Abstract

A Study on the Culture of Students in the Digital Generation

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In exploring the culture of students in the digital generation, we looked at their daily lives, both in and out of the school environment, and their diverse experiences of using a digital media technology, focusing on two aspects: obtaining information and building relationships. Taking the perspective of technology-in-practice, particular attention was paid to how students were continuously and routinely interacting with the digital media technology, what meaning they were finding in the technology, and what strategies they were using to cope with school, so as to understand the relationship between student culture and digital media technology. Taking further steps, we investigated personal and social contextual conditions that enabled or formulated such interactions, meanings and coping strategies. This approach marks a distinct departure from the technological determinism, which applies a singular causal relationship to the various interactions between digital media technology and student culture, concluding, without detailed descriptions, that use of smart phones has turned students into self-centered beings unable to get along together. In fact, technological determinism often points to the digital media technology itself as a cause of socio-cultural changes, while neglecting the social contexts, in which certain technologies are adopted, interpreted, perceived, and used by certain groups in their daily lives.

This study puts a distance from the approach of technological determinism, which defines

the interaction between the digital media technology and student culture as a singular relationship and fails to consider the social contexts, in which the technology is embraced, interpreted and used in various manners. Rather, we took into consideration a diverse nature of practical interactions and conditional contexts between student culture and digital media technology so as to promote more comprehensive and dynamic understanding of the culture of students in the digital generation.

We started with four research questions: 1) How do students organize their daily experiences of using digital media technology and what meaning do they find in them? 2) How do students, as part of the digital generation, perceive their school life and student culture and what are their coping strategies at school? 3) What are the experiences and/or perceptions of the digital student culture shared by teachers and parents? 4) What are the conditions that formulate the culture of students in the digital generation?

To address the above research questions, we conducted a mixed method research adoping both quantitative surveys and qualitative case studies. A survey was performed on students, teachers, and parents of two co-ed schools—school A (a middle school) and school B(a high school)—located in a middle-class district in Seoul. Based on these four research questions, we were able to identify distinctive characteristics of the student culture in the digital generation as well as certain conditions that contribute to formation of such student culture.

Daily experiences and perceptions of the digital generation

Digital media technology is already a routine part of students' daily lives. Approximately 90% of the students surveyed owned smart phones and only around 2% didn't have them. Students were also more confident than teachers or parents in using digital devices and this was acknowledged by teachers and parents as well. Over 50% of the students surveyed had their first mobile phones between elementary grades 3 and 5, while around 20% started earlier—in kindergartens or elementary grades 1 or 2. This shows that students have owned and used personalized mobile devices from very early years.

When asked about what the digital devices, i.e., smart phones, meant to them, the most predominant answers among the students were that the devices were "auxiliary devices that enriched their lives" (33.2%) and "toys to play with" (22.4%). Compared to the 4.7% of parents and the 2.6% of teachers who answered "toys to play with," students perceived the digital devices including smart phones to be more personal and intimate objects to play with.

A clear difference between the digital generation and the older generation was found in terms of the most frequently used applications on their smart phones. While students' favorite applications were social network services (SNS; e.g., Facebook) (36%), followed by instant messengers (e.g., Kakao Talk) (18%) and music players (11%), parents most heavily used instant messengers (24%) followed by web portals (16%) and news (10%). Teachers were similar to parents in their use of mobile applications, with instant messengers ranking the first (26%), followed by web portals (21%) and pictures/camera (13%).

Yet another sharp contrast was found between the generations in terms of the main purpose of using the digital devices. Whereas the most dominant responses among students were "to have fun" (38%) and "to relax" (25%), most of parents (62.1%) and teachers (80.0%) said "to obtain information." Indeed, in our qualitative case study, students spoke the most about using social media, such as Facebook, as well as gaining information related to entertainment from blogs on news of celebrities, web cartoons, You Tube videos, *etc*. Meanwhile, parents and teachers were using the new media, such as smart phones, to carry out more or less the same functions that they have performed with conventional media, such as chatting on messengers, reading newspapers, listening to the radio, taking pictures, *etc*.

With regard to experiences of communication, students did not match the stereotypical thinking that the digital generation is active in making new relationships in online space. The students in our study mostly maintained or expanded their relationships around their circle of friends at school. 55% of the students said they expanded their online network around the people they already knew, while 32% said their online network was limited

to only those they knew offline. Our qualitative study had similar observation: most of the high school students were alert toward strangers they meet online only, such as in games or on SNS.

Commoditization of online communication among students was impressive as well. For students, communicating through digital technologies, including Internet and smart phones, was common and almost universal part of their culture. Our survey also showed that students were very active in using text messages as an 1:1 online communication, compared to parents who frequently used phone calls. Many students had an experience of confessing their feelings to friends of the opposite sex (60%) and disclosed their dating status (40%) in the online world. In terms of the speed of SNS responses, 65% of students said they constantly checked their SNS. 63% of the students said they checked their SNS "almost out of habit," while 2% said they checked it "not to be left out." This implies that SNS-based communication has become a routine part of students' culture so much so that their online activities are performed without conscious efforts.

