

Education and Language-Based Knowledge Gaps Among New Immigrants In the United States: Effects of English- and Native-Language Newspapers and TV

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This study analyzed the impact of pre- and postimmigration use of English- and native-language newspapers and TV on the relative size of education- and language-based political knowledge gaps among new U.S. immigrants. Results from a nationally representative survey of new immigrants in the United States ($N = 3,319$) suggested that pre-immigration use of English-language newspapers widens political knowledge gaps between immigrant groups with higher and lower English proficiency and groups with higher and lower preference to use English in social interactions. However, the gap in political knowledge between immigrant groups with higher and lower levels of education was leveled by post-immigration use of English-language TV. Interestingly, use of native-language media also had a leveling effect on the knowledge gap. Specifically, pre-immigration use of native-language newspapers and TV decreased the gap in political knowledge between groups with high and low education, and pre-immigration use of native-language TV decreased the knowledge gap between groups with high and low preference to use English. Implications are discussed.

Keywords: media use, immigrants, political knowledge, preimmigration media use, postimmigration media use

More than 40 years ago, Tichenor, Donohue, and Olien (1970) proposed the knowledge-gap hypothesis. The original conceptualization of this hypothesis explains the following:

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As the infusion of mass media information into a social system increases, segments of the population with higher socioeconomic status tend to acquire this information at a faster rate than the lower status segments, so that the gap in knowledge between these segments tends to increase rather than decrease. (Tichenor, Donohue, & Olien, 1970, pp. 159–160)

Over time, this results in the widening of the knowledge gap between higher and lower socioeconomic groups. With education serving as a primary indicator of SES, a key proposition generally supported by extant knowledge-gap research is that groups with higher levels of education acquire information from the media at a faster rate than those with lower levels of education (Fredin, Monnett, & Kosicki, 1994; Hwang & Jeong, 2009).

While the knowledge gap has been tested among a diverse set of populations, not much research has applied it to examine variations in newly arrived U.S. immigrants' acquisition of acculturation-related knowledge—in particular, American political knowledge. Research is therefore warranted to examine whether the assumptions of the knowledge gap can be applied to the experiences of new immigrants. Such research is important because of the increasing numbers of immigrants entering the U.S. (see U.S. Census Bureau, 2010) and the likelihood that many of them will rely on the media to learn how to adjust to their new social environment (Choi & Tamborini, 1988; Kim, 1988; Lin, Song, & Ball-Rokeach, 2010; Moon & Park, 2007; Subervi-Velez, 1986). Furthermore, because political knowledge is often equated with increased political participation and a vibrant democracy (e.g., Galston, 2001), immigrants' chances to gain a voice in U.S. political decision making could depend upon how knowledgeable they are of American politics.

The present study attempts to extend the knowledge-gap hypothesis to the context of the acculturation process for new U.S. immigrants. The purpose of this study is to examine the impact of pre- and postimmigration use of English- and native-language newspapers and TV on knowledge gaps among new U.S. immigrants. We focus on first-generation immigrants who recently arrived to the United States with immigrant documents acquired in foreign countries, and those who are adjusting to legal status. We conceptually define preimmigration media use as use prior to arriving to the United States and postimmigration media use as use shortly after arriving in the United States. Native-language media is conceptually defined as media that use non-English languages. Furthermore, we focus on the gaps in political knowledge between immigrant groups with high and low education, English proficiency, and preference for using English in social interactions.

Before moving on, it is important to clarify that there are three approaches to testing the knowledge gap. The first approach analyzes longitudinal data on a single topic to investigate changes in the gap size as media publicity changes over time (Tichenor, Donohue, & Olien, 1970). The second approach uses cross-sectional data on topics varying in level of media publicity at a given point in time (Tichenor et al., 1970). The third approach analyzes cross-sectional, individual-level media use variables to measure the gap (e.g., Kwak, 1999) rather than using macro-level media publicity variables. This third approach also tests the knowledge gap by analyzing the statistical interaction between education and a news-media use variable (Eveland & Scheufele, 2000). The expectation is that the strength of the

relationship between education and knowledge will depend on how high or low the use of news media is. Our study employs this third approach by analyzing whether increases or decreases in new U.S. immigrants' political knowledge can be explained by the interactions between education, English proficiency, and English preference on the one hand and pre- and postimmigration use of English- and native-language newspapers and TV on the other hand.

Acculturation

Acculturation refers to an internalized learning process occurring when immigrants interact with the cultural environment of a new or host society (Berry & Kim, 1997; Stephenson, 2000). During acculturation, immigrants acquire their host society's culture through adopting its norms, values, and behaviors. Yet as immigrants acculturate to their new society, they retain aspects of their native culture. Common indicators of acculturation to American society include English proficiency (Chung, Kim, & Abreu, 2004) and preference to use English in social interactions (Stephenson, 2000). The extent to which immigrants are oriented to the political system of the United States also indicates their level of acculturation (Alva, 1985). Communication researchers have also adopted use of English-language media as an indicator of acculturation to American culture (Shoemaker, Reese, & Danielson, 1985).

Media Use and Political Knowledge of New Immigrants in the United States

Communication is the primary vehicle through which immigrants become acculturated to their new social environment (Kim, 1988). Park (1922) provided one of the first comprehensive scholarly commentaries regarding the role of mass media in integrating immigrants to America. About a half century after Park's work, Kim (1988) proposed and tested a comprehensive theoretical model explaining how U.S. immigrants' exposure to American media fosters their acculturation to American society. The assumptions of Kim's model were supported by subsequent studies (Choi & Tamborini, 1988; Moon & Park, 2007). Notably, research has shown a positive relationship between immigrants' media use and their knowledge of U.S. politics (e.g., Chaffee, Nass, & Yang, 1991). This research reinforces media-effects studies that indicate the media serve as important sources for the acquisition of political knowledge among members of the general U.S. population (Eveland & Scheufele, 2000) and particularly among American ethnic minorities (Tan, 1983). Our study extends this line of research by focusing on the differential effects of pre- and postimmigration use of English- and native-language newspapers and TV on new immigrants' political knowledge.

