

An exploratory study on the digital identity formation of Korean university EFL learners

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ABSTRACT: The present study aims to sketch the contours of new media ecology for Korean university students as well as to examine how these learners shape and negotiate their digital identity by using social networking services and digital devices. It also investigates their use of digital media for learning English as a foreign language (EFL). In total, 652 Korean university students completed a questionnaire, and a subset of this group participated in semi-structured interviews. The findings show that Korean university students are well integrated into new media ecology, and display emerging characteristics such as the use of social networking services on a daily basis, possession of wireless digital gadgets, and experience in studying online lectures. Also, they engage in digital media largely for the purpose of maintaining friendships with their peers and families, but prefer to keep a low profile in networked public cultures and “interest-driven participation” (Ito et al., 2010). On the other hand, these students have utilised new media for EFL learning to a large extent, but they are not fully engaged in globally networked target language communities.

KEYWORDS: Digital identity, foreign language learning, friendship-driven learning, interest-driven learning, Korean university students, media ecology, multiliteracy.

INTRODUCTION

New media technology such as mobile and social networking, web 2.0, and others is now rapidly transforming educational paradigms and influencing our understanding of knowledge and society. Emerging terminology in education such as social learning (boyd & Ellison, 2008), informal learning (Cross, 2006; Davies, 2008), and multiliteracy (Kasper, 2000; New London Group, 1996) drives the notion of new learning, moving from structured authority-oriented, text-based learning to ubiquitous, student-centred, multimodal learning. In particular, mobile learning has brought up a revolutionary concept – “anytime anywhere” access to learning, highlighting the “mobility” of technology, learning, and learners (El-Hussein & Cronje, 2010). This radically changed new media ecology determines the attributes of language learners’ digital identity in terms of how they view, learn, and use languages. In accordance with this identity formation, second language pedagogies should also be diversified.

Young people have been at the forefront of adopting new media technology. Their early exposure and lasting adjustment to new media have resulted in the existence of

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their own learning culture as a digital generation. In this vein, Ito et al.'s longitudinal digital youth project (2010) has enriched the study of digital identity with large, in-depth and context-specific datasets and has provided significant key concepts that can describe and categorise the characteristics of youth participation in the new media ecology. Their conceptual framework and findings can also be employed in understanding and comparing learners' digital identity across different cultures.

Their findings also raise new research questions, such as, "How are second language learners interacting with and engaged in a globally networked society?" and "How does their digital identity influence their language learning?" To answer these questions as well as others, it is crucial to understand the digital attributes of EFL (English as a foreign language) learners living in this changed learning environment in terms of their e-learning experiences, digital use patterns, and attitudes toward new media. However, there is not much empirical data to date concerning EFL learners situated within a culture-specific new media context.

That being said, the present study is concerned with Korean university students' digital identity. Korea is a "technology-rich" and "tech-savvy" society. Almost 100% of university students own smartphones and have had long experience with online learning throughout their primary and secondary education. On the other hand, Korea is well known as a unicultural and ethnocentric society, where people are reluctant to accept global cultures and people. Furthermore, their foreign language learning opportunities outside the classroom are still very limited. Until globally successful social networking sites (SNS) or Web 2.0 systems such as *Twitter*, *Facebook*, and *Google* were introduced, Koreans' Internet usage patterns had generally been restricted along national boundaries, relying heavily on Korean search engines or building online Korean communities using their mother tongue. Consequently, it is of great interest to investigate how their language learning identity has been changed in this new media trend.

The purpose of this research was first to explore how Korean university students' digital identity can be described and interpreted in terms of the conceptual framework established by Ito et al. (2010), and second to inquire about their attitudes towards new media and patterns of media usage for learning EFL. This study involved 652 university students in the Republic of Korea, who participated in a survey and a subset of whom participated in semi-structured interviews. It addresses the following research questions:

1. To what extent are Korean university students engaging in the new media environment?
2. How are new media shaping Korean university students' digital identity in light of the conceptual framework established by Ito et al. (2010)?
3. How is their digital identity influencing their EFL learning?

BACKGROUND OF THE STUDY

New media ecology

The term “media ecology” – a study of the media environment – was employed by McLuhan (1962, 1964) and Postman (1970), starting with the idea that media play a leading role in human beings’ perceptions, feelings, values and actions. Media ecology constitutes a complex message system (Postman, 1979), in which technology, culture, and everyday human practices are all dynamically interrelated, producing the meanings, uses, functions, flows and interconnections in people’s lives (Ito et al., 2010). The specifications of new media are changing constantly, and nowadays networked media such as mobile (or web 2.0) technologies and SNS² belong to the realm of new digital media. Networked media and the Internet have generated various modes of human-to-human communication as well as a huge global network community, and have made it possible to search an effectively unlimited amount of information. Furthermore, mobile devices have broken through the boundaries of time and place, and enabled “anytime anywhere” networking. The so-called “smart” technology of mobile devices is also merging numerous technological functions into programs or websites known as *mash-ups*, which integrate formerly disparate tools such as the web, multimedia, social networking, and telecommunication all together in a single user’s hands. These new media have changed our lifestyles and education remarkably.

Digital identity

Gee (2000) defines identity as “acting and interacting as a ‘certain kind of person’” (p. 100), and argues that individuals develop an affinity-identity by participating in specific practices in social contexts. Goode (2010) similarly views identity as “a product of participation in communities” (p. 502). According to her, a technological identity can be better understood with this definition. For example, students who participate in a computer camp or in a mathematics course can learn about technology with more knowledgeable users in each given context, which helps them to shape their technological identity. Thus, a digital identity is not a fixed trait; it is changing, context-dependent, and inextricably linked with the variable practices and resources of specific settings (Norton & Toohey, 2011). Goode (2010) suggests four aspects of belief systems as a conceptual backbone of a technological identity: beliefs about technological abilities; beliefs about the importance of technology; beliefs about the opportunities and limitations of participation; and motivation to learn about technology. On the other hand, boyd and Ellison (2008) summarise the core concept of a digital identity as being shaped through the following community processes: impression management, friendship management, network structure, and bridging of online and offline social networks.