Experience and Perception of School Life—by Students in the Digital Generation

Despite their expression of confidence in using digital technologies outside school, their digital capabilities did not seem to be officially recognized or appreciated at school. This signifies a gap between the information technologies taught at school versus those used in the real world. The latter, as stated, is heavily tilted toward pursuing entertainment interests and making social interactions with friends, using personalized smart phones. However, the former, as a formal subject taught in high schools, is mostly about working with documents (i.e., Microsoft Word and Excel), using public desktops. Students found such computer program classes difficult and perceived them to be irrelevant to their use of digital devices outside school and thus unfamiliar. They thought that what they learned in class would soon be forgotten after school tests.

We also surveyed students about their preferred media of learning. Compared to parents or teachers, students preferred digital devices to printed media when reading materials.

Compared to parents, students strongly preferred pictures to texts. Compared to teachers, students were more familiar to videos than to texts or pictures (students 3.33, parents 2.77, teacher 2.80). This result seems to be a good evidence for actively introducing to schools digital textbooks, electronic boards and videos as a replacement of traditional books. However, in our qualitative study, students were not enthusiastic or passionate about the introduction of new media devices to school. They found the devices fancy but that was all. Instead, what they wanted from schools were well-prepared classes offering engaging contents, fairness of teachers toward students, balanced evaluation of students across all aspects including non-academic achievements, warm friendships, and sense of togetherness—which were typical values promoted in the traditional model of education (and may seem irrelevant to the digital generation!) The implication of this finding is that, for a new digital media technology to bring meaningful changes into classrooms, it will have to fully embrace the sophisticated elements of teaching-learning, such as high quality contents, warm relationships, sense of togetherness, and dedicated attention from teachers—which have always been the essential needs of students across all times.

We also broke down students' experience of relationship-building in the digital world into relationship with peers, teachers, and parents. Our analysis showed that, contrast to the negative coverage by the media of students' digital interactions, highlighting "cyber bullying," students' perceived experience of peer relationships in the digital space was positive: an opportunity to share thoughts and have laughs with friends. For them, the digital world was a "breathing space" where they could spare themselves from now and then from "endless waves of school work" and "tight daily routines of schools and private study centers" to joke with friends and share their worries and frustrations. Of course, there did exist some negative experiences of peer interactions online. When asked if they had ever assaulted or had been assaulted in the digital space, 11% of the students said they suffered sneering or swear words. However, they seemed to grow up and to actively acquire sociability from trials and errors of such negative experiences. For instance, when asked how they resolved online conflicts with friends, middle school students said they preferred an online resolution, while high school students chose an offline means to solve the problem. Such difference between the two levels of school may be explained

by one of the findings from our case studies: most of the high school students learned from their frequent clashes in online chats that digital communication has its limitations, may cause misunderstandings, and may be used as a permanent evidence against them. In fact, many high school students responded that they had far fewer conflicts on the online media in their high school years than during their middle school years. Here again, students seemed to grow up and to actively learn how to communicate and adjust their interactions in the online space.

In student-teacher relationships, digital communication, mostly via smart phones, was used for convenience and simple administrative purposes, such as making public announcements, making group decisions, such as selecting a design for class T-shirts. Having a private online chat after school or being friends on SNS media with one's teacher/student was perceived as something uncomfortable for both students and teachers. Behind such unease about the online interface was a fear that it would blur the distinction between online *vs.* offline and between public *vs.* private worlds and ultimately infringe on their privacy. However, the question of "where do you draw the line of privacy between teachers and students?" was a challenge to all. It seemed that consensus was yet to be reached among teachers, among students, and between students and teachers on this question. For now, they all had their own definitions and policies. This showed that the development of digital media technology and its impact on secondary schools entailed issues with not only technical aspects, but also ethical and social dimensions.

As for student-parent interactions, the use of digital media technology had far wider spectrum than that for student-teacher communications. While some students had good communication with their parents enjoying online games or cartoons together, a fair number of students had conflicts with their parents about restricting the use of smart phones or switching back to conventional model phones to better concentrate on their studies. In latter cases, students didn't welcome the parents' intervention, but accepted it, acknowledged their high dependence on smart phones or understanding the need to spend more time studying.

Experience and Perception of Digital Culture of Students—by Teachers and Parents

Two streams of discourses exist when it comes to the use of digital media technology in the digital generation: the discourses of concern *vs.* the discourse of celebration. Our study revealed that the discourse of concern was more dominant than the discourse of celebration among teachers and parents, particularly among teachers. In the survey, the largest share (33%) of students said digital devices were "auxiliary devices that enriched their lives." Meanwhile, the largest share (27%) of parents said their children probably perceived digital devices as "toys to play with," and the second largest (23%) chose "auxiliary devices that enriched their lives." On the other hand, the largest share (48%) of teachers said that digital devices were everything to students and the second largest share (15%) said that students failed to use them smartly. This reveals that teachers, compared to parents, were taking students' dependence on digital devices much more seriously and far more negatively. It also implies that the discourse of concern is predominant in schools, where teachers are important players. Indeed, in the schools selected for our case studies, smart phones were banned at school for reasons of minimizing classroom interruptions, promoting discipline, *etc.*, and this was accepted by both parents and students for reasons of creating a disciplined environment for academic achievement.