Education, English-Language Proficiency, and Preference to Use English

Education. Education is considered an important variable in knowledge-gap studies because, among other things, it enhances the motivation necessary to process and give meaning to information obtained from media (Kwak, 1999). Thus, knowledge-gap research has focused on examining how media use widens or narrows the gap in political knowledge between groups with higher and lower education (Eveland & Scheufele, 2000; Wei & Hindman, 2011). Yet research shows that the extent to which the gap in knowledge between high and low education groups is increased or decreased depends largely on the type of media used. A finding of knowledge-gap studies is that newspaper use widens education-based

knowledge gaps, but TV use narrows them (e.g., Kleinnijenhuis, 1991; Kwak, 1999). This line of research reinforces Tichenor et al.'s (1970) proposition that "[s]ince television use tends to be less correlated with education, there is a possibility that television may be a 'knowledge leveler'" (p. 170).

The notion of TV as a "knowledge leveler" is supported in a study conducted by Liu and Eveland (2005), which found that the knowledge gap between higher and lower education groups is decreased by TV use, but the gap in political knowledge between these groups is increased as a result of newspaper use. Similarly, Tan (1983) showed a link between use of U.S. media and political knowledge among Mexican Americans, an ethnic minority group often studied in acculturation research. Although Tan's study was not a direct test of the knowledge gap, it showed that use of U.S. newspapers was associated with higher levels of public-affairs knowledge among those who possessed higher levels of education. For those who possessed less education, however, TV use rather than newspaper use led to higher levels of knowledge.

English Proficiency. Tichenor et al. (1970) held that persons with higher levels of communication skills would likely acquire public-affairs knowledge from the media at a faster rate than those with lower levels of communication skills, partially because individuals who possess more advanced skills are better equipped cognitively to understand, process, and recall complex information. Thus, communication skills could function much like education in creating gaps in political knowledge, as those having higher levels of communication skills may acquire knowledge from the media at a faster rate than those having lower skills, which would then widen the knowledge gap.

English-language proficiency is a communication skill that could likely enhance an immigrant's ability to make sense of U.S. political information disseminated by the media—particularly English-language media. Higher English proficiency may also facilitate the use of specific types of English-language media that demand greater attention and elaboration (e.g., newspapers) and that, in turn, are more likely to yield higher gains in political knowledge. Chaffee et al. (1991) found support that U.S. immigrants who are more highly proficient in English are able to acquire information about U.S. politics from U.S. newspapers at a faster rate than those who are less proficient in English.

Chaffee et al.'s study also indicated that immigrants who are less proficient in English tend to rely on U.S. TV more than newspapers as a main source of political information. The study concluded that TV serves a bridging role in politically socializing newly arrived immigrants who lack English proficiency. TV first allows these immigrants to be cognizant of U.S. politics. Over time and with the acquisition of more advanced English skills, they graduate to using newspapers as the primary source of public-affairs information.

Preference to Use English in Social Interactions. Acculturation-related research suggests that higher levels of English proficiency translate to higher preferences to use English in social interactions (Chiswick & Miller, 1996; Stephenson, 2000). Therefore, similar to the effects of English proficiency noted above, we might expect a gap in knowledge between new immigrants with high and low levels of preference to use English in social interactions, with newspaper and TV use affecting the size of this gap in a similar way as English proficiency. Indeed, a preference to use English could also facilitate the use of

specific types of English-language media, such as newspapers, that in turn may result in higher levels of political knowledge.

The role of preference to use English in social interactions as an SES indicator of knowledge gap is derived from one of Tichenor et al.'s (1970) propositions. They proposed that access to a greater number of social contacts, or reference groups, increases the likelihood that one will discuss public affairs topics with others. As such, groups with a wider web of social contacts might acquire knowledge at a faster rate than those with a narrower web (see also Eveland & Hively, 2009). Arguably, new immigrants who have a greater preference to use English in social interactions also have greater opportunities to join discussions with a wider network of people. This could include English-speaking individuals who likely belong to U.S.-born social networks (Chiswick & Miller, 1996). As an immigrant's social network becomes more heterogeneous, he or she becomes more likely to be exposed to a diverse range of information, including information pertaining to American politics.

Pre- and Postimmigration Use of English- and Native-Language Newspapers and TV

The independent variable of the knowledge-gap hypothesis is media use. In the case of newly arrived U.S. immigrants, we argue that their preimmigration use of media (or use in the host country) should be taken into account in addition to their postimmigration use (or use in the United States) when analyzing the media's effects on their political knowledge.

Indeed, according to the theory of transferability (Black, Niemi, & Powell, 1987), immigrants are able to draw on their preimmigration experiences and transfer the lessons learned from them to their new host environment. Knowledge obtained during postimmigration is thus incorporated into one's preimmigration orientations. This theoretical perspective suggests immigrants can acquire knowledge of their new host society through their preimmigration experiences such as their use of media.

Furthermore, previous research has primarily focused on the effects of postimmigration use of U.S. media or English-language media on American political knowledge. The studies reviewed above suggest that postimmigration use of English-language newspapers will increase American political knowledge among immigrants with higher rather than lower levels of education (Tan, 1983) and higher rather than lower levels of English proficiency (Chaffee et al., 1991). It is also reasonable to expect this pattern could be found for higher versus lower preference to use English in social interactions.

In sum, the literature suggests that the relative size of the knowledge gap between immigrants with high and low levels of education, English proficiency, and English preference will vary depending on the level of pre- and postimmigration use of English-language newspapers, with the gap being more likely to exist among those with higher use of English newspapers. We thus propose the following hypotheses:

H1: The gap in political knowledge between immigrant groups with higher and lower education will depend on use of English-language newspapers such that the gap will more likely occur among those with higher pre- and postimmigration use of English-language newspapers.

H2: The gap in political knowledge between immigrant groups with higher and lower English proficiency will depend on use of English-language newspapers such that the gap will more likely occur among those with higher pre- and postimmigration use of English-language newspapers.

H3: The gap in political knowledge between immigrant groups with higher and lower preference to use English in social interactions will depend on use of English-language newspapers such that the gap will more likely occur among those with higher pre- and postimmigration use of English-language newspapers.

However, based on the same research reviewed above (e.g., Chaffee et al., 1991), we can also expect that use of English-language TV plays a bridging role in facilitating increases in knowledge for immigrants who are less educated, less proficient in English, and who have lesser preference to speak English. For these immigrants, TV may be an important source of information. Thus, as previous knowledge-gap research has shown, TV may function as a knowledge leveler, decreasing the political knowledge gap (e.g., Eveland & Scheufele, 2000). In this case, the gap would be less likely to exist among those with higher levels of English TV use. We therefore propose the following hypotheses:

H4: The gap in political knowledge between immigrant groups with higher and lower education will depend on use of English-language TV such that the gap will be less likely to occur among those with higher pre- and postimmigration use of English language TV.

