

The “Had Mores”: Exploring Korean Immigrants’ Information Behavior and ICT Usage When Settling in the United States

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The process of settling in a new country can be extremely challenging, entailing various information needs to cope with rapid changes and adjustments to a new environment. Through interviews with 16 Korean immigrants in the United States, we explored their information behaviors in the settlement process. In line with prior work (Shoham & Strauss, 2008), we found that Korean immigrants needed various types of information: housing, work, banking, transportation, law, school, health, and language. Out of these information types, the Korean immigrants prioritized information for education and struggled to seek health and legal information. We further uncovered that various information needs are closely intertwined and found an additional type of information need: to build a new social network after migration. They often used Information and Communication Technologies (ICTs) as information sources while adapting the ICT infrastructures of the U.S. into their information practices. ICTs enabled them to build and maintain “local” and “global” identity; however, they may struggle to assess user-generated content in the new context. We noted that their strong use of ICTs for intraethnic interaction might slow down their integration into the host society. We discuss implications for future work to support immigrants’ settlement in the host country.

The process of settling in a new country can be extremely challenging and stressful, entailing rapid changes and adjustments to a new environment. Immigrants need many types of information to get oriented to their new culture and

surroundings. Information enables them to meet their immediate needs and solve their daily problems (Caidi, Allard, & Quirke, 2010). It also helps them overcome psychological insecurity, loneliness, and the temporary state of disability known as “culture shock” (Shoham & Strauss, 2008). Without adequate information, immigrants may experience frustration in their new social environment and may be at risk of being marginalized by their host culture (Cheong, Edwards, Goulbourne, & Solomos, 2007). The inability to access information is a form of social exclusion that hurts not only those who are excluded, but also the broader host society (Caidi et al., 2010).

Information and Communication Technologies (ICTs; for instance, computers, mobile devices, and the Internet) are generally known to improve accessibility of everyday information. However, limited research exists illustrating the integral role of ICTs in the context of immigrants’ settlement (Caidi et al., 2010). As a nation of immigrants, the United States welcomes about 1.5 million new immigrants every year. As of 2015, 13.5% of the U.S. population was born outside of the country; the number of immigrants in the U.S. has doubled from 23 million in 1990 to 43.3 million in 2015 (U.S. Census Bureau, 2015). Understanding the potential role of ICTs in supporting immigrants’ settlement in their host country is an important and timely problem.

In this work, we studied South Korean immigrants in the U.S. (herein referred to as Korean immigrants) to improve understanding of immigrants’ information behaviors during settlement in a new country. Asian immigrants recently passed Hispanics as the largest group of new immigrants to the U.S. Korean immigrants represent the fastest-growing racial group in the U.S., and they are one

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of the largest Asian immigrant groups (Lopez & Bialik, 2017). Furthermore, Korean immigrants are more likely to have extensive experience with rich ICT infrastructures before migration, compared with other immigrant groups—South Korea is the world leader in Internet penetration (OECD, 2014), boasting the world's fastest average Internet connection speed (Wikipedia, 2017a). Also, more than 88% of the Korean population owns smartphones, and of those, 94% access the Internet on a daily basis (Poushter, 2016). Despite the increase of the population with distinctive experiences of ICT infrastructure, the information behavior of Korean immigrants has received little attention. They may have different cultural and social norms that influence information needs and seeking behavior, and their utilization of ICTs for acquiring information could be more nuanced. In this study, we explore Korean immigrants' information behaviors and their ICT usage while adjusting to life within the host country.

Immigrants' Information Needs

Immigrants face numerous challenges during settlement in a new country, which requires access to robust sources of information (Caidi et al., 2010). Without sufficient information, it is possible for immigrants to experience "information poverty," which is a part of "a dichotomy between those with easy access to an abundance of information and those who do not [know] how and where to find it and even, perhaps, do not understand the value of information and how it can help them in their day-to-day lives" (Goulding, 2001). A state of information poverty can result from factors such as a lack of access to information tools and services, a lack of the technological skills to retrieve information, and a lack of access to accurate guidance for retrieving information (Sweetland, 1993). Prior research suggests that information poverty can be as problematic as economic poverty (Hersberger, 2003). The problem can be even more pronounced for immigrants who are less knowledgeable about their new environment and have greater information needs. They may not have enough time to develop social networks to access necessary resources in the host country upon arrival (Caidi et al., 2010). Without adequate information access, immigrants cannot make informed decisions that could potentially alleviate many stressful settlement issues.

Immigrants need various types of information to thrive. Shoham and Strauss (2008) interviewed U.S. immigrants in Israel and separated their information needs into eight types: housing, work, school, transportation, banking, health, law, and language. Baron, Neils, and Gomez (2014) found that language and transportation information was important for Hispanic immigrants in Seattle who needed to manage their daily lives and navigate the city. Quirke (2015) noticed the significance of leisure activities for immigrants' psychological health, and asserted the importance of leisure-related information for newcomers. Lloyd (2014) explored how refugees adapt to a new health environment and codevelop

health literacy practices. These types of information allow immigrants to meet their immediate needs (for instance, food and sleep), and to become oriented within their host society by learning new social contexts.