Based on previous literature, Ito et al. (2010) suggest four key concepts that characterise the ways youth are engaged with new media (i.e., how digital identity is shaped): *genres of participation*, *networked publics*, *peer-based learning*, and *new*

² boyd and Ellison (2008) define SNS as “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (p. 211).

media literacy (see Figure 1). These concepts were used as an analytic framework for their longitudinal ethnographic study on digital youth, and also adapted in this study as a conceptual framework for creating survey items and analysing data, as they contain a full description of characteristics that can be applied to the target group of this study. In what follows, discussions on this framework will be provided.

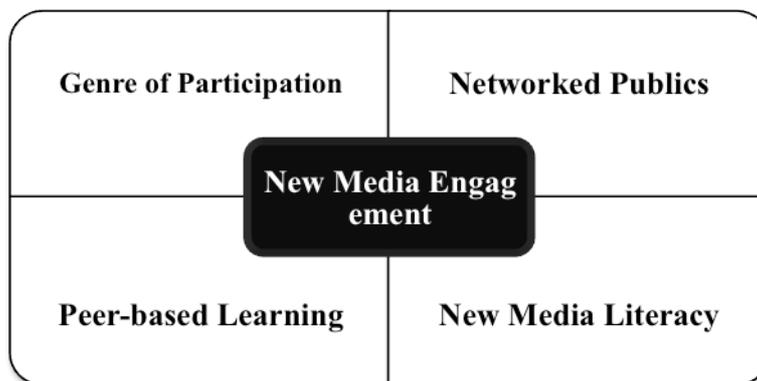


Figure 1. The conceptual framework of Ito et al. (2010)

A genre of participation can be defined as “different ways in which kids engage with new media and how their engagement relates to social participation and identity” (Ito et al., 2010, p. 76). According to Ito et al., youth have their own genres of participation individually, ways to recognise a set of social, cultural, and technological characteristics. In examining young people’s patterns of engaging in media and interacting with other people, Ito et al. distinguish between two major genres of participation: *friendship-driven* and *interest-driven*. The friendship-driven genre is represented by the engagement of youth in their everyday interaction with their friends and family members. On the other hand, interest-driven practices “require more far-flung networks of affiliation and expertise” (Ito et al., 2010, p. 16), and interests are major components in forming networks and friendships. While these two genres represent a high-level distinction in the description of young people’s engagement in media in Ito et al. (2010), they further distinguish more specific conventions in terms of different degrees of commitment to the media: “hanging out”, “messing around”, and “geeking out”. Among these, “hanging out”, which is most closely linked to “friendship-driven” practices, is casual and friendship-oriented by nature, with major participants associated with this practice being within one’s local networks. “Messing around” falls somewhere between “hanging out” and “geeking out”, and it represents young people’s initial step towards interest-based practices, with the issue of how to deal with technology and media being the major focus of their activities. Youth may “mess around” by searching for information online and “tinkering” with digital gadgets and multimedia software. “Geeking out”, as its name suggests, situates itself in the domain of the “interest-driven” genre, and the youth who are geeking out immerse themselves deeply into the areas of their own interests, which are generally not present in their local friendship-based networks. In pursuing “geeking out” practices, online media serve a crucial role in enabling youth to search for and maintain relationships with comrades who share the same interests.

The merging of online networks and digital media tools has given birth to *networked publics*, in which youth take an active role in social network communities to generate and share culture and knowledge, which in turn will activate and structure their

learning and identity. It is this newly emerging type of public through which youth can expose their network connections to “broader publics”, and also engage in different publics simultaneously (e.g., local-school and online contexts), shaping a multi-faceted identity. On some occasions, networked publics offer young people opportunities to replicate their real-world friendship-driven practices in online environments, or to search for a group of shared interests (often including unidentified audiences) beyond their immediate local contexts. On the other hand, *peer-based learning* is informal, out-of-class learning based on peer-to-peer interaction, which augments young people’s motivation by observing and communicating with peers of the same age and with the same interests. By straying away from formal instruction in school and from their parents, youth are searching for opportunities to learn lessons for life skills, social norms among their peers, and even specialised knowledge within the domain of their interests. Peer-based learning is also operationalised by “a context of reciprocity” (Ito et al., 2010, p. 22), meaning that an individual user can simultaneously learn, produce, and put a value on knowledge and culture. Some young people, particularly those engaging in interest-driven practices, may develop the identity of an expert or knowledge-transmitter in a chosen area (without forcing their authority on their peers) – a kind of identity which otherwise would be difficult for them to develop in formal contexts.

Finally, new media literacy represents the literary practices of young people as a form of culture, learning and identity. According to Ito et al. (2010), new media literacy may range from skills related to creating and editing online profile pages, displaying their online network to publics, experimenting with online-specific languages, and using specialised vocabulary for gaming, to developing “new experimental genres that make use of the authoring and editing capabilities of digital media” (p. 342). New media literacy may develop along with young people’s orientation to the aforementioned “genre of participation” continuum.

Despite its brief history, the conceptual framework of Ito et al. (2010) has been widely cited in recent studies on the use of technology in education (e.g., Campbell, Wang, Hsu, Duffy, & Wolf, 2010; Davies, 2011) and youth participation in online networks (e.g., Ahn, 2011; Kahne, Middaugh, Lee, & Feezell, 2012; Pascoe, 2012; Tripp & Herr-Stephenson, 2009). However, to the best of the authors’ knowledge, there has been little previous effort to adapt this framework in developing research instruments, and consequently examine the identity of certain populations with these instruments, and this is the area in which the present study aims to contribute to the current field.