H5: The gap in political knowledge between immigrant groups with higher and lower English proficiency will depend on use of English-language TV such that the gap will be less likely to occur among those with higher pre- and postimmigration use of English language TV.

H6: The gap in political knowledge between immigrant groups with higher and lower preference to use English in social interactions will depend on use of English-language TV such that the gap will be less likely to occur among those with higher pre- and postimmigration use of English language TV.

Another goal of our study is to examine the role of native-language media in explaining knowledge gaps among new immigrants. However, it is not clear from current research whether use of native-language media will increase or decrease knowledge gaps for new immigrants. Ethnic and native-language media might serve an important role in integrating ethnic groups to American society (Viswanath & Arora, 2000). Recent research also indicates that new immigrants could acquire information about American politics through their use of native-language media (Dalisay, 2012). In this regard, native-language media may have the potential to narrow or level the political-knowledge gap between new immigrants with higher and lower education, higher and lower English proficiency, and higher and lower preference to use English in social interactions. Yet, there is evidence that native-language media may not exert much influence in the acquisition of American culture, after accounting for the effects of American media (Moon & Park, 2007). In this case, native-language media would neither narrow nor widen the gap in political knowledge between new immigrants. Due to limited research in this area, we investigate the following research question:

RQ1: What effect will pre- and postimmigration use of native-language newspapers and native-language TV have on the gap in political knowledge between immigrant groups with higher and lower education, higher and lower English proficiency, and higher and lower preference to use English in social interactions?

Method

Data Source

Data were acquired from Princeton University's New Immigrant Survey (NIS) conducted by Jasso, Massey, Rosenzweig, and Smith (2003). The survey included 8,573 personal, face-to-face interviews, with a response rate of 68.6%. The response rate was based on the total number of completed interviews (8,753) divided by the number of individuals in sample frame (12,500). Among the total sample, only 30 individuals reported being U.S. citizens, which is less than 1% of the total sample (0.35%, to be exact). The sample we employ in our study is comprised of all non-U.S. citizens. The interviews were conducted in the respondents' preferred languages within a seven-month period from May to November 2003. The geographical sampling frame for the survey included the most populous 85 metropolitan statistical areas and all of the top 38 counties in the United States. The sample consisted of new-arrival immigrants (i.e., those who had recently arrived to the United States with immigrant documents acquired in foreign countries) and adjustee immigrants (i.e., those adjusting to legal status). Immigrants from over 30 countries were represented, and a majority reported that they were born in Mexico, Europe, Central Asia, or India.

Respondents were randomized into five subgroups and asked questions regarding their use of specific types of media. Our study analyzed data from two of the subgroups, leaving a final sample size of $N = 3,318$. One of these subgroups was asked how often they read newspapers ($n = 1,644$); the other subgroup was asked how often they watched TV ($n = 1,674$).

Measures

Political Knowledge. The dependent variable is current American political knowledge, which was measured by asking respondents whether they knew the name of the person who held the following positions: (a) president of the United States, (b) secretary of state, (c) chief justice of the U.S. Supreme Court, (d) and speaker of the U.S. House of Representatives. Responses to these items were coded so that 1 = *correct answer* and 0 = *incorrect, refusal, or don't know*. Responses to the four items were combined and summed up to form a single index (newspaper [NP] sample: $M = 1.43$, $SD = 0.76$, $\alpha = .43$; TV sample: $M = 1.47$, $SD = 0.76$, $\alpha = .44$).

Media Use. The independent variables are pre- and postimmigration use of both English- and native-language media. Respondents were asked how often they read a newspaper in English ($M = 2.29$, $SD = 1.60$) and in their native language ($M = 3.45$, $SD = 1.59$) each week in the year prior to leaving their countries of origin. Respondents were also asked how often they read a newspaper in English ($M =$

3.00, $SD = 1.64$) and in their native language ($M = 2.51$, $SD = 1.51$) each week as a permanent resident in the United States. These were measured on a 5-point Likert scale: 1 = *every day*, 2 = *a few times a week*, 3 = *once a week*, 4 = *less than once a week*, and 5 = *never*. In the TV-use subgroup, respondents were asked how many hours a week they watched TV in English ($M = 5.16$, $SD = 9.53$) and in their native language ($M = 6.25$, $SD = 9.52$) in the year prior to leaving their countries of origin. They were also asked how many hours a week they watched TV in English ($M = 9.06$, $SD = 11.10$) and in their native language ($M = 3.19$, $SD = 7.00$) as a permanent resident in the United States. Different from the ordinal-level measures of newspaper use, these were measured at the ratio level within the range of 0 to 168 hours.

Education, English Proficiency, English Preference. We measured level of education as the number of years of schooling that respondents reported completing (NP sample: $M = 12.60$, $SD = 5.10$; TV sample: $M = 12.76$, $SD = 4.98$). Two items measured current English proficiency: "How well would you say you understand English when someone is speaking to you?" (1 = *not at all*, 4 = *very well*), and "How well would you say you speak English?" (1 = *not at all*, 4 = *very well*). These items were combined and averaged to form a single index (NP sample: $M = 2.62$, $SD = 1.03$, $r = .91$; TV sample: $M = 2.66$, $SD = 1.01$, $r = .91$). Three items measured current preference to use English in social interactions: (a) "What languages do you currently speak at home?" (b) "What languages have you spoken outside of your home while at work in the United States in the past twelve months?" and (c) "What languages do you speak outside of your home when you are with friends?" Responses were scored with 1 if respondents reported speaking English and 0 if they did not. Responses to these items were combined and averaged to form a single index (NP sample: $M = 0.49$, $SD = 0.40$, $\alpha = .75$; TV sample: $M = 0.50$, $SD = 0.41$, $\alpha = .77$).

Control Variables. We controlled for age and gender in our regression models. In the newspaper-use sample, the respondents' ages ranged from 27 to 99 years ($M = 47.82$, $SD = 13.77$). Gender was coded with males as 1 (47.5%) and females as 0 (52.5%). In the TV-use sample, the respondents' ages ranged from 27 to 93 years ($M = 47.28$, $SD = 13.08$). Gender was coded with males as 1 (50%) and females as 0 (50%).