Despite this growing area of research, there are still many unanswered questions about immigrants' information needs, in particular regarding the settlement process in the host country. For example, what types of information are harder or most important to obtain than others?

What are the characteristics of immigrants' information needs and seeking behaviors? Further, are there other types of information needed for settlement besides the eight aforementioned types (Shoham & Strauss, 2008)? To improve our understanding of immigrants' information needs in the settlement process, we first explore the research questions:

RQ1. What kinds of information do Korean immigrants prioritize or struggle to seek when settling down in the U.S.?

RQ2. What are the information needs of immigrants when settling in the host country?

Immigrants and Their Usage of ICTs

ICTs, such as mobile phones, computers, and the Internet, are some of the most important information sources for immigrants, largely because they ease transnational experiences (Caidi et al., 2010). ICTs enable immigrants to build their "glocal" network by expanding the "local" (information behaviors that establish coping mechanisms in their host countries) and "global" (engagement in communication activities with their home countries) dimensions in their everyday lives (Mehra & Papajohn, 2007). ICTs provide easier access to ethnic media and local news sources that help immigrants keep track of news globally in their home countries and locally in their host countries (Lin & Song, 2006). ICTs also facilitate rapid, long-distance communication with family or friends who remain in their home countries (Caidi et al., 2010; Komito, 2011), local people in their neighborhood (Aizlewood & Doody, 2002), and already-established immigrants with prior migration experiences (Caidi, Komlodi, Abrao, & Martin-Hammond, 2014; Wong & Salaff, 1998). Accordingly, ICTs help immigrants understand and participate in their host country, empowering them to function effectively in a new society (Andrade & Doolin, 2016).

Despite these benefits of ICTs, immigrants are also known to face problems when using ICTs in a new country with regard to limited access to the Internet and/or digital literacy. Haight, Quan-Haase, and Corbett (2014) found that recent immigrants to Canada have significantly lower rates of Internet access despite their higher levels of online activity than Canadian-born residents and earlier immigrants. This problem could be more pronounced by some immigrant groups such as U.S. Hispanics, who have limited access to the Internet or ownership of a cell phone (Livingston, 2011), and African refugees in Australia who

prefer print resources because they are unfamiliar with—or even distrust—information obtained on the Internet (Borland & Mphande, 2009).

Although prior work examined the ICT use of immigrants who have limited digital access or literacy, it remains underexplored how immigrants from a country with rich ICT environments use ICTs in their host country. Thus, another goal of this work is to gain a deeper understanding of ICT use and the challenges ICT-literate immigrants face. We sought the answers of Korean immigrants who came from a country with the world's leading ICT infrastructures. We expected that they would articulate the problems of ICT usage from the perspective of “technology savvy” immigrants. As a social practice, the way people seek resources online is influenced by the Internet connectedness patterns of their home societies (Jung, Kim, Lin, & Cheong, 2005). We therefore believed that Korean immigrants might have fewer challenges when using ICTs in the U.S., a society with different ICT connectedness patterns. Hence, we investigated another research question:

RQ3. How do Korean immigrants use ICTs while settling in the U.S.?

Research Methods

We conducted semistructured interviews with 16 Korean immigrants to gain detailed insights into their information behaviors. We recruited Korean immigrants who had moved to the Seattle area within the past 3 years¹ using flyers posted at a market, postings on Korean online communities (Kseattle.com; Seattlemissy.com), and through word of mouth.

The interviews were 60 minutes each on average and were conducted in Korean over the telephone or using NateOn, a web-based chat service. We first asked interviewees to recount the types of information they needed when they moved to the U.S. When they could no longer recall any additional information needs, we prompted them with the eight different types of information needs as identified by Shoham and Strauss (2008). The questions include:

- What kinds of information did you need when you first moved to the U.S.?
- How did you get information about housing/work/schooling/transportation/banking/health/law/language?
- How do you use your ICTs in the U.S.?

Our approach was iterative and data analysis was continual throughout our data-collection process. The interviews were conducted in three phases, interjected by

¹A newcomer often refers to one who migrated to a new society within 5 years or less (Caidi et al., 2010); however, during pilot interviews, we learned that one is less likely to remember the details of the settlement process if s/he had moved to a new country more than about 3 years ago. Thus, we recruited interviewees who had been in the U.S. for 3 years or less.

rounds of data analysis that allowed us to follow the directions that emerged from our data and to refine our interview protocol for subsequent interviews (Charmaz, 2006). One of the authors, who is fluent in Korean and proficient in English, first transcribed the audio recordings and then translated the scripts into English. Two authors independently read through the first six transcripts and created initial codes. We discussed what to focus on for the subsequent interviews as a restarting point. The focused codes included: the types of information that are most necessary, the types of information that are most difficult or easiest to seek, the types of information sources, and ICT usage practices. After establishing the direction, seven more interviews were conducted, where we reexamined the codes that emerged from the prior interviews and created additional codes. However, we found only a few additional codes (for instance, differences between ICT usage in Korea and in the U.S.). After conducting and analyzing three more interviews, from which additional codes did not emerge, we discussed all codes until we reached full agreement and agreed that the point of data saturation had been reached. One author reanalyzed all 16 transcripts, compared codes across the transcripts, and created categories. The two authors then discussed the relationships of categories, related categories to subcategories, and specified the properties of a category to create themes.

