, Arterton, and Orren 1988; Delli Carpini and Keeter 1996). It was found that people who offer their opinions and read others' opinions on discussion boards and online discussion forums and who are engaged in email communication show higher levels of civic and political participation than those who do not (Bimber 1998, 1999, 2001; Shah et al. 2001; Weber and Bergman 2001). Studies have shown that voting rates among Internet users are higher than among those who do not use the Internet (Katz 1997; Pew Research Center 1998), Internet use relates to an increase in political activity (Browning 1996; Rheingold 1993), and those who use the Internet have a high level of political interest (Johnson and Kaye 1998).

However, other studies found that increased use of the Internet is related to decreased communication with family and friends (Kraut, Patterson, Lundmark, Kiesler,

Mukopadhyay, and Scherlis 1998). It was argued that using the Internet is similar to watching television, which generally implies physical inactivity and limited face-to-face social interaction (Kraut et al. 1998). It may also be that time spent using the Internet takes away time for civic engagement. Putnam (2000) argued that those who access news through the Internet tend to be engaged in fewer civic activities than those who access news through traditional mass media such as newspapers, radio, and television. In addition, studies of online political discussions have provided rather doubtful results about the Internet's potential as a sphere of deliberation and democracy (Mutz 2006).

Despite these doubts about a positive relationship between Internet use and civic engagement, informational use of the Internet was found to clearly encourage community involvement and promote civic participation (Norris 1998; Sha, McLeod, and Yoon 2001). Shah et al. (2005) made the criticism that research about the Internet's implications for civic engagement considered only the volume of media use and not the patterns of use. They suggested focusing on different functions and uses of the Internet, such as information seeking and self-expression, and examining how they play complementary roles in shaping the level of civic participation. Using two-wave national panel survey data from the United States, they found that information seeking through both traditional media and online media leads to political discussion offline and civic messaging online, which in turn influence civic participation. These findings suggest that future study needs to consider how the use of the Internet both as an information resource and as a discussion forum relates to civic participation, by separately analyzing these two roles.

Education

Among various sociodemographic factors, education is one of the most important predictors of citizens' levels of engagement in public organizations. Previous studies have consistently shown that more educated people more frequently participate in voluntary work, public committee meetings, and political rallies. These results are consistent across other variables such as income, age, and race (Putnam 2000). This seems to be related to the fact that the educated have more resources and a greater capacity to participate in civic organizations and social networks. On the other hand, Nie, Junn, and Stehlik-Barry (1996) noted a relative aspect in the effects of education on political participation. They found that while educational attainment has an important impact on political engagement, increases in education level do not necessarily lead to increases in engagement over time, because the increasingly competitive educational environment requires people to spend less time on politics and more on their education.

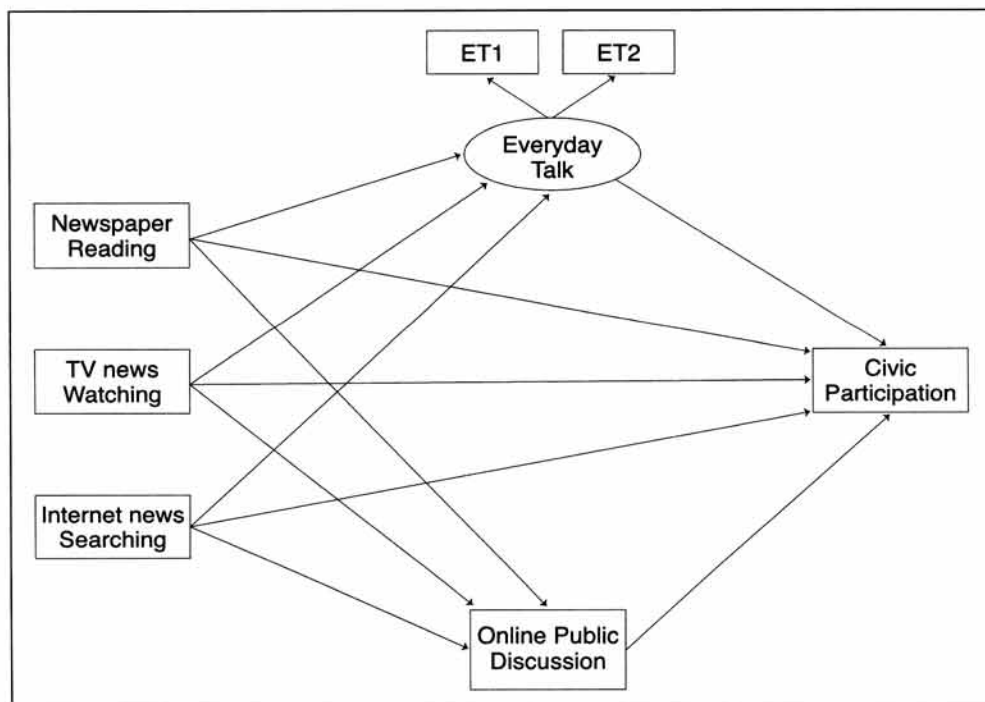
Educational background seems to play a role in the relationship among media use,