Data Analysis

To test the hypotheses and investigate the research question, we used an approach adapted from previous knowledge-gap research (e.g., Eveland & Scheufele, 2000) that analyzes the statistical interactions between the three moderators (education, English proficiency, and English preference) and our media-use variables (pre- and postimmigration use of English- and native-language newspapers and TV), testing the equality of the relationship between the moderators and our criterion measure of political knowledge at different levels of media use. According to Eveland and Scheufele (2000), if the relationship between a specific SES indicator and political knowledge is positive and the relationship between a specific media use variable and political knowledge is also positive, then (a) a negative sign for the interaction term is indicative of a weaker relationship between the SES indicator and political knowledge at high levels of the media-use variable, and (b) a positive sign for the interaction term is indicative of a stronger relationship between the SES indicator and political knowledge at high levels of the media-use variable.

We employed the moderated multiple regression analysis approach using a series of ordinary least squares (OLS) regression models to analyze statistical interactions. Preliminary analyses indicated that bivariate linearity existed between the components of interaction terms. To minimize concerns of multicollinearity, preimmigration media use did not control for postimmigration media use in the models, and vice versa. We also conducted simple slope tests employing Hayes' (2013) SPSS PROCESS macro. Based on the pick-a-point method, we estimated conditional effects at plus and minus one standard deviation around the mean of each of the three moderators, with the main effect variables mean-centered prior to analysis and confidence intervals generated at 95%. When this approach produced values outside of the possible range of the data, we used the lowest possible value instead.

Results

Before analyzing the interaction effects, we examined relationships between the main predictors and main effects for each of the predictors in the model. As the zero-order correlation results in Table 1 show, education, English proficiency, and English preference were all positively related to both pre- and postimmigration use of English-language newspapers and TV. Although the three moderators were all positively related to preimmigration native-language newspaper use, the three moderators were all negatively related to postimmigration native-language TV use. Moreover, individuals who had more education also had higher English proficiency and higher preference to use English, and vice versa.

Tables 2–4 show that in both the newspaper- and TV-use data sets, older people were more likely to be more knowledgeable than younger people in the models of pre- and postimmigration English- and native-language TV use. Males were more likely to have more political knowledge than females across all the models. Education and English proficiency were also positively associated with political knowledge across all the models. English preference was not associated with knowledge in any of the models.

H1 proposed that the gap in political knowledge between immigrant groups with higher and lower education is dependent on an immigrant's use of English-language newspapers, with the gap being more likely to occur among those with higher pre- and postimmigration use of English-language newspapers. This hypothesis was not supported, as the interactions between education and pre- and postimmigration use of English-language newspapers were not significant ($p > .05$) (Table 2).

H2 proposed that the knowledge gap between immigrant groups with higher and lower English proficiency will be more likely to exist among those with higher pre- and postimmigration use of English-language newspapers. H2 was partially supported. As shown in Table 3, the interaction between English proficiency and postimmigration use of English newspapers was not significant. However, there was a significant positive interaction between English proficiency and preimmigration use of English newspapers ($\beta = .06, p < .05$). The form of this interaction suggests the knowledge gap between immigrant groups with higher and lower English proficiency increases or widens from preimmigration use of English newspapers (see Figure 1). Simple slopes tests revealed that the relationship between preimmigration use of English newspapers and political knowledge was strengthened by English proficiency only when levels of proficiency were high (point estimate = .007; 95% CI: .001 to .015), but not when levels of proficiency were low (point intercept: -.009; 95% CI: -.028 to .005). These results are consistent with H2.

H3 proposed that the knowledge gap between immigrant groups with higher and lower preference to use English will be more likely to exist among those with higher pre- and postimmigration use of English-language newspapers. H3 was partially supported. Table 4 shows that the interaction between English preference and postimmigration use of English newspapers was not significant. However, there was a significant positive interaction between English preference and preimmigration English newspaper use ($\beta = .06, p < .05$). The form of this interaction is shown in Figure 2. This suggests that the knowledge gap between the higher and lower preference groups increased with higher use of preimmigration English newspapers. Simple slopes tests revealed that the relationship between preimmigration use of English newspapers and political knowledge is strengthened by English preference only when levels of preference were high (point estimate = .008; 95% CI: .001 to .016), but not when levels of preference were low (point intercept: -.009; 95% CI: -.023 to .004). On balance, these results are consistent with H3.

H4 proposed that the knowledge gap between immigrant groups with higher and lower education will be less likely to exist among those with higher use of English language TV. H4 was partially supported. As Table 2 shows, the interaction between education and preimmigration English TV use was not significant. However, there was a significant negative interaction effect between education and postimmigration English TV use ($\beta = -.08, p < .01$), and the form of this interaction is illustrated in Figure 3. Simple slopes tests indicated that the link between postimmigration use of English language TV and political knowledge was amplified by education only when levels of education were low (point estimate = .002, 95% CI: .001 to .004), but not when levels of education were high (point intercept: -.001; 95% CI: -.003 to -.000). This is consistent with H4 and suggests that postimmigration use of English-language TV decreases or levels the knowledge gap.

H5 proposed the knowledge gap between immigrant groups with higher and lower English proficiency will be less likely to exist among those with higher use of English-language TV. This hypothesis was not supported, as there were no significant interactions between English proficiency and pre- and postimmigration English-language TV use (Table 3). H6 proposed the knowledge gap between immigrant groups with higher and lower preference to use English in social interactions would be less likely to exist among those with higher use of English language TV. This hypothesis was not supported, as there were no significant interactions between preference to use English and pre- and postimmigration English-language TV use (Table 4).

RQ1 investigated the effect of pre- and postimmigration use of native-language newspapers and native-language TV on the gaps in political knowledge between immigrant groups with higher and lower education, higher and lower English proficiency, and higher and lower preference to use English. Three significant interactions were found for native-language media. First, Table 2 shows a significant negative interaction effect between education and preimmigration native-language newspaper use ($\beta = -.07, p < .05$). The pattern in Figure 4 indicates that preimmigration use of native-language newspapers decreases the gap in political knowledge between immigrant groups with higher and lower education. Simple slopes tests revealed that the relationship between preimmigration use of native-language newspapers and political knowledge was strengthened by education only when levels of education were low (point estimate = .012; 95% CI: .004 to .019), but not when levels of education were high (point intercept: -.001; 95%

CI: -.009 to .007). In this case, the knowledge gap between groups with higher and lower education was less likely to exist among those with higher preimmigration use of native-language newspapers. These results support a knowledge-leveling effect rather than a widening effect for preimmigration use of native-language newspapers.