Overview of Interviewees

The interviewees consisted of nine females and seven males whose ages ranged from their 20s to 50s. Their current occupations included journalist, caregiver, and IT manager. Their previous occupations in Korea included teachers, marketers, advertisers, students, and manager. Most interviewees ($N = 13$) plan to stay in the U.S. for at least the next 5 years, and intend to apply for permanent resident status, demonstrating that they do not consider themselves to be temporary residents (Figure 1). All participants own and use personal computers and smartphones on a daily basis. We used the web-use skill index (Hargittai & Hsieh, 2012), a digital skill measurement often used in digital literacy studies, to test Korean immigrants' ICT skills. The index asks if one knows each of the following web-related items: advanced search, tagging, PDF, spyware, wiki, JPG, weblog, cache, malware, and phishing. The interviewees demonstrated relatively high ICT skills ($M = 3.56$), a higher score than college students at the University of Illinois-Chicago ($M = 3.25$)—as reported in a prior study (Hargittai & Hsieh, 2012).

Findings

We now discuss our findings on Korean immigrants' information behavior when settling in the U.S. Their information needs and seeking behavior are detailed, followed by a discussion of their ICT usages and challenges when using ICTs in the U.S.

	Gender ¹	Age	Periods ²	Current Occupation	Past Occupation	Reason for migration	English ³	Green Card ⁴
P1	F	30-39	15	Homemaker	Service adviser	Marriage to American	fair	Yes
P2	M	40-49	5	Journalist	Advertiser	Better education for his children	poor	Probably
P3	F	20-29	24	Homemaker	Jewelry designer	Marriage to American	good	Yes
P4	F	30-39	1	Homemaker	Teacher	Following her husband's job relocation	poor	Yes
P5	F	30-39	36	Homemaker	Marketer	Following her husband's job relocation	fair	Yes
P6	F	40-49	29	Homemaker	Homemaker	Following her husband's job relocation	poor	Yes
P7	M	20-29	24	Student	Student	Better education for himself	fair	Probably
P8	F	20-29	9	Web Designer	Web Designer	Marriage to American	good	Yes
P9	F	30-39	24	Student	Government Officer	Marriage to American	fair	Yes
P10	M	30-39	19	Student	Manager	Better education for himself	fair	Probably
P11	M	30-39	21	Student	Researcher	Better education for himself	fair	Probably
P12	M	40-49	13	Student	Journalist	Better education for his children	poor	No
P13	M	30-39	26	IT Manager	IT Manager	His job relocation & better education for his children	fair	Yes
P14	F	20-29	12	Student	Student	Better education for herself	good	Probably
P15	M	20-29	3	Student	Student	Better education for himself	poor	Probably
P16	F	20-29	13	College Student	TV reporter	Marriage to American	fair	Yes

1. F: female, M: male, 2. Residential Periods in the U.S. (months) 3. Self-reported English level, 4. Plans for obtaining permanent residential permit

FIG. 1. Demographics of participants.

Korean Immigrants' Information Needs and Seeking Behavior

Interviewees' information needs fell under the eight types as found in prior work: housing, banking, transportation, school, health, law, work, and language (Shoham & Strauss, 2008). However, we found that their information behavior is more complex and nuanced. We detail the types of information that Korean immigrants prioritized and struggled to seek and discuss our findings on the immigrants' information needs as a newcomer to the host country.

Information for education is important. Information regarding education appeared as a high priority for Korean immigrants. Many came to the U.S. specifically to pursue educational opportunities for both their children and themselves. They actively searched for information about the quality of lectures, school rankings, curricula, or tuition fees. They tended to make decisions with regard to education first, and then altered other decisions accordingly, which increased the salience of education information needs. *"When I decided where to live, I looked for my kids' school first. I got some school information from my co-workers, and I drove around town to see which schools had good environments. We chose the nicest, safest, and cleanest school. After deciding the school for my kids, we looked for the house nearby (P2)."* This emphasis on education is deeply rooted in the cultural value Koreans place on education. Korea, noted for its "education fever," outpaces the rest of the world with an 82% high school graduation rate for adults, which exceeds the OECD average of 75% (OECD, 2013). Koreans are known to believe it is important to avoid bringing shame to the family through occupational or educational failures (Kim, Yang, Atkinson, Wolfe, & Hong, 2001). These may explain why interviewees placed information about

education at the higher level compared with other types of information.

Challenges with health or legal information. Health and legal information were the most difficult types of information for Korean immigrants to search, access, and understand. Interviewees found it challenging to know the appropriate keywords in English when searching for information related to health or laws. On the surface, this could be attributed to their limited proficiency in English or a lack of knowledge of a specialized field; however, we found that it is deeply rooted in their limited understanding of the social infrastructure—the medical and legal systems—in the host country. *"In Korea, whenever I was sick, I could go [to] any private hospital near my home, but here, I could go to another clinic only after first seeing my primary care physician.... I didn't understand the two-step process (P3)."* P3 did not fully understand the medical systems in the U.S., so she was not familiar with the term "primary care." Instead, to get a basic check-up, she kept searching for a doctor online using the keyword, "hospital," when it was actually a primary care doctor that she was looking for.