Measuring digital identity seems a very challenging task. Previous studies have generally employed qualitative methodologies. First of all, narrative inquiry based on story-telling has often been used to describe the digital identity of each individual. For example, Harrison and Thomas (2009) used a collection of students’ narratives about their computer experiences and attitudes toward technologies in order to reveal the development of students’ technological identities. Similarly, Goode (2010) also used narrative inquiry to find out how socio-cultural contexts such as family and school practices influence the development of a technological identity. Another relevant method is *Technobiography* – the use of an anecdotal diary of personal stories about and interactions with technology (Stepulevage, 1999). Ethnographic interviews and observations have also been used (Goldman, Booker, & McDermott, 2008; Ito et al., 2010). Some researchers have used surveys (Goode, 2010; Hiradhar & Gray, 2008),

but almost none of them provided statistical information with large-scale data that described the digital identity of particular settings or groups. Although it seems true that a deeper understanding of young people's beliefs about or ways of engaging with new media is driven by rich description and vivid voices obtained directly from participants, it is also pivotal to examine a particular population's overall patterns of digital media use and their belief systems, and the findings from quantitative inquiries can be a good source for comparing digital identities across different cultures. The present study developed a participant questionnaire based on the work of Ito et al. (2010) and others, with an aim to obtain large-scale quantitative data related to the digital identity formation of Korean university EFL students.

Korean students' digital identity and EFL learning

Korean culture is one of the factors that influence the negotiated digital identity formation of our target population. Some recent studies have examined Korean students' digital identity and their unique culture related to social media environments. According to Kim, Sohn and Choi's survey study (2011), a Korean university student group was oriented towards "obtaining social support from existing social relationships" (e.g., family and close friends) in SNS (p. 371), whereas its American university counterpart put more weight on seeking entertainment (e.g., finding people with similar interests). A study by Alhabsh, Park, Kononova, Chian, and Wise (2012) further revealed that the proportion of socially close friends in Korean's online social networks was substantially higher than that in Americans' networks. They also indicated that Koreans maintained remarkably lower numbers of *Facebook* friends compared to US samples.

Recent studies have also examined Korean students' use of new media for EFL learning. For example, Kim, Park and Baek (2011) analysed language-learning patterns of Korean students (grade 5, 7, 11) while they were completing twitter-based writing tasks. Elam and Nesbit (2012), on the other hand, investigated Korean university students' use of SNS and web 2.0 tools for project-based EFL learning. These studies both reported that Koreans students showed a keen interest in using new media for language learning, which enhanced collaboration and social interaction during their lessons. These attempts, however, were all made in classroom settings with assignments or activities guided by instructors. Therefore, it seems that new media can effectively assist Korean EFL students' language learning, but no further indication was given from any previous studies as to how spontaneously Korean students take advantage of new media for their language learning or how they shape their digital identity as second language learners by engaging in them; these are the questions that the present study aimed to address, along with the issue of their digital identity itself.

METHODS

The present study reports a subset of data collected for a large-scale research project that examined the growth of digital identity among young Korean students. According to the description in Ito et al. (2010, pp. 7-8), this age group represents the youngest cohort of "young adults" (age 19-30), and those who have just passed the stage of adolescence. The investigation into these tertiary-level students is of particular

interest in this context, as a large portion of this population began to experience full-fledged technology-based lifestyles around this period, and thus lend themselves to important empirical investigation.

Participants

The group of participants in the present study was comprised of 652 students from two universities located in Seoul, Republic of Korea. Due to restricted resources, the sampling frame for the present study was limited to universities located in the capital city (i.e., Seoul). Among a limited number of universities available for data collection, the authors decided to sample one public university and one private university, whose student populations were diverse in terms of their geographical distribution (i.e., place of origin) and socio-economic class. On the other hand, these institutions could be characterised as enrolling students with excellent levels of educational achievement (those in the top 10%). The participants consisted of 453 male and 199 female students with 222 freshmen, 78 sophomores, 156 juniors, and 196 seniors. In terms of the proportion of male and female students, the sampling of the present study can be suggested to be moderately skewed in view of student demographics of Korean universities (50% male and 50% female students). They were from 47 different majors including Law, Physics, English, Philosophy, Choreography and so on.

Instrument

The authors designed the questionnaire for the present study based on previous examples from the literature that have delved into multiliteracy, mobile learning, and digital ecology (see *Background of the study* section for more details). In particular, theoretical concepts drawn from Ito et al. (2010) such as “hanging out”, “messaging around”, and “geeking out” were directly employed in designing questionnaire items.

The final version of the questionnaire (see Appendix A) comprised three sections: 1) participants’ background information and a range of online activities in which they engage, 2) participants’ use of social media, and 3) attitudes towards multiliteracy, using technology in learning English, and the value of new media. The questionnaire items in the first two sections were primarily descriptive in nature, asking about participants’ digital lifestyles and behaviours. Cronbach’s alpha (i.e., reliability) for the third section of the questionnaire, which was comprised of Likert-scale items exclusively, was calculated in SPSS 21, and the resulting reliability of 25 Likert-scale items was .707. It should be noted that, while these three sections could stand on their own, some concepts were dealt with by more than one questionnaire item from different sections for the purposes of triangulation and cross-checking. Table 1 describes the major constructs of the present study that were subject to our questionnaire, with some of them being directly drawn from the theoretical framework of Ito et al. (2010). These constructs were also used in building a coding scheme for the post-questionnaire interview (see *Interview* section).

Interview

Out of 27 participants who volunteered (through the questionnaire) to be interviewed, in total 12 students were selected in consideration of their academic years and majors. Three male and two female students from the sampled public university participated in the interview, as well as five male and two female students from the sampled

private university. These participants were then interviewed individually by the authors at their respective institutions. The interviews were conducted in a semi-structured format. The interview questions ranged from descriptive questions on using digital media and SNS (e.g., how often do you use your smartphone to access your SNS accounts) to more value-laden questions (e.g., what are the benefits and drawbacks of using online materials in studying English). Each interview took 15 to 20 minutes, and was conducted in Korean.