interpersonal communication, and civic participation as well. Eveland and Scheufele (2000) argued that less educated people would have more difficulty comprehending information in newspapers and more ability to process information presented on television. Therefore, it would be important to explore how education plays a role in how use of different news media and interpersonal communication influence civic participation.

HYPOTHETICAL MODEL

The purpose of this study was to examine the structural relationships between news media use, interpersonal communication among citizens, and civic participation. It examined how news media use was related to the level of civic participation and to the rate of online discussions and everyday political conversations; how participation in online discussions and everyday political talk was related to the level of civic participa-

Figure 1. Hypothetical Model



Note: ET1 means how often citizens talked about (1) matters relating to the government (including the administration, the president, Congress, and the courts) with other people including family members, friends, and colleagues: ET2 means how often citizens talked about (2) social and local issues with other people including family members, friends, and colleagues.

tion; and how the structural relationships among news media use, online discussions, everyday political talk, and level of civic participation differed across educational backgrounds. In order to explore the effects of informational use of the media, this study examined uses of news media such as reading news articles, watching news programs, and searching the Internet for news. To study expressive use of the media, Shah et al. (2005) focused on civic messaging such as the use of email to discuss politics with someone, write a letter to the editor of a newspaper, write to a political organization, or organize a social activity. But most Koreans who communicate online participate in online political boards and forums rather than using email to communicate about politics. Thus, this study focused on participation in online discussion forums and boards to study expressive use of the Internet. The hypothetical model is presented in Figure 1.

METHOD

This section describes data source and sample of the study and measurements of the variables. It also explains the method of analysis.

Data Source and Sample

We used the 2007 Citizen Perception Survey (CPS) conducted by the Knowledge Center for Public Administration and Policy at Seoul National University and Gallup Korea between November 12 and 27, 2007, a nationwide sample of enfranchised South Korean citizens. The data on demographic, social, and familial variables, perceptions about society and government, and media use and conversation were obtained by self-completed questionnaires and face-to-face interviews. The 2007 CPS sample consists of 1,215 citizens-600 females (49.4%) and 615 males (50.6%), with a mean age of 40.97 and a standard deviation of 13.08. Eighty-five respondents (7.0%) received six years of education or less (elementary school), 87 (7.2%) received more than six but no more than nine years of education (middle school), 614 (50.5%) received more than nine but no more than twelve years of education (high school), and 429 (35.3%) received more than twelve years of education (at least some college).

Measures

The survey measured civic participation, newspaper reading, television news watching, Internet news searching, participation in online discussions, and participation in everyday political talk.

To measure the degree of civic participation, the survey asked respondents how actively they affiliated with local organizations such as resident associations or attended town meetings and other activities. Responses were measured on a five-point scale ranging from 1 (not at all) to 5 (thoroughly).