Sometimes interviewees obtained health and legal information by hiring service providers (for instance, a lawyer or doctor); however, accompanied complex processes and (perceived) higher cost discouraged them from relying on these services. P5 and P8 were less likely to go to doctors, for example, after learning the actual costs of the medical system in the U.S.: *"When I had a sore throat, I went to doctor, it was just [a] casual cold...the doctor didn't do anything special...but he charged me about 200 dollars. I was really shocked...so I never go to doctor again. I search [for] more information about whatever I can do home (P5)."* With or without their personal experiences, all interviewees strongly believed that

the cost of medical services in the U.S. would be much higher compared with Korea, where a universal health care system is in place (Wikipedia, 2017b). This stereotypical notion prevented some interviewees from gaining hands-on experience of the health or legal systems in the U.S. P2, P4, and P11 relied on a variety of medicines they had brought from Korea when they emigrated. P6 visited Korea to vaccinate her daughter because she was concerned about the price of vaccinations for infants in the U.S., although she did not search for information beforehand.

Closely intertwined information needs. Oftentimes, interviewees needed different types of information concurrently, which was not discussed in prior work (Shoham & Strauss, 2008). For example, interviewees needed to know about the local schools or public transportation when seeking housing information, as this helped make decisions on where to live (P2, P6) (Figure 2). It became clear that some information needs were intertwined with certain other information, making it necessary to seek another type of information; consequently, interviewees searched for them contemporaneously. P10 described his tough first week in

the U.S.: “To get one type of information, I needed to obtain other information first...for a driver’s license, I needed a document proving where I live. I also needed another document from the Korean consulate showing that I have a driver’s license in Korea.... So, I got a document from the landlord showing I live here, and then I was able to get a license.... I was able to do things one by one, like opening a bank account.” As information seeking behavior is a response to information needs (Njoku, 2004), interviewees often recalled in what ways they actually “sought for” when answering the question about what they “needed” when settling in the U.S. Their simultaneous information-seeking processes made their information needs more related to each other.

The types of information that were overlapped depended on context. P14 and P15 were college students in the U.S. with F1 Student Visas. They often searched information related to employment, visa law, and further educational opportunities (for instance, graduate school) simultaneously, as they were concerned about their future residence in the U.S. postgraduation. On the other hand, interviewees with children (P2, P6, and P13) needed the types of information to help them better raise their