Second, Table 2 shows there was a significant negative interaction between education and preimmigration use of native-language TV ($\beta = -.06, p < .05$). The pattern of this interaction indicates that preimmigration native-language TV use decreases the gap in political knowledge between groups with higher and lower education (Figure 5). Results of the simple slopes tests revealed that the relationship between preimmigration use of native-language TV and political knowledge was strengthened by education only when levels of education were low (point estimate = .002; 95% CI: .001 to .004), but not when levels of education were high (point intercept: -.001; 95% CI: -.003 to .001). Thus, the knowledge gap between groups with higher and lower education was less likely to exist among those with higher preimmigration use of native-language TV, suggesting that preimmigration use of native-language TV levels the education-based knowledge gap.

Third, as shown in Table 4, there was a significant negative interaction effect between English preference and preimmigration native-language TV use ($\beta = -.06, p < .05$). This interaction is plotted in Figure 6. Simple slopes tests revealed that the relationship between preimmigration use of native-language TV and political knowledge was strengthened by English preference only when levels of preference were low (point estimate = .002; 95% CI: .001 to .003), but not when levels of preference were high (point intercept: -.000; 95% CI: -.002 to .001). That is, the knowledge gap between groups with higher and lower preference to use English was less likely to exist among those with higher preimmigration use of native-language TV. These results suggest that preimmigration use of native-language TV levels the knowledge gap between high and low English-preference groups.

Table 1. Correlation between Education, English Proficiency, English Preference, and Media Use.

	Education	English Proficiency	English Preference	Preimmigration English Media Use	Preimmigration Native Media Use	Postimmigration English Media Use	Postimmigration Native Media Use
Education	---	.60**	.46**	.45**	.31**	.51**	.13**
English Proficiency	.57**	---	.74**	.57**	.12**	.64**	-.02
English Preference	.45**	.77**	---	.39**	.13**	.52**	-.06*
Pre-immigration English Media Use	.19**	.27**	.18**	---	.10**	.58**	-.05
Pre-immigration Native Media Use	.02	-.03	-.01	.28**	---	.27**	.42**
Post-immigration English Media Use	.15**	.23**	.20**	.59**	.37**	---	.12**
Post-immigration Native Media Use	-.12**	-.11**	-.11**	.25**	.55**	.30**	---

Note. The Pearson correlations of the newspaper data set are above the diagonal, and those of the television data set are below the diagonal. * $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed test

Table 2. Regression Analysis of Political Knowledge by Media Use and Education.

		NP Model	TV Model	NP Model	TV Model
Block 1	Education	.16***	.22***	.17***	.23***
	Age	.04	.06*	.04	.06*
	Gender (Male)	.17***	.19***	.17***	.18***
	Preimmigration English Media Use	.03	.00	---	---
	Preimmigration Native Media Use	.04	.04	---	---
	Postimmigration English Media Use	---	---	-.02	.00
	Postimmigration Native Media Use	---	---	.07**	.06*
	English Proficiency	.26***	.20***	.28***	.21***
	English Preference	-.02	-.04	-.01	-.04
	R^2	.19***	.17***	.19***	.17***
	Adjusted R^2	.19***	.17***	.19***	.17***
Block 2	Education*Preimmigration English Media Use	.05	-.04	---	---
	Education*Preimmigration Native Media Use	-.07*	-.06*	---	---
	Education*Postimmigration English Media Use	---	---	.02	-.08**
	Education*Postimmigration Native Media Use	---	---	-.02	-.03
	R^2	.20***	.18***	.19***	.18***
	Adjusted R^2	.19***	.17***	.19***	.17***

Note. Values are standardized regression coefficients. Variables in Block 2 control for Block 1 and one another, but not vice versa. * $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed test

Table 3. Regression Analysis of Political Knowledge by Media Use and English Proficiency.

		NP Model	TV Model	NP Model	TV Model
Block 1	Education	.16***	.22***	.17***	.23***
	Age	.04	.06*	.04	.06*
	Gender (Male)	.17***	.19***	.17***	.18***
	Preimmigration English Media Use	.03	.00	---	---
	Preimmigration Native Media Use	.04	.04	---	---
	Postimmigration English Media Use	---	---	-.02	.00
	Postimmigration Native Media Use	---	---	.07**	.06*
	English Proficiency	.26***	.20***	.28***	.21***
	English Preference	-.02	-.04	-.01	-.04
	R^2	.19***	.17***	.19***	.17***
	Adjusted R^2	.19***	.17***	.19***	.17***
Block 2	English Proficiency*Preimmigration English	.06*	.02	---	---

Media Use					
English Proficiency*Preimmigration	Native	-.02	-.04	---	---
Media Use					
English Proficiency*Postimmigration	English	---	---	.01	-.01
Media Use					
English Proficiency*Postimmigration	Native	---	---	.02	-.02
Media Use					
R^2		.20***	.17***	.19***	.17***
Adjusted R^2		.19***	.17***	.19***	.17***

Note. Values are standardized regression coefficients. Variables in Block 2 control for Block 1 and one another, but not vice versa. * $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed test.

Table 4. Regression Analysis of Political Knowledge by Media Use and English Preference.

		NP Model	TV Model	NP Model	TV Model
Block 1	Education	.16***	.22***	.17***	.23***
	Age	.04	.06*	.04	.06*
	Gender (Male)	.17***	.19***	.17***	.18***
	Preimmigration English Media Use	.03	.00	---	---
	Preimmigration Native Media Use	.04	.04	---	---
	Postimmigration English Media Use	---	---	-.02	.00
	Postimmigration Native Media Use	---	---	.07**	.06*
	English Proficiency	.26***	.20***	.28***	.21***
	English Preference	-.02	-.04	-.01	-.04
	R^2	.19***	.17***	.19***	.17***
	Adjusted R^2	.19***	.17***	.19***	.17***
Block 2	English Preference*Preimmigration	English	.06*	.01	---
	Media Use				
	English Preference*Preimmigration	Native	-.01	-.06*	---
	Media Use				
	English Preference*Postimmigration	English	---	---	.03
	Media Use				
	English Preference*Postimmigration	Native	---	---	.00
	Media Use				
	R^2	.20***	.18***	.19***	.17***
	Adjusted R^2	.19***	.17***	.19***	.17***

Note. Values are standardized regression coefficients. Variables in Block 2 control for Block 1 and one another, but not vice versa. * $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed test.