To measure newspaper reading, respondents were asked how often they read a newspaper. Responses were measured on a four-point scale ranging from 1 (never) to 4 (almost daily). To measure television news watching, respondents were asked how much time they spent watching television news programs—including issues programs, culture and education programs, and documentaries. Responses were measured on a four-point scale ranging from 1 (never) to 4 (almost daily). To measure Internet news searching, respondents were asked how much time they spent browsing the Internet for news. Responses were measured on a four-point scale ranging from 1 (never) to 4 (almost daily).

Respondents were asked how often they participated in online discussions of political and public issues by posting their opinions or reading other people's postings on discussion boards devoted to such issues. The responses were measured on a four-point scale ranging from 1 (never) to 4 (almost daily).

Respondents were asked how often they talked about two types of issues with other people including family members, friends, and colleagues: (1) matters relating to the government (including the administration, the president, Congress, and the courts), and (2) social and local issues. Responses were measured on a four-point scale ranging from 1 (never) to 4 (often). The reliability of the responses regarding the two types of issues was adequate ($r = .679$).

Control Variables

This study controlled for demographic variables including age, gender, income, and years of education—and for political inclination, which was measured by self-reports on a five-point scale ranging from 1 (very liberal) to 5 (very conservative).

Missing Data

The data of this study did not have many missing cases, but each indicator had one or two. With regard to the normality assumptions of the full-information maximum-likelihood estimation (Enders and Bandalos 2001; Schafer and Olsen 1998), we investigated the normality of each variable in terms of its kurtosis and skewness. The normality assumption was well met for all the variables used in our model. Descriptive statistics of indicators are presented in table 1.

Table 1. Overall Descriptive Statistics

	More education (N = 429)				Less education (N = 786)			
	Mean	SD	Skew	Kurtosis	Mean	SD	Skew	Kurtosis
Newspaper reading	1.580	0.695	0.992	0.524	1.369	0.621	1.593	1.904
Television news watching	2.201	0.926	-0.018	-1.202	2.393	1.069	-0.087	-1.316
Internet news searching	2.329	1.024	0.134	-1.136	1.677	0.979	1.149	-0.033
Online discussion	2.180	0.578	0.697	1.375	1.679	0.693	0.938	1.141
Everyday talk 1	1.942	0.719	0.843	1.309	1.777	0.714	0.902	1.234
Everyday talk 2	2.051	0.692	0.698	1.101	1.915	0.722	0.760	0.981
Civic participation	1.786	1.172	1.193	0.103	1.795	1.194	1.250	0.222

Note: More education = 13 years of education or more; less education = 12 years of education or less.

Statistical Analysis

We used structural equation modeling for our analyses. We developed a full structural model first as a hypothetical model, in which news media use influenced civic participation through online discussions and everyday talk. Then we used the residualized covariance matrix as input in the hypothetical model to regulate control variables (Cho, Shah, McLeod, McLeod, Scholl, and Gotlieb 2009; Shah, Cho, Nah, Gotlieb, Hwang, and Lee 2007). Last, we compared the effects of news media use, online discussions, and everyday talk on civic participation between the group with more education (thirteen years or more) and the group with less education (twelve years or less). We confirmed metric invariance of the hypothetical model across the samples in order to perform a multigroup analysis (Hong, Malik, and Lee 2003; Levesque, Zuehlke, Stanek, and Ryan 2004).

RESULTS

In structural equation modeling, a matrix of correlations among the measured variables should be presented (Klem 2004, 234). Before testing the hypothetical model across the samples, we conducted correlation analysis among the measured variables in each sample. The correlation matrix for the measures of newspaper reading, television news watching, Internet news searching, online discussion, everyday talk, and civic participation for each group is presented in table 2.