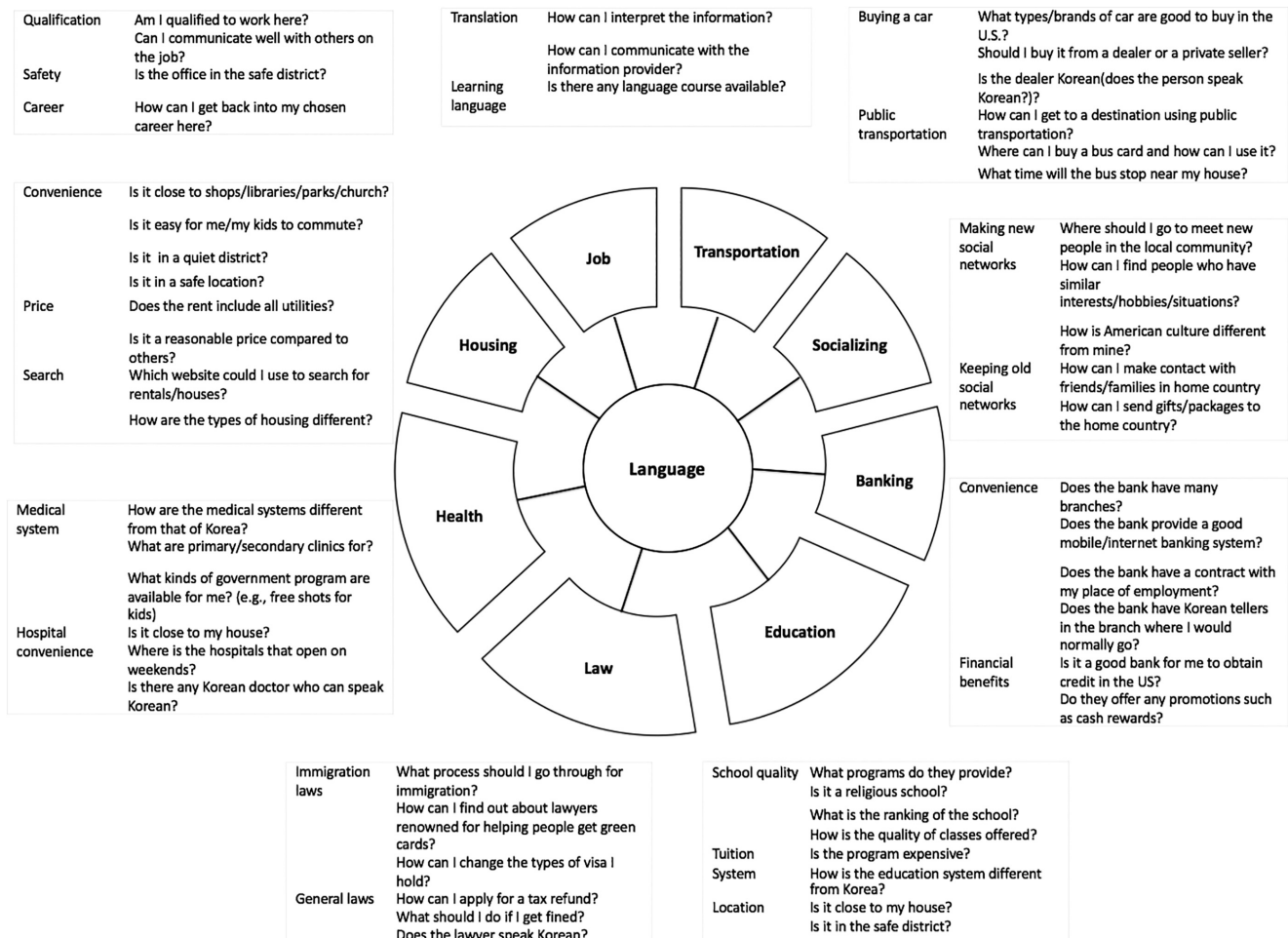


FIG. 2. The nine types of information needs of Korean immigrants.

children. P6 chose her current residence after considering the quality of the preschool for her daughter, its accessibility via public transportation, and public facilities (for instance, playgrounds) in the area. When searching for a new city to move to, P13 first wanted to know about good preschools and reliable obstetricians in the city for his children.

Additional information needs to build a new social network. Aside from the eight types of information (Shoham & Strauss, 2008), we found that interviewees needed information related to socializing. Newcomers learned about how to behave in a way that is acceptable in the new community by developing relationships of varying degrees of intimacy with others (Merton & Merton, 1968). As newcomers, interviewees wanted to socialize with people in the U.S. and to learn about different cultures endemic to the U.S. Some interviewees wanted to know how to meet others who were similar to them, raising specific questions like: “How can I find other moms with kids who are in the similar ages as my son?” (P4, P6), and “Where can I find people who have the similar hobby as me?” (P1, P16) (Figure 2). In fact, P1 consulted Kseattle to find a hobby group to join that matches her interest, and found a motorcycle club, which she still enjoys participating in. However, it was not always easy for interviewees to find others who share commonalities. P16 used Kseattle to recruit other Koreans who were willing to practice acting and perform in plays as a hobby, but she could not find as many people as she wanted, and wondered how she could find like-minded people nearby.

Furthermore, interviewees wanted to experience “the locals,” but often struggled to acquire information for socializing with “out-groups” beyond their work, school, or church spheres (P4, P6, and P16). P13 wanted to learn “the American ways” to celebrate his son’s first birthday following traditional American rituals; however, he could not do so as he did not know where to look for information, or who to ask for help. P6 sought local events on Independence Day, but she could not find anything happening around her city, even though she searched local television news. Although some were able to find socializing information, it was often not presented in a way that fostered participation from immigrants. P1 searched volunteering information to be more engaged with her local community, but she could not easily determine which volunteering tasks were feasible for her to undertake. This was because the website she used to search for volunteering information did not provide sufficient details, such as desired language levels, required skills, or expected outcomes: “I was not sure what I could do with my English skill.... I wanted to search something simple and easy that immigrants could do...but there wasn’t anything for me... in fact it was hard to tell what tasks the volunteering job involves.... I just remember wondering, ‘what does this job require?’ after reading a volunteering advertisement.” If she were able to search for volunteering tasks that did not

necessarily require a high level of English proficiency, she could have taken on volunteering work. However, the lack of such information tailored to immigrants prevented the interviewees from interacting with others socially, which undermined their ability to create new social networks in the host country and their engagement with local communities.

Language information is fundamental. We found that language information is fundamental for interviewees to acquire, interpret, or utilize other types of information, so that it tends to underlie the other types of information needs. As P6 said, “The hardest information for me is anything written in English.”; most interviewees faced a language barrier, and hence needed language information as a tool for accessing other types of information. They often searched for the meaning of words using web-translating sites or web/mobile dictionaries (P1, P4, P5, and P8). Sometimes, they needed information about hiring translators to acquire and/or interpret the other types of information: “I strongly wanted my son to go to that elementary school, but had a small argument with the education officer. The translator explained they were really strict about it [the age-limit for children attending the school]...so it might be hard for my son to attend to the school then in her opinion.” As English is a prerequisite for many other types of information in the U.S., language information was a fundamental need for Korean immigrants’ information behavior.

How Korean Immigrants Use ICTs in the Settlement Process

In this section, we discuss Korean immigrants’ ICTs usage in their settlement process. We first discuss how Korean immigrants adapt the ICTs infrastructures of the host country into their information behavior. Then, we unfold how they use various ICTs, using the “global” and “local” dimensions of immigrants’ ICT usage (Mehra & Papajohn, 2007) as a framework.