Major construct	Specific category	Relevant questionnaire items		
		Section I	Section II	Section III
Digital Engagement (general routine)	Online activity	1, 2	1	2
	Online learning experience	3, 4		18
Genre of participation (major distinction)*	Friendship-driven genre of participation		1, 2, 3, 4, 5	1, 7, 8
	Interest-driven genre of participation			
Genre of participation (different degrees of commitment to media engagement)*	Hanging out			1, 7,
	Messing around	1, 2	5	8, 9, 11
	Geeking out			10, 12
Networked public cultures and peer-based learning*				3, 4, 5, 6, 13,14,17
New media literacy*		1, 2		15,16
Digital identity and EFL learning		5, 5-1, 6		19, 20, 21, 22, 23, 24, 25

Table 1. Major constructs of the present study and relevant questionnaire items

Data analysis

The participants’ responses to each questionnaire item were analysed descriptively. Then, as mentioned in the *Instrument* section, these results were put together to ensure that our understanding of the emerging patterns and phenomena at hand was based on convergent findings from different sections and items of the questionnaire. Among the results of the Likert-scale items, only those directly relevant to the main issues are presented.

The interview data were partially transcribed and translated into English by the authors. The extracts of the interview data were then analysed qualitatively for the purposes of triangulating the data from the questionnaire as well as providing more in-depth explanation of general patterns emerging from the questionnaire. Accordingly, themes emerging from the interviews were first coded based on a scheme which largely reflected the constructs in the questionnaire (see Table 1), including those such as engagement in different genres of participation, orientation towards different types of multimedia, involvement in networked public cultures, and

others. Those themes which were not part of this coding scheme were coded separately. In *Results and Discussion*, each interviewee is coded in terms of university (A for public university, B for private university), gender (M for male, F for female), and their unique numbers (e.g., AM#1 refers to a male student from the public university, who was the first interviewed student).

RESULTS AND DISCUSSION

Korean university students as a digital generation

The first part of this section aims to sketch the “new media ecology” of our own context – the issue that the first research question aimed to address. A general impression that emerged out of the data analysis is that the Korean university context can be described as a “technology-rich” and “tech-savvy” environment, as anticipated. The first piece of evidence for this proposition came from the findings on the participants’ primary methods of accessing the Internet, with 87% of the total participants ($n = 557$) reporting the use of smartphones or tablet PCs. Only 13% of the participants ($n = 85$) reported using desktop computers to get online. These figures suggest that the digital lifestyles of Korean university-level students are fundamentally based on the use of a wireless LAN connection. Perhaps more interestingly, more than 98% of the participants owned at least one SNS account, with 37% of this group having more than four accounts. It is noteworthy that only nine participants stated that they did not own a single SNS account. This finding confirms the authors’ assumption that social networking has penetrated the Korean student culture, and that it serves as an essential element of their digital lifestyles.

The most frequent online activities were “getting access to portal websites” (24%), “using SNS” (22%), and “listening to music or watching video clips” (19%). Indeed, one interviewee made the following comment on using SNS in his daily life:

AM#3: Using SNS is so important for me to maintain relationships with my friends and people I know....I would definitely not feel comfortable if I were deprived of SNS.

On the other hand, “checking emails” and “blogging” were carried out by the participants to a much smaller degree (12% and 3%, respectively), from which one can infer that they prefer shorter writing (i.e., microblogging), which reflects a new writing trend on the web, to full blogging or emailing. Another interesting finding was that the participants showed a strong preference for receiving multimedia-based messages (e.g., images and music) over text-based ones.

Table 2 provides more detailed information on Korean university students’ preferred online activities with their digital devices. The participants were found to search and read news or information (22%), enjoy multimedia content (music 19%, images 13%, video 6%), and exchange comments and talkbacks (13%) in digital environments. Producing digital files (text 11%, presentation 6%) and writing journals (blogging 3%) were not very common activities. The data analysis reveals that Korean university students are in fact digital *consumers* who are accustomed to searching for

and interacting with information, rather than providers who create and introduce cultural content of their own.

Category	Number of responses (<i>n</i>)	Percentage of each category (%)
Downloading and editing images	221	13
Downloading and editing video clips	111	6
Exchanging comments or talkbacks	220	13
Writing and editing text messages	183	11
Creating presentation materials	106	6
Blogging	47	3
Searching for news or academic information	369	22
Taking e-Classes/online lectures	120	7
Downloading and editing music files	329	19
Total	1706	100

**Table 2. Preferred online activities with digital devices
(multiple responses per participant)**

One of the noteworthy findings regarding the new media ecology was the participants' ample experience with listening to online lectures, called "In-Gang" in Korean. These free or paid online lectures, which basically consist of video lecture clips, are similar to what Khan Academy³ offers today, and they have been very commonly utilised by Koreans since the early 2000s. Korean university students have adapted well to this type of lecture, with 98% of the participants ($n = 638$) having experienced online lectures before entering university. What is more, about 49% of the group ($n = 320$) was introduced to online lectures before the age of fifteen, and a similar percentage of the participants ($n = 301$) had listened to more than ten online lectures by the time of this study.

To sum up, a rich networked media ecology marks Korean university students as a digital generation who are not only equipped with wireless digital gadgets, but also make use of new media for various purposes. Thus, the "digital divide" (Norris, 2001) does not seem to be characteristic of these students.

New media engagement

Having painted a general picture of how Korean university students fare in the new media ecology, the authors now examine the issue of how new media have shaped their digital identity. To this end, they will draw on four analytic lenses from Ito et al. (2010) – namely *genre of participation* (and *levels of commitment and intensity in new media practice*), *networked publics*, *peer-based learning*, and *new media literacy* – through which they can describe the profile of Korean students' digital identity and the process of their identity formation.

³ It is a non-profit educational organization established in 2006 with an aim to offer a free and high-quality education (<https://www.khanacademy.org/>).