Table 2. Bivariate Pearson's Correlation Matrix among Measured Variables

	NR	TW	IS	OD	ET1	ET2	CP
NR	–	.069	.201**	.112**	.240**	.215**	.033
TW	.149**	–	-.156**	-.185**	.123**	.093*	.186**
IS	.119*	.105*	–	.585**	.019	.013	-.102**
OD	.066	-.006	.338**	–	.056	.065	-.018
ET1	.194**	.112*	.140**	.109*	–	.705**	.235**
ET2	.171**	.042	.141**	.117*	.630**	–	.197**
CP	.122*	.102*	-.109*	.005	.146**	.198**	–

Note: Correlation coefficients below the diagonal are for the group with more education (N = 429), and those above the diagonal are for the group with less education (N = 786). NR = newspaper reading; TW = television news watching; IS = Internet news searching; OD = online discussion; ET = everyday talk; CP = civic participation.

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

Test of Hypothetical Model using Residualized Covariance

We developed a hypothetical model in which three independent variables (newspaper reading, television news watching, and Internet news searching) influenced one dependent variable (civic participation) through two mediating variables (online discussions and everyday talk). We took a preparatory step and created a residualized (partial) covariance matrix to control for age, gender, education, income, and political inclination by regressing all measures on these variables. The control variables do not account for a substantial amount of the variance, except for Internet news searching and online discussion (from 0.6% to 23.8%), as indicated in table 3.

Table 3. Regression Analyses for Residualization

	NR	TW	IS	OD	ET	CP
Age	-.025	.006	-.018	.016	.050	-.006
Education	.183***	-.155***	.360***	.469***	.081**	-.011
Income	.010	-.023	.009	.036	.043	.015
Gender (male = 1)	.024	-.019	-.028	-.020	-.010	.013
Political ideology	.012	.026	-.107***	-.070**	-.011	.073*
R ² (%)	3.4	2.7	15.6	23.8	1.1	0.6

Note: NR = newspaper reading; TW = television news watching; IS = Internet news searching; OD = online discussion; ET = everyday talk; CP = civic participation. Numbers are standardized regression coefficients.

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

The fit of this hypothetical model (i.e., the partial covariance hypothetical model) was good: $\chi^2(4, N = 1,215) = 2.740, p = .602, TLI = 1.007, RMSEA = .000$. The results confirmed that the hypothetical model is generally supported by the sample. Newspaper reading and television news watching influenced everyday talk ($\beta = .242, p < .001$ for newspaper reading; $\beta = .104, p < .01$ for television news watching), while Internet news searching did not. In addition, only Internet news searching was associated with online discussion ($\beta = .449, p < .001$), while newspaper reading and television news watching was not. Unlike the hypothetical model's prediction, however, newspaper reading did not influence civic participation, which was influenced by television news watching ($\beta = .125, p < .001$), Internet news searching ($\beta = -.132, p < .001$), and everyday talk ($\beta = .230, p < .001$). Also, online discussion did not influence civic participation. These results are presented in table 4 and figure 2.