Adapting ICTs infrastructure of the host country. As newcomers to their host countries, interviewees continually faced unfamiliar situations, which seemed to extend into their ICT usage. Interviewees were not accustomed to the ICT infrastructure in the U.S. P4 mentioned her frustration with Internet speed in the U.S.: “We were not familiar with the speed of the internet here. It is incredibly slower than you can imagine. If I press the enter key, the screen has to change, but it never appears quickly and it is disconnected so frequently.” Impatience with ICTs in the U.S. was due to interviewees’ prior experiences with ICTs in Korea. “Internet here is much more expensive than in Korea, for the speed as well (P2).” From their perspective, they paid more for Internet access and mobile services in the U.S., while suffering slower access speeds. The average Internet speeds are twice as fast in Korea than in the U.S. (Wikipedia, 2017a), and the package prices of broadband/TV/phone in certain US cities,

which offer lower download speeds, stand in stark contrast: San Francisco (\$99), New York (\$70), compared with Seoul (\$15; Geoghegan, 2013).

This led interviewees to change their information behavior. P15, for example, used to communicate with others by uploading his daily photos/movies on SNS in Korea, but stopped doing that here because he felt it was too slow to upload or download content using his home Wi-Fi. Sometimes he intentionally went to the college just to use their Wi-Fi with its faster speed. P12 used to be satisfied with using a single technology, a smartphone, while in Korea. However, he purchased other technologies (for instance, GPS navigation), optimized to meet his specific needs. When he went on road trips in the U.S., he sometimes had trouble finding the route because his phone lost its connection frequently, so he felt it was unreliable. *"You shouldn't imagine [the U.S.] is the same as Korea. I traveled a lot around here, and there are so many places I cannot use my smartphone.... You should buy a navigation system if you don't want to cry in the middle of nowhere."*

ICTs for "local" information. Interviewees utilized ICTs including location-based services, search engines and online communities to acquire information that helps them cope with everyday lives in the U.S. We noted that interviewees often used location-based services such as maps (for instance, Google Maps) and GPS navigation systems (for instance, TomTom). These services let them avoid feelings of "lostness" in a new society and help them get a better sense of where to go in their host country. For example, P6 noted she always searched for bus information (bus schedules, the availability of bus stops near her destination) wherever she went; P5 often checked Google Maps whenever she wanted to go to local restaurants and read what others thought about the place. With regard to search engines, some interviewees intentionally "migrated" to Google, the most popular search engine in their host country, from Naver, a Korean-based search engine used by more than 80% of the South Korean search market (Economist, 2014). Most participants believed Naver did not provide sufficient information for living in the U.S. Sometimes interviewees chose different search engines according to the information they looked for: Naver for information related to Korea, and Google for content related to the U.S. (P3, P14, and P16). P4 even changed her mobile applications from Naver series (for instance, Naver calendar, Naver N-drive) to the Google equivalents after she arrived in the U.S. Further, interviewees used online communities such as SeattleMissy, Kseattle, and MissyUSA, which are specifically built for Korean immigrants in the U.S. These online communities offer tailored information provided by other Koreans. When P6's child became sick late at night, she did not know what kinds of medicine she could purchase as substitutes for Korean medicine brands; further, she did not know where she could take her child for emergency care. She posted her child's symptoms and asked questions on

SeattleMissy. Fortunately, she received quick responses from other mothers with similar experiences, and was able to act accordingly.

User-generated content in the U.S. Although interviewees relied highly on search engines to seek information about the host country, they often struggled to find what they wanted, or to assess the quality of information they found. Interviewees tended to prefer user-generated content (for instance, reviews on online communities and personal opinions on blogs) to relatively objective information (for instance, official websites) which they found difficult to access. P16 described her frustration when using the Google search engine, and revealed her general expectations for Internet searching. She anticipated reading others' opinions on topics—a subjective pooling of information over objective or corporate content: *"I would say official sites are not generally what I look for.... I just want to read others' opinions about the college, not its official website...it is like a way of learning about the college from others' perspective."*

More problematic is that even when interviewees found the user-generated content in the U.S., it was not always easy for them to interpret: *"I don't think internet information is always useful in the U.S. because the online recommendations usually do not match my taste. I am not sure if my taste is unique, but generally online reviews don't meet my expectations (P13)."* They did not seem to have that problem with user-generated content from Korean-centric websites such as Kseattle or Naver. P12 struggled with how to assess restaurant reviews on U.S. sites such as Yelp compared with his comfort using Naver blogs: *"In Korea, it was easy for me to gauge if reviews on Naver blogs were applicable to me or not, so I was able to get some idea [of] if the restaurant [keyword for searching] would meet my expectation before I went there. But here, I don't have any sense what it will be like, even though I read the reviews about the restaurants."*

ICTs for "global" information. All interviewees maintained their "global" identity by keeping updated with the news in their home country, as well as by communicating with their friends and family still there. Easy access to ethnic media helped interviewees obtain information about their home country on a daily basis. Many interviewees followed Korean news online—the news curated by the Korean portal services (for instance, Naver, Daum) and the major Korean broadcasting system websites (for instance, KBS, MBC) enabled them to easily follow what is currently happening in their home country. Some interviewees actively followed Korean media content (for instance, news, drama) via online streaming services or Korean cable channels with subscriptions. At the same time, most interviewees frequently communicated with their family and friends via mobile messaging applications (for instance, Kakao Talk, Line), Internet phone services (for instance, LG Internet phone), and social network services (for

instance, Kakao Story, Facebook) to acquire psychological comfort and obtain necessary information. Further, ICTs enabled interviewees to easily communicate with other Koreans in the U.S. such as extended family or friends, which was not discussed in a prior study (Mehra & Papajohn, 2007). Other Koreans in the U.S. were helpful for interviewees to get “locally” oriented in the host country; however, we found that they also serve as a “global” network to immigrants by providing cultural and psychological support. For example, P3 had Korean-born friends living in the U.S., who she frequently contacted by phone. They helped her in being better connected with the home country: *“I have really close old friends in other states, and we speak almost everyday.... I asked one friend about the better Korean TV provider...the TV provider she recommended me broadcasts live, almost the same schedule of broadcasting systems in Korea.”*