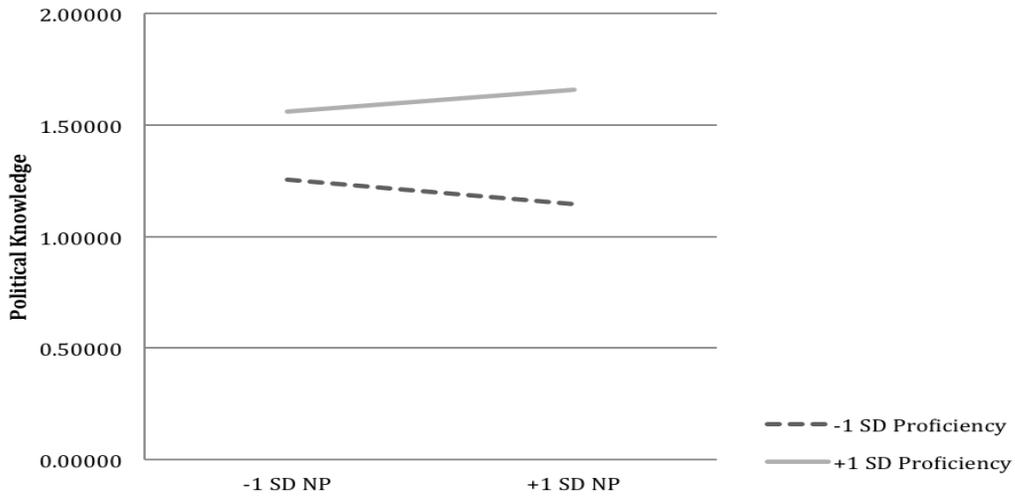


Figure 1. Interaction of preimmigration English newspaper use and English proficiency predicting political knowledge.

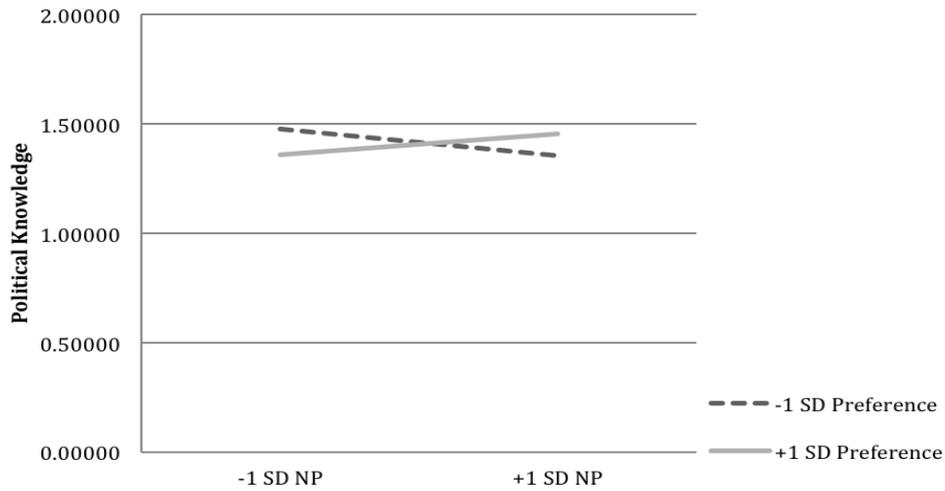


Figure 2. Interaction of preimmigration English newspaper use and English preference predicting political knowledge.

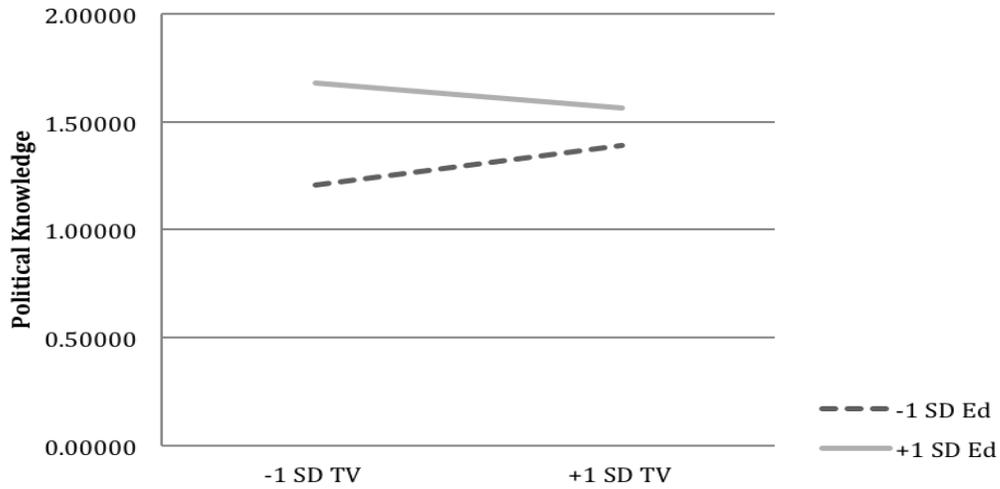


Figure 3. Interaction of postimmigration English TV use and education predicting political knowledge.

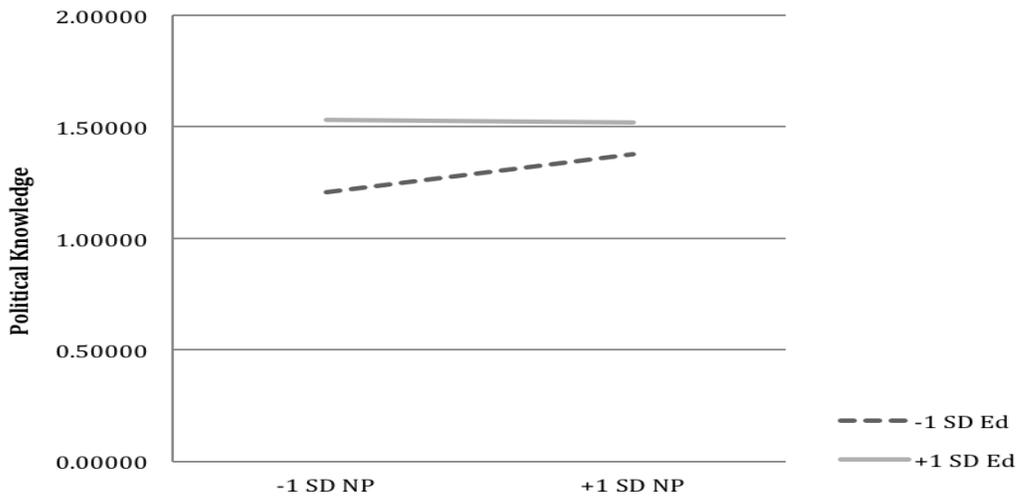


Figure 4. Interaction of preimmigration native-language newspaper use and education predicting political knowledge.