Table 4. Standardized Path Coefficients of Hypothetical Model

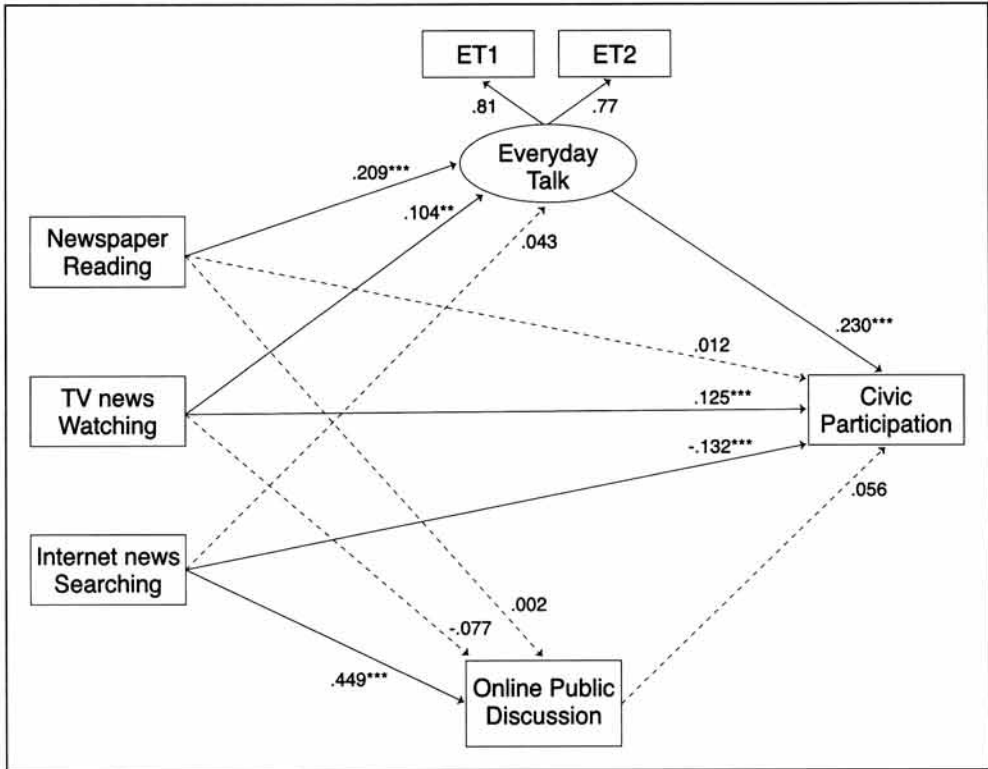
	Parameters	Path coefficients
Paths	Newspaper reading → online discussion	.002
	Newspaper reading → everyday talk	.242***
	Newspaper reading → civic participation	.012
	Television news watching → online discussion	-.077
	Television news watching → everyday talk	.104**
	Television news watching → civic participation	.125***
	Internet news searching → online discussion	.449***
	Internet news searching → everyday talk	.043
	Internet news searching → civic participation	-.132***
	Online discussion → civic participation	.056
	Everyday talk → civic participation	.230***

Note: Numbers are standardized regression coefficients. $N = 1,215$.

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

Mediation was assessed using the Sobel test (Sobel 1982) and the bootstrapping procedure (Arbuckle 2007). The Sobel test (MacKinnon, Warsi, and Dwyer 1995; Sobel 1982) provides an estimate of the indirect effect of the independent variable on the dependent variable through the mediator. We first examined whether online discussion mediates the effect of news media use on civic participation, and found that newspaper reading, Internet news searching, and television news watching have no indirect effect on civic participation through online discussion. We also examined whether everyday talk mediates the effect of news media use on civic participation, and found that newspaper reading has an indirect effect through everyday talk on civic participa-

Figure 2. Standardized Path Coefficients of the Hypothetical Model



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

tion ($\beta = .056, p < .01, z = 2.509$), while television news watching and Internet news searching do not have this indirect effect. This result suggests that the effect of newspaper reading on civic participation operates through its effect on everyday talk. The results are presented in table 5.

Table 5. Standardized Indirect Effects of News Media use on Participation

Independent variable	Mediator	Bootstrap estimate	Sobel test (z)
Newspaper reading	Online discussion	0.000	0.040
	Everyday talk	0.056	2.509**
Television news watching	Online discussion	-0.004	0.767
	Everyday talk	0.024	1.506
Internet news searching	Online discussion	0.025	0.881
	Everyday talk	0.103	1.371

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

Test of the Structural Model Invariance Across the Samples

To conduct a multigroup analysis, we first estimated a baseline model in which measurement parameters—that is, factor loadings—were simultaneously and freely estimated. The baseline model, which is the simultaneous testing of the hypothetical model with the two samples, showed that the model fit was adequate: $\chi^2 (8, N = 1,215) = 6.097, p = .636, TLI = 1.011, RMSEA = .000$. In the metric invariance model, all the factor loadings were constrained to be equal for both the group with more education and the group with less education. This model assessed metric variance that is between-group differences in the strength of association between measured variables and the latent construct. The fit of the metric invariance model was still good: $\chi^2 (9, N = 1,215) = 6.839, p = .654, TLI = 1.011, RMSEA = .000$. The chi-square difference was statistically significant, while differences in fit were minimal: $\Delta\chi^2 (1, N = 1,215) = .742, p = .389, \Delta TLI = .000, \Delta RMSEA = .000$. These results show that all the constructs were similarly understood by both education groups.