Genre of participation

The cultural practices of Korean university students in the new media ecology can be largely described as a “friendship-driven genre of participation”, meaning that their digital lifestyles centre around maintaining and fortifying relationships with their ordinary circle of family members and friends in their local contexts. As one clear piece of evidence, the participants reported that “maintaining relationships and socialising” were the primary reasons for using SNS (57%). Those reasons less concerned with friendship such as “gathering information” (15%), “exchanging opinions” (10%), and “expressing oneself in online environments” (9%) were generally given a lower priority by the participants.

In contrast, the “interest-driven genre of participation” was not clearly borne out in the data of the present study. This type of participation, according to Ito et al. (2010), should accompany a wide networking – one which goes beyond the local context. A group of people involved in the interest-driven genre of participation might include those who engage in regular interaction in their local contexts as well as exchange comments in online environments with users who share a common interest. In any case, one would expect that this latter group should make up at least some noticeable proportion of a person’s friend list, if he or she could be said to be oriented towards “interest-driven” engagements. However, the survey data do not show any sign of the interest-driven genre in social networking usage patterns: 32% of participants ($n = 211$) had fewer than 30 friends with whom they communicated via SNS. This figure appears to be unexpectedly small. That being said, it would be difficult to argue that interest-driven groups constitute any significant proportion of these figures. Furthermore, a majority of the participants ($n = 521$) reported that the percentage of their SNS friends whom they had never met in reality was smaller than 10%. These findings jointly suggest that the proportion of interest-driven groups in their friend lists may be negligible, or even non-existent. This finding corroborates those of previous studies on Korean students’ uses of SNS (Kim et al., 2011; Alhabsh et al., 2012), with their online network being largely established for the purpose of maintaining friendships, and the percentage of those engaging in interest-driven practices being small.

Levels of commitment and intensity in new media practice

Another level of analysis was performed on the participants’ relationships with new media in light of “different degrees of commitment to media engagement” such as “hanging out”, “messaging around”, and “geeking out”. It has been shown above that Korean university students use digital devices and SNS primarily for the purpose of maintaining relationships with people in their local contexts, and thus can be said to be strongly oriented towards the “hanging out” genre. However, it was also found that a considerable proportion of the participants were engaging in activities such as accessing portal websites, listening to music, and watching video clips. The use of a wide range of multimedia and web resources in this manner is representative of the “messaging around” genre. On the other hand, pursuits of more specialised knowledge and interests (i.e., geeking out) were found to be less characteristic of Korean university students, as interest-based and autonomous activities such as blogging and video editing were not predominant traits of these participants.

The findings from the Likert-scale questionnaire items (section III) also coincided with the above proposition. Table 3 presents the results of the Likert-scale items on the participants' engagement and involvement in new media practices.

Statement / Genre of participation	Strongly disagree		%		Strongly agree		Mean (SD)
	1	2	3	4	5		
Q7. The main purpose of my daily online activity is mainly to communicate with my friends (e.g., casual chats or making appointments). / Hanging out	2.1	8.7	19.6	53.4	16.1	3.73 (.91)	
	10.8		19.6	69.5			
Q8. The main purpose of my daily online activity is to satisfy my interests (e.g., search information for my interests). / Messing around	.8	3.8	21.2	59.6	14.6	3.83 (.74)	
	4.6		21.2	74.2			
Q9. The main purpose of my daily online activity is to play with web tools (listening to music, watching video clips, taking pictures, etc.). / Messing around	1.8	11.7	31.8	46.1	8.6	3.48 (.88)	
	13.5		31.8	54.7			
Q10. The main purpose of my daily online activity is to run and manage personal blogs, online communities, and other web accounts. / Geeking out	35.7	41.3	13.8	7.1	2.1	1.99 (.99)	
	77.0		13.8	9.2			

Table 3. The participants' engagements in new media practices

Table 3 shows that the participants' responses to the items concerned with "hanging out" and "messaging around" were in sharp contrast to those concerned with "geeking out". That is, more than half of the participants responded positively to the statements relevant to the "hanging out" and "messaging around" genres. For example, about 70% of the participants agreed with the statement in Q7 ($M = 3.73$, $SD = 0.91$) that the daily purpose of using online materials was to communicate with their friends, which is a typical activity of the "hanging out" genre. On the other hand, less than 10% of the participants were found to engage in online activities under the "geeking out" genre (e.g., running personal blogs and online communities), as can be seen in Q10 ($M = 1.99$, $SD = 0.99$).

Networked public cultures and peer-based learning

It can be inferred from the findings discussed to this point that the new media ecology for Korean university students would generally meet the condition for networked publics, and thus this population should have established their own networked public cultures based on mutual trust and context-specific norms. However, from the survey data analysis, Korean university students seem to be cautious in trusting and learning from each other in networked public cultures (see Table 4).

Statement	Strongly disagree		%		Strongly agree		Mean (SD)
	1	2	3	4	5		
Q3. With smartphones, I can get most of the information that I need.	.6	3.2	11.0	54.4	30.8	4.11 (.77)	
	3.8		11.0	85.2			
Q5. The information that net users provide such as reviews or Q&As is trustworthy.	9.2	31.2	43.1	17.7	4.9	2.67 (.87)	
	40.4		43.1	16.5			
Q6. I tend to refer to online reviews in making a decision.	10.1	28.0	30.7	29.6	2.1	2.85 (1.03)	
	38.1		30.7	31.2			
Q13. I tend to tap net users' opinions when I decide on my position on a certain social issue.	5.4	22.5	40.3	16.0	.5	3.01 (.91)	
	27.9		40.3	31.7			
Q14. When I pick up new Internet words (or expressions), I would like to use them in online communication.	4.1	26.7	36.4	28.7	2.5	3.02 (.95)	
	30.8		36.4	32.8			

Table 4. The participants' attitudes towards networked public cultures and peer-based learning

As can be seen in Table 4, whereas a majority of Korean university students acknowledge and utilise the power of technology and authority-based knowledge on the Internet for their own learning (Q3, $M = 4.11$, $SD = 0.77$), they were rather dubious about the “value” of information offered by networked public cultures (Q5, $M = 2.67$, $SD = 0.87$); thus shared knowledge seldom appears to influence them in building up their opinions or enhancing social learning, as can be seen in Q6 ($M = 2.85$, $SD = 1.03$) and Q13 ($M = 3.01$, $SD = 0.91$).