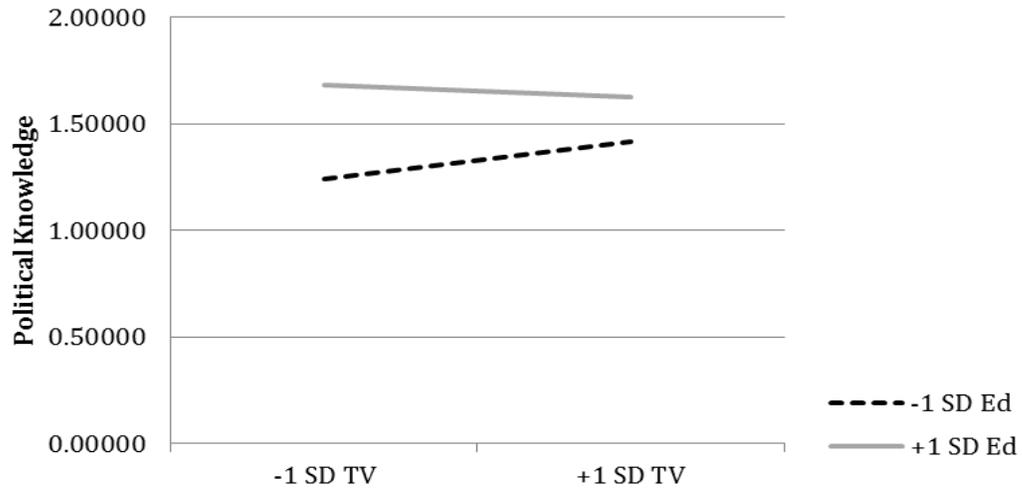


Figure 5. Interaction of preimmigration native-language TV use and education predicting political knowledge.

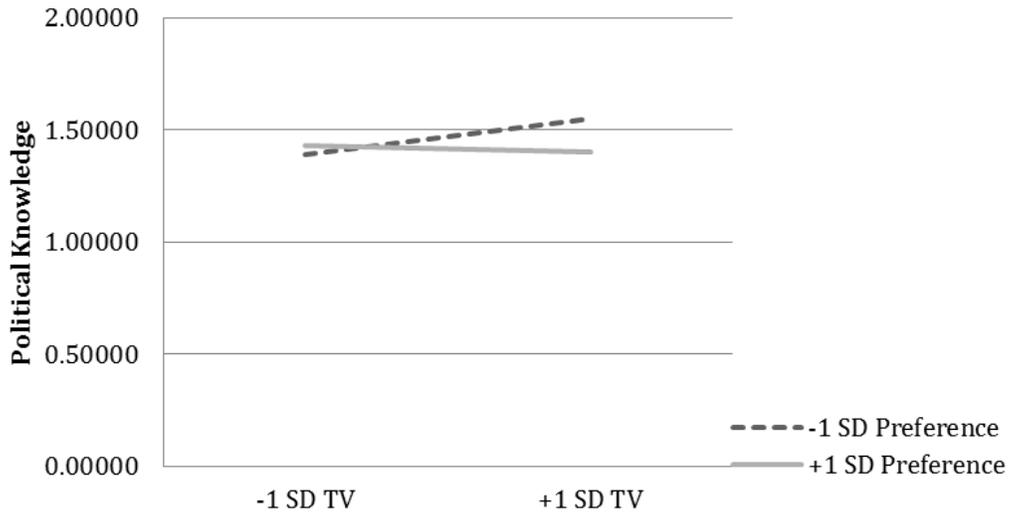


Figure 6. Interaction of preimmigration native-language TV use and English preference predicting political knowledge.

Discussion

Almost a century ago, Park (1922) stimulated scholarly interest regarding the role of the media in integrating immigrants into America. Subsequent studies have shown that the media play an integral role in acculturating new immigrants (Moon & Park, 2007) and impact acculturation indicators such as political knowledge of the host country (Dalisay, 2012). However, research suggests there are variations in the extent to which immigrants are able to acquire knowledge about their host country from the media (e.g., Chaffee et al., 1991). In extending this tradition of research, we examined the differential effects of pre- and postimmigration use of English- and native-language media on the relative size of the gaps in political knowledge among new U.S. immigrants. Specifically, we examined knowledge gaps between immigrant groups with higher and lower education, English proficiency, and preference to use English in social interactions. Our findings contribute to the literature in a number of ways.

First, with respect to the role of English-language newspapers in the knowledge gap, our results revealed that preimmigration use of English newspapers increased the gaps in political knowledge between immigrant groups with higher and lower English proficiency. This supports previous research showing that use of English newspapers serves as a key predictor of political knowledge for immigrants with higher rather than lower English proficiency (Chaffee et al., 1991). Extending these previous findings, our study revealed that preimmigration use of English newspapers widens the gap in political knowledge between new immigrants with higher and lower English preference.

Yet our findings also indicate that preimmigration use of English newspapers does not affect the knowledge gap between groups with high and low levels of education. Thus, the extent to which immigrants acquire political knowledge from preimmigration use of English newspapers depends more on their being proficient in English and having a preference to use English than on their having a high level of education. On the other hand, our results show that postimmigration use of English newspapers did not interact with education, English proficiency, or preference. On balance, these findings suggest that preimmigration use of English newspapers matters more than postimmigration use in affecting and thus increasing the knowledge gap between new immigrants with high and low English proficiency and preference. One explanation for this finding may be that immigrants with high English proficiency and preference had a higher motivation to gain information about U.S. politics from English newspapers before immigration than after. Indeed, research suggests that motivation impacts the rate at which one is able to acquire political information from the media (Elenbaas, de Vreese, Schuck, & Boomgaarden, 2014; Kwak, 1999). Yet because the data set we used did not include measures of motivation, more research is warranted to examine whether this variable affects immigrants' rates of knowledge acquisition from use of

English newspapers. If so, further research should also investigate the factors that may affect differing motivation levels.