Comparisons of the hypothetical models revealed that measurement parameters were

Table 6. Standardized Path Coefficients and Chi-square Value Differences with Invariance Constraints

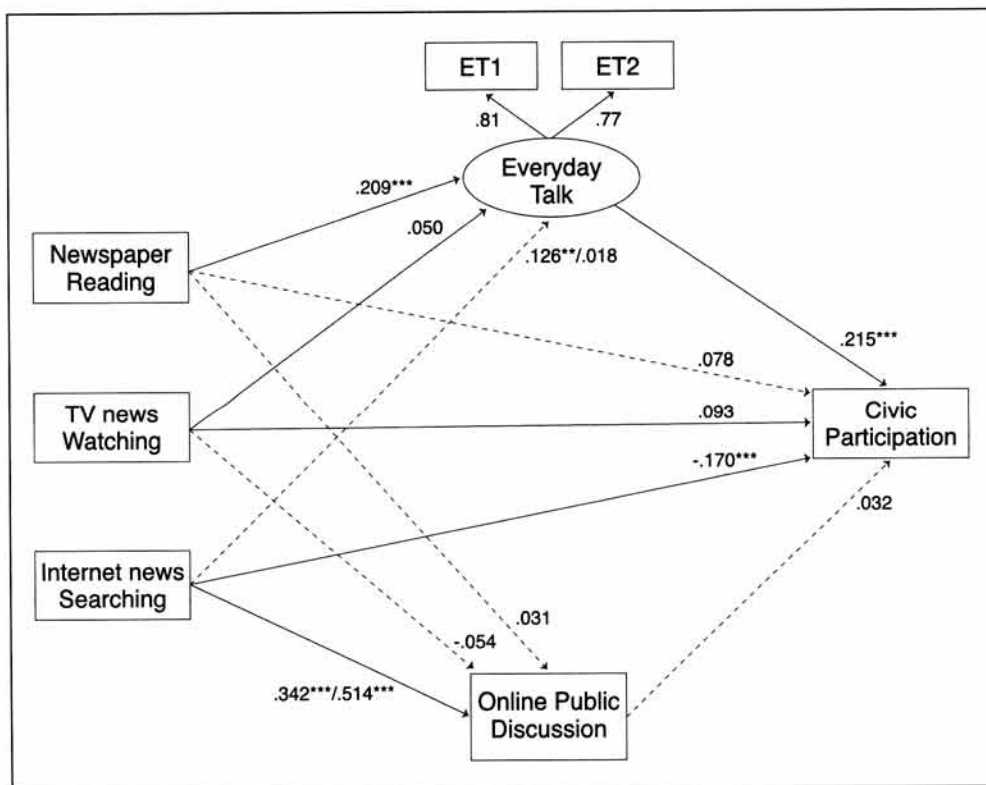
	Parameters	More education	Less education	$\Delta\chi^2$ (df=1)	ΔTLI	$\Delta RMSEA$
Paths	Newspaper reading → online discussion	.031	-.021	.927	.001	.000
	Newspaper reading → everyday talk	.209***	.268***	2.750	.009	.000
	Newspaper reading → civic participation	.078	-.032	3.165	.011	.001
	Television news watching → online discussion	-.054	-.069*	.046	-.003	.000
	Television news watching → everyday talk	.050	.114**	.822	.000	.000
	Television news watching → civic participation	.093	.143***	.369	-.002	.000
	Internet news searching → online discussion	.342***	.514***	20.391***	.087	.038
	Internet news searching → everyday talk	.156**	-.018	6.282*	.024	.016
	Internet news searching → civic participation	-.170***	-.101*	.686	.000	.000
	Online discussion → civic participation	.032	.061	.174	-.003	.000
	Everyday talk → civic participation	.215***	.249***	.072	-.003	.000