Stronger intraethnic interaction, weaker cross-cultural interaction. ICTs enabled interviewees to maintain their ethnic identity by connecting with other Koreans; however, such strong connections may prevent them from learning about the other ethnicities in the host country. One reason could be that interviewees reduce their interactions with other ethnicities while interacting only with fellow Koreans. For example, P16, who came to the U.S. a year prior, mentioned that she was too busy to meet new people because she volunteers for the Washington State Korean Association, which she had found on Kseattle. P6 did not feel like making new friends, as she already had many Korean friends from the church in the U.S. P7 tried to play video-games with his non-Korean school friends but couldn’t because of “cultural differences” in terms of how to co-play video-games; instead, he found other Korean friends. Further, easy access to ethnic media also reduced their needs for informational sources outside what other Koreans created or translated, as it was an easier information source for them to understand: *“Once I turn on TV news here, it doesn’t last more than 5 minutes. I just feel like the anchors in the news speak English too fast, and I am desperate to watch Korean TV news. Then I just turn it off and read Korean news online (P4).”* Maintaining strong connections with people, society, and culture of the home country should not be a problem. However, it could be problematic if it reduces opportunities to interact with other ethnicities and to become familiar with the language and culture in the host country, which could delay immigrants’ psychological migration to the host society. P5 mentioned some Korean immigrants who mostly interact with other Koreans in the U.S., and considered them “narrow-minded,” and as “separated from the major stream.” This suggests that interviewee’s physical locality in their host countries could remain less relevant to their identity when they maintain strong connections with people and the culture of their home country via ICTs.

Discussion

This study aimed to examine Korean immigrants’ information behaviors during their immigration process and to cast a more detailed look into their ICT usage. Through interviews with Korean immigrants, we found their information needs are complex and nuanced. Despite frequent use of ICTs for their “glocal” identity, these immigrants struggle to adapt to the ICTs in the host country and thus fail to strengthen “local” identity. We discuss how our findings are situated in prior literature on the topic, and offer implications to support migration processes.

This study extends research on immigrants’ information behavior by examining and adding to information needs that prior work identified (Shoham & Strauss, 2008) in the context of Korean immigrants in the U.S. Their cultural value and limited knowledge about the host country affected what they prioritized (information for education) or struggled to seek (health and legal information) while various types of informational needs were found to be closely intertwined. In particular, the need for language information was fundamental, which aligns with prior work that asserted the importance of language as an access to necessary resources for settlement (Baron et al., 2014; Nomura & Caidi, 2013). The complex nature of immigrants’ information needs shows that their settlement is not a simple problem to be solved by a few solutions (Caidi et al., 2010), indicating that diversified ways of support are needed in immigrants’ everyday lives for successful settlement.

This study also elucidates how Korean immigrants utilize and struggle with ICTs in the settlement process, building on prior work (Mehra & Papajohn, 2007). The technology-savvy immigrants needed to alter their information behavior according to the ICTs infrastructure in the host country while struggling to manage their “glocal” lives. Their challenges in utilizing ICTs for information needs lead to questions on the traditional distinction proposed by the digital divide, contrasting simply between “Haves” and “Have-nots.” As one’s access to and skills with ICTs are the most important elements in our modern era of information (Hersberger, 2003), either “Have” or “Have-nots” are important in researching the digital divide (Hargittai & Hsieh, 2012; Van Dijk, 2006) as well as immigrants’ information behavior (Andrade & Doolin, 2016; Haight et al., 2014). We found, however, that thinking about the digital divide in terms of “Haves” and “Have-nots” can lead researchers to overlook the “Had-Mores.” In our study, the “Had-Mores”—those who were used to better and faster ICTs, but who no longer had access to that infrastructure or those technologies—still struggle to use ICTs in the U.S. to find and make sense of information necessary for their settlement.

Our findings suggest that “Had-Mores” also need support to appropriate their ICTs use in the host country. However, this need may be currently overlooked. For example, the current re-education programs for immigrants

tend to focus on attaining basic technology skills (for instance, learning how to send emails: Seattle Office of Immigrant and Refugee Affairs, 2017) rather than adjusting their existing information skills. This focus on technology skills would not be useful to the “Had-Mores” who are web-proficient. Those who help with immigrants’ settlement process, such as local libraries, government, and non-profit organizations, need to note that these “tech-savvy” populations also need educational or instrumental support to perform information behavior at the desired levels that may be different from those with low technology literacy. In addition, our findings also highlight the need to reexamine the current literacy scales to assess one’s competence to utilize ICTs. Lloyd (2014) noted that information literacy is a social practice located in the interaction between people and sociocultural aspects of their new information environments, and explored how refugees’ experience of a new health environment shaped the development of their health literacy. In this respect, an ICTs literacy index should reflect the sociocultural aspects of information behavior, rather than the individual’s capability.