Second, with respect to the use of English-language TV, our study indicates that postimmigration use of English-language TV has the potential to level the gap in political knowledge between those with higher and lower levels of education. This is consistent with previous knowledge-gap studies showing that TV use levels the education-based knowledge gap (Kwak, 1999; Liu & Eveland, 2005). However, we found that preimmigration use of English-language TV did not affect the education-based knowledge gap. Our findings augment Chafee et al.'s (1991) notion of the bridging role of TV in the political socialization of immigrants. We revealed that postimmigration use of English-language TV matters more than preimmigration use in serving as a bridge in politically socializing new immigrants—notably, less educated immigrants. Yet we found that pre- and postimmigration use of English-language TV did not affect knowledge gaps between immigrant groups with higher and lower English proficiency and preference.

Third, with respect to the use of native-language media, our findings suggest that these media have the potential to level the knowledge gap. Specifically, preimmigration use of native-language newspapers and preimmigration use of native-language TV may level the political knowledge gap between immigrants with higher and lower levels of education. On the other hand, our results also suggest that preimmigration use of native-language TV has a leveling effect on the political knowledge gap between immigrants with lower and higher English preference. This implies that native-language media play an integral role in the political socialization and acculturation process for new U.S. immigrants, and it supports previous research showing that new immigrants can acquire information about American politics through their use of native-language media (e.g., Dalisay, 2012).

Finally, we found that pre- and postimmigration use of native-language newspapers and TV did not affect the knowledge gap between groups with higher and lower English proficiency. An explanation for this lack of significant interactions is suggested by the zero-order correlations in Table 1, which indicate that higher English proficiency was more strongly associated with use of English media rather than native-language media.

Limitations and Directions for Future Research

Some limitations of this study should be noted, along with directions for future knowledge-gap research for immigrants. First, the survey's design randomized and split the respondents into separate subgroups, and each subgroup was administered a particular set of media-use questions. Due to this design, it was not possible for us to analyze the combined effects of the media sources along a single regression model. Future studies could consider measuring use of these media in a single questionnaire and analyzing their aggregated influences.

Second, the survey assessed use of media in general rather than news media or specifically political media. Because use of specifically political media might better explain the acquisition of political knowledge, we may be underestimating media's influence. For instance, the survey did not contain measures for use of Internet-based media such as online newspapers, blogs, or online TV. Recent

research shows support for knowledge gaps as a result of use of Internet-based media (e.g., Wei & Hindman, 2011), so it is important that future studies measure the use of such media and analyze their roles in the acquisition of political knowledge for new immigrants. Also, the survey asked respondents about their use of media in "your native language." Although this would have literally meant ethnic media using languages other than English, the survey didn't make this distinction. Therefore, we recommend future research to address this concern.

Fourth, because the data set we used did not include an exhaustive set of relevant variables, we did not control for other variables that may have affected the rate of acquisition of political knowledge, such as length of residence, having children in the household who speak English, income, race/ethnicity, region, community, and urban/suburban/rural location. Gaziano (2010) and Jerit, Barabas, and Bolsen (2006) similarly advocated a focus on community structure and differing coverage of issues for knowledge-gap research. Future research can examine the impact of these variables on the knowledge gap.

Fifth, the items measuring English proficiency were based on individuals' perceptions of their proficiency, and the items for preference to use English were based on self-reports of English use in social interactions. As such, we could not determine whether individuals' perceptions of their English proficiency or their self-reports of English preferences were being influenced by social desirability. However, this potential limitation could be tempered by the fact that a number of validated and established instruments designed to measure acculturation (e.g., Stephenson, 2000) also rely on self-reports to measure English proficiency and preference. Nevertheless, we recommend that future studies consider employing more objective measures of English proficiency and preference rather than perceptual or self-report measures.

Sixth, the α reliability scores for our index of political knowledge were below .70. While the reliability scores for this index were not ideal, Eveland and Hively (2009) point out that this issue is not uncommon for these types of measures, as civic indices are "more of a count of behaviors that are functional alternatives rather than a series of behaviors that each tap the same underlying construct" (p. 221). Nevertheless, we acknowledge the marginal reliability of our political knowledge index as a limitation of our study, and we suggest that future research consider adopting other indices that measure knowledge.

Seventh, recent acculturation-related research has focused on the impact of communication variables on civic engagement among immigrants (Wilkin, Katz, & Ball-Rokeach, 2009). Similarly, Eveland and Scheufele (2000) have extended the knowledge gap to the realm of a participation gap. Also, recent studies have found links between the use of digital technologies and offline and online political participation (e.g., Dalisay, Kushin, Yamamoto, Liu, & Skalski, in press; Yamamoto, Kushin, & Dalisay, in press). Because our study did not analyze the potential gaps in civic and political participation, future research may very well examine how differing levels of education, English proficiency, and English preference could potentially affect the relationship between media use and civic and political participation for new immigrants.

Finally, our study was geographically constrained to the United States, and our sample included only U.S. immigrants. Whether the findings are generalizable to the experiences of new immigrants in other countries remains to be determined. For instance, an individual's receptiveness to American political knowledge and motivation to use and have access to American mainstream media may vary by national differences such as differing media systems and press freedoms; differences in political systems and the likelihood of political participation; and differences in languages, ethnicities, and cultures. Unfortunately, the data set we used did not include these national variables. Also, because an examination of all these variables is beyond the scope of a single study, future research could also consider disaggregating new immigrants' ethnic and cultural backgrounds and their countries of origin because key variables may differ along these lines.

Conclusion

Our study helps to clarify the roles of English- and native-language newspapers and TV in the knowledge gap in particular and in acculturation in general. English-language newspapers may only be helping to acculturate those who already have high education and high preference to use English. According to our study, these immigrant groups seem to be the ones gaining knowledge from their pre-immigration use of English-language newspapers. While less educated immigrants and immigrants with low preference to use English seem not to benefit from the use of English-language newspapers or TV, native-language media may serve an important role in acculturating these immigrant groups to American culture. As our findings suggest, less educated immigrants are able to acquire American political knowledge from preimmigration use of native-language newspapers and TV; immigrants who prefer to use English less are able to acquire knowledge from preimmigration use of native-language TV. This implies it may not be a fair assessment to conclude that use of native-language media hinders the acculturation process for immigrants, particularly their socialization to American politics. Therefore, we recommend that new immigrants not be discouraged from using native-language media.

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