Note: More education = 13 years of education or more; less education = 12 years of education or less. Numbers in these two columns are standardized regression coefficients in the metric invariance model. $\Delta\chi^2$ indicates the increased chi-square values when each of the paths was constrained to be equal across the samples. ΔTLI indicates the increased TLI values when each of the paths was constrained to be equal across the samples. $\Delta RMSEA$ indicates the increased RMSEA values when each of the paths was constrained to be equal across the samples.

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

generally invariant across the samples. To determine whether structural relationships among independent and dependent variables were also invariant across the samples, this study tested the equivalence of structural links among the latent constructs. When all eleven paths were constrained to be equal across the groups, the fit of the path coefficients invariance model was still good: $\chi^2 (20, N = 1,215) = 42.220, p = .003, TLI = .951, RMSEA = .030$. However, the chi-square difference was statistically significant: $\Delta\chi^2 (11, N = 1,215) = 35.381, p < .001$; and model fit change was substantial: $\Delta TLI = -.006, \Delta RMSEA = .030$. To identify paths of equality constraints that increase the chi-square values significantly, each of the eleven paths was individually constrained and compared with the metric invariance model. Two of the eleven paths were found to be statistically different across the groups. The results are presented in table 6. Figure 3 presents the model that was found to be the best fit to the data across the samples.

Figure 3. The Structural Model with All Paths Constrained Across the Sample



Note: For the equivalent regression path, the standard regression weights presented in the group with less education. For the nonequivalent regression path, the standard regression weight for each group is presented in the following order: more education/less education.

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

The findings show that there were differences in how Internet news searching influenced online discussion and everyday talk in the two educational groups. The path from Internet news searching to online discussion was stronger among the respondents with less education than among those with more education, and this difference was statistically significant. On the other hand, the path from Internet news searching to everyday talk was much stronger among respondents with more education than among those with less education, and this difference was statistically significant. The effect of Internet news searching on online discussion was stronger in the group with less education, while its effect on everyday talk was stronger in the group with more education.

CONCLUSION

This study evaluated the roles played by newspapers, television, the Internet, and interpersonal communication in achieving the classical objective of promoting citizens' participation. Among various types of news media use, television news watching and Internet news searching positively influenced the level of civic participation. The more respondents watched television news and the more they searched news on the Internet, the more frequently they participated in civic organizations. However, newspaper reading was not found to be associated with more civic participation. Contrary to the previous studies by Norris (1996) and Putnam (1995), those who read more newspapers were not more actively involved in civic activities.

On the other hand, we found that structural relationships exist in the way that newspaper reading influences everyday talk and everyday talk then influences civic participation. Those who read more newspapers talked more frequently with family, friends, and colleagues about government matters or social issues, which in turn increased civic participation. This finding showed that the effect of newspaper reading on civic participation operated through interpersonal communication, which is consistent with the growing evidence that communication among citizens may be an important intervening variable between news media use and participation (McLeod et al. 2001; Sotirovic and McLeod 2001). The effect of newspaper reading on civic participation was mediated by interpersonal communication. As noted in other studies on the communication mediation model, news media seem to provide information and exposure to different views, thus encouraging political talk (Mutz 2002), and then political talk seems to raise awareness about collective problems, thus promoting civic participation (McLeod, Scheufele, and Moy 1999).

Those who frequently talked with family, friends, and colleagues about govern-

mental matters or social and local issues were involved more actively in civic participation. It is consistent with the finding of Sheufele (2002) that the main effect of news media use veils a difference in effects for people who talk to others about issues frequently and those who do not. The results of the present study also signify the importance of informal, private, interpersonal communications to the civic participation process (Delli Carpini, Cook, and Jacobs 2004). On the other hand, those who participated in online discussions more frequently were not engaged in a higher level of civic participation than those who did not. It was not participating in online discussions, but being engaged in everyday talk with other people, that enhanced civic participation.