The lack of mutual trust here appears to have impeded the development of well-established “peer-based learning” environments. One consequence of this appears to lie in the participants' non-conformity to social norms established by networked public cultures, with three quarters of the participants reacting negatively or remaining neutral towards the statement Q14 ($M = 3.02$, $SD = 0.95$), which dealt with the idea of picking up words and expressions on the Internet and taking them up as part of their online communicative repertoire. Therefore, the authors were not able to observe in their data the occurrence of “peer-based learning”.

New media literacy

Another prominent feature of Korean university students was concerned with their media literacy. While previous sections have reiterated the participants' familiarity with multimedia, this subsection aims to further validate this finding with those based on the Likert-scale questionnaire items (see Table 5).

Statement	Strongly disagree		%		Strongly agree		Mean (SD)
	1	2	3	4	5		
Q15. It's easier to use images or videos than to use texts when describing or explaining something.	3.7	20.7	29.1	37.9	8.6	3.27 (1.00)	
		24.4	29.1		46.5		
Q16. I prefer to opt for materials with images or videos over those with text only.	.9	5.4	18.0	56.5	19.2	3.88 (.81)	
		6.3	18.0		75.7		

Table 5. The participants' attitudes towards multimedia

The results regarding the statements Q15 ($M = 3.27$, $SD = 1.00$) and Q16 ($M = 3.88$, $SD = 0.81$) in Table 5 revealed that the participants had a strong preference for multimedia over the text-only mode in terms of processing content on the Internet (see Sakar & Ercetin, 2005 for a similar finding). It is noteworthy that about three quarters of the participants would opt for materials with images and videos over those with text only. This finding seems to demonstrate clearly that the participants had developed multiliteracy (Kasper, 2000; New London Group, 1996) from an early age, presumably due to the influence of using digital devices in their childhood and adolescence. One interviewee described why text-only materials are not appealing:

AF#5: I have some "objections" [interviewee's emphasis] to materials based on text only....I mean...I feel like I have to read the whole thing! It's not motivating.

Another interviewee stated that multimedia materials allow one to process the content more efficiently:

BM#12: A picture paints a thousand words indeed....On many occasions, I just need a picture or video clip to understand the whole thing. It's more efficient.

When it comes to learning English, multimedia materials also appear to enhance students' understanding of the cultural aspects of an English-speaking community more effectively:

AM#2: When I read an English text about American cultures...I understand the content better with an image or photo...for example we read about "staging the house" to sell it at a higher price last time...without an image presented by the instructor, I would have much difficulty in understanding what "staging" or "de-cluttering" means.

Success in new media society demands multiliteracy, "that is, competence in an even more diverse set of functional, academic, critical, and electronic skills" (Kasper, 2000, p. 105). The findings here suggest that Korean university students' multiliteracy has been pursued and developed simultaneously, and that their new media literacy seems to contribute significantly to structuring their digital identity.

Digital identity and EFL learning

The third research question addressed the issue of how the new media ecology has affected Korean university students in terms of learning EFL in online environments. The triangulated data analysis identified that Korean university students had resided in the digital EFL learning environment for a substantial period of time, but they do not seem to take full advantage of it.

Three major findings on networked media usage patterns for EFL learning are as follows. First, approximately 73% of the participants ($n = 475$) had experienced learning English online, indicating that the new media ecology had become firmly entrenched in their EFL learning. Second, three major language skills of their online learning experience were test preparation (26%), reading (23%), and listening (21%). This large proportion contrasted sharply with those who used online materials to develop speaking and writing skills, a group which represented only 10%. Third, 82% ($n = 532$) reported that they had visited foreign websites in English, and engaged in more than one online activity, as illustrated in Table 6. The indicated online activities such as retrieving information, watching video clips, and SNS activities (e.g., FacebookTM, TwitterTM), can be defined as authentic English learning tasks (Arnold & Paulus, 2010; Chapelle, 1999), although some students do not seem to view visiting websites in English as an opportunity to learn English. That is, the proportion of those who reported learning English online was smaller than that of those who had visited foreign websites in English. This finding further implies that some participants may have gone through implicit English learning processes. Indeed, it is likely that Korean EFL learners have begun to participate in a target language discourse community by being exposed to authentic language input (Kern & Warschauer, 2000), and that they are unconsciously shaping their digital identity as EFL learners. Table 6 provides details on the proportion of each online activity carried out by the participants on foreign websites in English.

Category	Number of responses (n)	Percentage of each category (%)
Retrieving information on academic and current affairs	183	13
Retrieving daily living information (e.g., information on travelling)	142	10
Listening to music or watching video clips	284	20
Playing games	93	7
SNS activities (e.g., Facebook TM , Fanfiction TM)	211	15
Shopping	92	7
Google-based activities (Googling or Google Plus TM)	321	23
Studying English	71	5
Total	1397	100

Table 6. The participants' online activities on websites in English (multiple responses per participant)

The participants' responses to the relevant Likert-scale items also indicate that they were well accustomed to the new media ecology in terms of learning EFL. For example, as shown in Table 7, almost half of the participants (47%) reported that they were comfortable reading English on their computers (Q21, $M = 3.29$, $SD = 1.03$), and about two thirds of them (63%) were found to use lexical-searching functions on the Internet for unfamiliar or uncertain English expressions (Q19, $M = 3.60$, $SD = 1.02$). These findings point to the possibility that multimedia literacy may have some bearing on the way they learn another language. Some students also believed that multimedia tools could not just affect their methods of learning, but also be beneficial to the development of their language skills, with 55% of the participants agreeing with statement Q20 that watching foreign video clips on the Internet would help their listening skills ($M = 3.48$, $SD = 0.98$). Also of great interest was that some students had developed their own strategies with multimedia features for different learning purposes. The following comment is from an interviewee who liked to watch Technology, Entertainment, Design (TED) lectures for the purpose of learning English:

AF#1: If I have both Korean and English subtitle files for TED lectures...I would use the Korean subtitles in order to understand the content, and I would use the English subtitles in order to enhance my listening skills.