One specific way in which “Had-Mores” need support is to better appropriate user-generated content in the U.S. Our interviewees struggled to assess user-generated content for “local” information. This caused frustration that stems from gaps between interviewees’ self-assessed ICT skills and their experiences using a host country’s ICTs. These preconceptions may lead immigrants to be less likely to trust user-generated content available in their host countries and to question its relevance to them. These skeptical attitudes can influence immigrants’ information behaviors at large, and may further limit them from obtaining the help and information they need. One way to support them could be to help them easily access information that matches their taste or context. People are likely to assign more credibility to information if they believe the source of information is closer to their own context and beliefs (Wathen & Burkell, 2002). Similarly, interviewees put more faith in information found through Naver, as they could rely on their shared cultural knowledge with the content contributor. On the other hand, when looking up reviews on Yelp, interviewees wondered if the reviews were applicable to them because they could not easily perceive the Yelp reviewers’ tastes and experiences as being similar to their own (P13). Techniques like collaborative filtering could be used to reduce the barriers for immigrants to find information more similar to their own tastes, and hence more relevant to them. Collaborative filtering matches content to users based on the opinions of other people and makes recommendations on this basis (Resnick, Iacovou, Suchak, Bergstrom, & Riedl, 1994). The technique has been widely used in other domains to improve the relevance of information, such as movie recommendations (Ali & Van Stam, 2004) and online shopping (Linden, Smith, & York, 2003). The similar techniques could be extended to sites for local information like Yelp, particularly for immigrants. Immigrants would then be able to read the information generated by

others who have had similar experiences, faced similar problems, and who hold similar attitudes.

Integration or inclusion, having identities in both host and home countries, may be the ideal type of immigration in terms of immigrants’ psychological well-being and social stability of the host country, compared with assimilation, separation, or marginalization (Segal & Elliott, 2010). Inclusion policies need to encourage immigrants to involve themselves in the larger society, as a stronger focus on their own culture unintentionally results in moves toward separation (Berry & Sam, 1997). This study uncovers that Korean immigrants’ ICTs usage of the “global” network may delay their learning about the host society, which aligns with prior work (Komito, 2011), and that they also need support to expand “local” network with others beyond the same ethnicity.

ICTs could be designed to help immigrants easily interact with others outside of their ethnic community (for instance, other ethnic immigrants), by allowing those who are comparatively newer in the host country to help one another. This could take the form of mentoring systems that pair up immigrants with members of other ethnic groups who are at a similar stage of settlement into their host country and encourage them to help each other; or Q&A sites or resource-sharing platforms across immigrant groups that immigrants could use to offer and ask for help, similar to the online forums where international health professionals help one another (Komlodi et al., 2016). In this way, immigrants could interact with others who have recently faced and tackled similar problems and share both their experiences and tacit knowledge with members from many different cultural backgrounds. This may help immigrants to better gain and interpret certain types of information that requires background knowledge about the host country (for instance, health and legal information), like the African refugees who codeveloped their own coping strategies to the unfamiliar health systems in Australia (Lloyd, 2014). A service like this would support immigrants’ information and socializing needs (Quirke, 2015), and eventually help them to be integrated into their host countries, which might be beneficial for social inclusion (Mwarigha, 2002).

Some limitations of this study should be kept in mind. Because cultural value and immigrants’ existing knowledge of the country can influence their information needs, our results will likely not generalize across all immigrant groups. Also, our findings are based on 16 interviews with South Korean immigrants who emigrated to the U.S. within 3 years of the study, so our findings also may not speak to Koreans who emigrated to the U.S. earlier or have been living in the U.S. longer. Future research should consider more diverse samples of “technology-savvy” immigrants with a variety of other social and cultural contexts (for instance, Americans who moved to Tanzania, which has about a 5% Internet penetration as of 2015) and explore how the prior experience of ICTs would affect immigrants’ information needs and seeking behaviors. We hope our preliminary findings provide insight for researchers and practitioners

exploring similar issues in the general field of immigrants' information behaviors.

Conclusion

Overall, this study makes important theoretical and practical contributions by examining Korean immigrants' information needs and seeking behaviors, as well as their ICT usage during the settlement process. Extending prior work on immigrants' information behavior, we capture the more complex picture of information needs and seeking behaviors of Korean immigrants, and uncover an additional information need—to create a new social network in the new social context. Furthermore, we found that Korean immigrants needed to compromise with the ICTs infrastructure in the host country, and struggled to assess user-generated contents, threatening the balance of “glocal” everyday lives. This allows us to conceptualize these ICT users as “Had-Mores”—those who are accustomed to better and faster ICTs, but who no longer have access to the same infrastructure, extending the traditional division of “Haves” and “Have-nots.” This opens up opportunities for future research on information behavior during changing cultural and social contexts after migration, particularly in consideration of prior ICTs experiences. As more people move from one society to another, which may or may not have comparable infrastructure and cultural and social contexts, it is increasingly important to understand and support immigrants' information behavior in their settlement process.

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