Why did online discussion not lead participants to become more active in civic organizations and meetings, while talking with friends and family did? How does online discussion differ from everyday talk? The answers seem to be related to the fact that online communication may be more unilateral than face-to-face communication and encourages communication with strangers in a way face-to-face communication does not. But in order to thoroughly investigate the reasons, it would be necessary to conduct further research, probably designing a research model that allows us to compare informal and formal discussions in both online and offline settings.

These findings also suggest that the effects of different types of Internet use on civic engagement may be different. Internet news searching, which is more informational, increased civic participation, while participation in online discussions, which is more expressive, did not. Shah et al. (2005) paid special attention to complementary roles played by news media use and interpersonal communication in promoting civic engagement; they argued that the relationship between media use and personal communication is further complicated by the rise of the Internet, which provides both a source of political information and a sphere for political expression. In the same vein, this study also found that informational use of the Internet showed a positive influence on civic participation while expressive use did not. It remains to be seen, however, whether the striking limitation in the ability of online discussion forums to promote involvement in civic activities will continue as new kinds of Internet use and services emerge, including social media such as Twitter and MySpace, which represent a combination of email, social networking, chatting, informational blogging, and other activities.

Our analysis shows that Internet news searching played a different role depending on a person's level of education. Although the structural relationships among news media use, online discussions, everyday talk, and civic participation were found to be similar between the more-educated and less-educated groups in most paths, the difference in the effect of Internet news searching on participation in online discussions and everyday talk were significant. When respondents with lower levels of education did more Internet news searching, they participated in online discussions even more fre-

quently than their more educated counterparts. In other words, Internet news searching increased participation in online discussion in both educational groups, but its impact was stronger among those with less education. In comparison, when respondents with higher levels of education searched for news on the Internet more frequently, they participated in private talk with family, friends, and colleagues more frequently than their less educated counterparts. Therefore, Internet news searching did not increase interpersonal communication among those with less education, while it did increase interpersonal communication among those with more education.

These results suggest that those with different educational backgrounds respond to receiving more information by searching for news in a different way. Most active users of news media want to talk with others about social and public issues they have come to know, but it seems that those with less education chose online forums as an outlet for communication, while those with more education chose people they knew for expressing and sharing their thoughts. It may be more difficult for people with less education to find other people to talk to about public issues, or they may lack confidence and have greater fear of talking to other people. In contemporary Korean society, where differences in views and opinions are quite stark even to the degree of polarization, fears of speaking out may be real. Or it may be that those with less education who seek information would naturally prefer an environment in which indicators of social status and identity are less obvious, in order to avoid social prejudice and to be evaluated based on what they say rather than how much education they have. These are all speculations that are worthy of further study.

The most significant implication of this difference based on education level relates to the fact that online discussions do not enhance civic participation while face-to-face conversations do. Everyday political talk showed the greatest influence on civic participation, and everyday talk was influenced by newspaper reading and television watching. Increased Internet news searching led to increased everyday political talk, and thus in turn to more civic participation, only among those with higher education levels. For those with less education, Internet news searching did not result in civic participation.

These results do not necessarily mean that providing more education to citizens will increase civic participation. Across time, the level of education has dramatically increased in most countries, but the level of civic participation has tended to decrease (Putnam, 2000). The results rather suggest that those with different educational backgrounds have different paths by which they engage in greater civic participation. For those with less education, the traditional path in which more political talk leads to more civic engagement, and more newspaper reading and television watching leads to more political talk, seems to be the more stable mechanism. Future studies need to explore more specific ways in which citizens' civic participation is related to news

media use, interpersonal communication, and the level of education, as well as other factors that have not been considered in the present study.

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