Statement	Strongly disagree		%	Strongly agree		Mean (SD)
	1	2	3	4	5	
Q19. I do a search on the Internet for unknown or uncertain English expressions or grammar.	3.4	13.1	20.0	47.1	16.3	3.60 (1.02)
	16.5		20.0	63.4		
Q20. Watching movies or video clips based on English seems to enhance my English listening skills.	2.9	14.0	28.1	42.0	13.0	3.48 (.98)
	16.9		28.1	55.0		
Q21. I am comfortable reading texts in English on the computer monitor.	4.8	18.0	30.5	36.4	10.3	3.29 (1.03)
	22.8		30.5	46.7		
Q22. I communicate with friends from other countries on Facebook™ or other SNS.	29.1	24.8	15.6	20.6	9.9	2.57 (1.35)
	53.9		15.6	30.5		
Q25. I would feel more comfortable chatting with native speakers of English on the phone or the Internet than chatting with them in person.	23.2	32.5	23.8	13.8	6.7	2.48 (1.18)
	55.7		23.8	20.5		

Table 7. The participants' attitudes towards learning English with new media

However, their authentic EFL learning also seems to be restricted to developing receptive skills only, which echoes the finding presented above. That is, a relatively low percentage of the participants used new media such as SNS or chatting to communicate with foreign friends or native speakers of English, as can be seen in Q22 ($M = 2.57$, $SD = 1.35$) and Q25 ($M = 2.48$, $SD = 1.18$). The authors' hypothesis was that this was most likely caused by cultural differences, rather than by not having

access to the Internet or there being a lack of available digital devices with which they could go online. Two interviewees confessed that they would not enjoy communicating with foreigners on SNS or writing their thoughts in English there for the following reasons:

BM#7: I am afraid that others might think that I am showing off my English... moreover... [even if I would use SNS for my English learning purposes] I wouldn't want to let other people know about that. Why should I?

BM#9: I don't want to write stuff on Facebook because I am very conscious of what other people would think of me...I mean I am so concerned that...if I write something in English on Facebook...others would probably think "why did she write this in English"?

Evidently, the new media ecology does not seem to have established a relaxed and cordial environment in which Korean university students can lower their affective filters and engage in making an intense commitment with a target language community and the people therein. This phenomenon can be well explained by the findings of previous studies (Kim, Y. et al., 2011; Alhabash et al, 2012) that Korean university students use SNS mostly for the purpose of building better social relationships, and do so largely with other socially close Koreans. Therefore, they believe that writing in English or about EFL subjects is socially awkward or at least improper in this context.

Overall, Korean university students' EFL learning in the new media ecology can be characterised as "receptive". They were more oriented towards learning receptive skills such as listening and reading. Furthermore, the participants were very far from being comfortable initiating interaction with a target language community. It is thus concluded that Korean university students have viewed and utilised new media as an English learning environment to a large extent, but that they have not been fully engaged in a target language discourse community.

CONCLUSION

This study sought to estimate the degree to which Korean university students were engaging in the new media ecology. It also examined the influence of new media on their digital identity and their EFL learning. The present findings indicate that Korean university students display full immersion in the new media ecology, as a result of which a wide range of its available aspects, for example, communicating with others via SNS, owning digital gadgets, and learning through online lectures, have become integral parts of their lives. One might expect that these conditions are sufficient for shaping a full-fledged digital identity. Contrary to this expectation, it has been found that the massive influx of new media has not been able to elicit Korean students' active participation in social networking with those living outside their local contexts; these students still prefer to keep a low profile in networked public cultures and peer-based learning through online channels.

A possible explanation for this phenomenon is related to the characteristics of this population, which are firmly rooted in the media culture of Korea (e.g., they consider web-posting to be a form of "showing off"). That being said, the findings suggest that

the digital identity of Korean university students is more skewed towards the “friendship-driven genre of participation” than to the “interest-driven genre of participation”, and consequently these learners mostly engage in “hanging out” and “messaging around” practices. This finding is of theoretical interest, as it demonstrates that a technology-savvy environment, such as the current one that exists in Korea, with a relatively small degree of “digital divide” may not directly bring about a noticeable development of the “interest-driven genre of participation” or a strong degree of commitment to media engagement (i.e., “geeking out”).

Another interesting finding is that Korean university students’ new media literacy contributes significantly to shaping their digital identity; however, their identity seems to have been structured with a lack of trust of unknown users on the net, which in turn impedes the development of a “peer-based learning” milieu. It remains to be seen what underlies this unique shaping of Korean university students’ digital identity, and the authors believe that investigating the culture and national inclination of Koreans would be a useful starting point for this research inquiry.

It has been also shown that the strong orientation towards new media and the resulting digital identity on the part of Korean university students have a significant bearing on their learning to the extent that the concepts of literacy and learning for these students are changing quite dynamically. In terms of learning EFL in this media-saturated environment, Korean university students are largely adept at exploring online learning materials. However, the characteristic of their digital identity related to genre of participation has also been observed in their online EFL learning. They appear to focus on developing receptive skills, and are hesitant to engage in interaction with unknown English speakers on the net (which would enhance their speaking and writing skills), which in turn would result in an unbalanced diet in terms of a range of language areas to be developed.

One of the limitations of this study deserves to be discussed here. The participants of the study, while coming from diverse backgrounds in terms of geographical distribution (i.e., place of origin), socio-economic class, and academic majors, all had relatively high levels of academic achievement. It is also noteworthy that they were all recruited from universities located in the capital city. Therefore, the findings of the present study cannot be generalised beyond those who have characteristics similar to the participants of the present study.

As a final remark, the questionnaire designed for the present study has been found to do justice to the investigation of the participants’ digital lifestyles and identities. While the authors acknowledge that it is subject to further revision and even restructuring, it is their hope that this questionnaire will serve as a useful instrument for researchers in other countries in examining the current issues with their own learners, enabling the research community to then compare emerging identities and lifestyles of digital youth across the world in a more direct manner. Simultaneously, future research should explore which factors determine and influence participants’ beliefs about EFL learning in the new media ecology and their usage patterns thereof, from which we may obtain more useful pedagogical implications for English teaching and learning.

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Manuscript received: July 30, 2014

Revision received: October 24, 2014

Accepted: November 5, 2014

APPENDIX A: QUESTIONNAIRE (ENGLISH TRANSLATION)

1. Gender: qMale qFemale 2. Academic Year: _____
3. Major: _____
4. The primary method of using the Internet: q Smartphone q Laptop or tablet PC q Desktop computer

Section I. Online activities

1. Choose three options below that I do most frequently when I go online:

- (1) Checking emails (2) Checking SNS updates or messages (e.g., Kakaotalk™, Facebook™)
(3) Searching portal websites (4) Playing online games (5) Listening to music or watching video clips (6) Blogging (7) Searching for news or retrieving academic information
(8) e-Class/taking online classes (9) Others _____

2. Choose every option that I would like to do with my computer (or smartphone):

- (1) Downloading and editing images (2) Downloading and editing video clips (3) Exchanging comments or talkbacks (4) Writing and editing text messages (5) Creating presentation materials (6) Blogging (7) Searching for news or academic information (8) Taking e-Courses/online lectures (9) Downloading and editing music files (10) Downloading software or applications

3. I first took online lectures when I was attending a _____.

- (1) Not applicable (2) elementary school (3) middle school (4) high school (5) university

4. The number of the online lectures that I have taken so far is approximately _____.

- (1) Not applicable (2) 0-5 (3) 6-10 (4) more than 10

5. I have studied English online (on a PC or mobile device)

- (1) Yes (go to question number 5-1) (2) No (go to question number 6 directly)

5-1 Choose every option for which I have used online materials in studying English.

- (1) Vocabulary learning (e.g., using dictionary) (2) Listening (watching CNN news or movies) (3) Preparing for English proficiency tests such as TOEIC and TOEFL (4) Speaking practice (with native speakers or via online communication) (5) Reading (e.g., reading online newspaper in English) (6) Writing (e.g., writing a web diary, online writing feedback or vocabulary/grammar checkers) (7) Others _____

6. Choose every online activity that I do on foreign websites in English.

- (1) Retrieving information on academic and current affairs (2) Retrieving daily living information (e.g., information on travelling) (3) Listening to music or watching video clips
(4) Playing games (5) SNS activities (e.g., Facebook™, Fanfiction™) (6) Shopping
(7) Google-based activities (Googling or Google Plus™) (8) Studying English
(9) Others _____.

Section II. Social media

1. I have _____ SNS accounts (examples of SNS include Facebook™, Cyworld™, Kakaotalk™, Line™, Band™, Twitter™, Metoday™, network games, online communities etc.).

(1) 0 (2) 1-3 (3) 4-10 (4) more than 10

2. The number of my friends with whom I communicate via SNS is _____.

(1) less than 30 (2) 30-60 (3) 61-100 (4) more than 100

3. The number of my friends from other countries on my friend-list is _____

(1) 0 (2) 1-10 (3) 10-30 (4) more than 30

4. The percentage of my friends (among those with whom I communicate via SNS) whom I have never met in person is approximately _____.

(1) 0-10% (2) 11-30% (3) 30-50% (4) higher than 51%

5. The purpose of communicating by SNS with my friends is _____.

(Adding the percentage for each section should amount to 100%).

1. maintaining relationships and socialising ()%
 2. exchanging and sharing information ()%
 3. exchanging opinions ()%
 4. collaborating for projects or homework ()%
 5. expressing myself ()%
 6. others ()%
- Total **100** %

Section III. Digital identity & multiliteracy

Question items	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I use SNS (e.g., Kakaotalk™, Facebook™, Twitter™) to maintain good relationships with people around me (e.g, family members, friends).					
2. I would feel insecure or uncomfortable if I didn't get to use SNS for even a single day.					
3. With smartphones, I can get most of the information that I need.					
4. Using SNS is the fastest route for getting hands-on information.					
5. The information that net users provide such as reviews or Q&As is trustworthy.					
6. I tend to refer to online reviews in making a decision.					
7. The main purpose of my daily online activity is mainly to communicate with my friends (e.g., casual chats or making plans).					
8. The main purpose of my daily online activity is to satisfy my interests (e.g., search for information related to my interests).					
9. The main purpose of my daily online activity is to play using web tools (listening to music, watching video clips, taking pictures, etc.).					
10. The main purpose of my daily online activity is to run and manage personal blogs, online communities, and other web accounts.					
11. The main purpose of my daily online activity is to play online games.					
12. The main purpose of my daily online activity is to do homework and study academic subjects.					
13. I tend to tap net users' opinions when I decide my position on a certain social issue.					
14. When I pick up new Internet words (or expressions), I would like to use them in online communication.					
15. It's easier to use images or videos than to use texts when describing or explaining something.					

16. I prefer to opt for materials with images or videos over those with text only when reading online.					
17. When I learn something new, I find it easier to google it or ask somebody online than to read instructional manuals or listen to lectures on it.					
18. Knowledge-based lectures are more effectively delivered on the Internet (than in real classrooms).					
19. I do a search on the Internet for unknown or uncertain English expressions or grammar.					
20. Watching movies or video clips in English seems to enhance my English listening skills.					
21. I am comfortable reading texts in English on the computer monitor.					
22. I communicate with friends from other countries on Facebook or other SNS.					
23. If needed, I use English-based websites to purchase something or book tickets.					
24. I have listened to lectures on the English language such as TOEIC or TOEFL on the Internet.					
25. I would feel more comfortable chatting with native speakers of English on the phone or the Internet than chatting with them in person.					