However, teachers and parents both agreed that disciplining the use of smart phones was not a panacea. Parents, in particular, shared a thinking that banning smart phones and the small joys that they brought was too much harsh for their children, who were already "deprived of fun" as they competed for college under a tremendous stress. But, at the same time, they were worried and anxious about their children being too dependent on digital devices and not performing well at school. Such ambivalence contributed to frustration and indecision in responding to their children's use of smart phones.

Furthermore, we found that parents and teachers were only disciplining students' *physical access* to smart phones (i.e., limiting the time of use), but they were not knowledgeable about their actual *experience* (i.e., what applications they were using, who they were interacting with, *etc.*). Again, such limited understanding or ignorance contributed to

frustration and indecision in responding to students' use of smart phones.

Conditions for Formation of Student Culture in the Digital Generation

To identify conditions for shaping student culture in the digital generation, we analyzed personal background factors, such as gender, level of school, socio-economic status, as well as in-school and out-of-school factors. Our quantitative analysis showed that the use of digital devices varied significantly by gender, level of school, and socio-economic status. For instance, boys showed relatively higher use of online games, whereas girls used more instant messengers. Middle school students used more games and instant messengers compared to high school students, who used more SNS programs. Another impressive finding from our qualitative analysis was that students' perception and experience of physical appearance were highly gendered, and that their experience of searching information related to college/career varied greatly across socio-economic status. In addition, albeit very few in number, some students were actively engaged in online social and economic activities as a learner and producer/consumer. Such diversity in students' perception and experience of the digital world according to their personal background factors implies that the student culture in the digital generation is not homogeneous at all. To be more accurate, the student *cultures* in the digital generation have diverse topographies. Thus, it would be a big risk to highlight only one aspect of the student cultures in the digital generation and promote it as a typical or representative one.

As stated earlier, students in the digital generation (unlike the older generation) perceived digital devices as means of entertainment and relaxation. In order to understand the characteristics of the culture of students in the digital generation, it is important to examine the context of their school life and daily routines. The digital generation can be defined as a group of people, to whom an identity and role of a “student” is assigned and who are expected to be at fixed places, such as schools, study centers, and home, at fixed times throughout the day from dawn to night as routine. Their use of smart phones was more sporadic compared to that of adults, scattered across multiple time slots and places due to various school rules and parental interventions. Students agreed to the need for

such rules and interventions for their academic achievement. In this regard, amid such implicit consensus among students, parents, and teachers, it was not surprising that smart phones were perceived as gadgets for entertainment, rather than for academic learning, that students use during breaks to relieve stress from academic pressure.

We noted that in the school setting, the discourse of "academic achievement" was supported and prioritized by all three parties—students, parents, and teachers—when it came to students' interaction with digital media technologies. In school space, the discourse of "academic achievement" easily overwhelmed the discourses of "celebration" (promoting development of net-smart talents fit for new digital environment) or the discourse of "concern" (emphasizing the risk of addiction). As an extreme example, a student, however digitally talented he/she may be, is expected to focus on academic studies and enter a university to learn digital media technology. Conversely, a student, however heavily addicted he/she may be to smart phones by an objective standard, is not disciplined by teachers or parents as long as they pull off high academic performance. A consistent evidence of the dominance of the discourse of "academic achievement" over others may be that the most common digital media technology allowed by schools today, despite the dramatic development of the technology, is a video lecture of conventional blackboard teaching. Our interpretation is that the predominance of the discourse of "academic achievement" in the interface between digital media technology and digital generation is a unique phenomenon originating from the intersection of two identities: *digital generation* and *student*s.

The environment in which students spare time out of their busy routines to use digital media technology—mostly during transportation, during breaks at study centers, before going to bed, *etc.*—comprised of technologies that are designed to be consumed before or without users' critical assessment, commercial pressures, or external conditions, such as conflicts between policies for market regulation and technology promotion. With regard to technology development, students tended to accept information on SNS without critical assessment or filtration, without recognizing that their favorite search engines provide personalized search results or that SNS platforms unconsciously force users to adopt certain

algorithms or that adopting such algorithms create a personalized network. As for commercial pressures, some were visible, such as profit-minded restructuring, electronic commerce, and surcharges to mobile phone bills, but others were more subtle—excessive emphasis on physical appearances, consumerism, and induction of free labor in the form of clicking "likes" or "recommends" on the SNS platforms. We analyzed the digital space operating under such commercial pressures. Lastly, in terms of regulatory policies, we noted two contrasting camps: market disciplines *vs.* industry promotion. The market discipline camp regards students as minors and focuses on preventing or prohibiting all hazardous and potentially addictive contents. On the other hand, the industry promotion camp looks at students more as potential consumers than recipients of school education or members of the civil society, and focuses on promoting certain industries including games business. They tend to prefer such terminologies as "immersion" or "culture" to "addiction" or "regulation." Amid such conflicting discourses that represent different interests of diverse *adults*, it was difficult to find out-of-school factors that represented the interests and perspective of the students in the digital generation.

Based on our analysis, we developed policy recommendations for fostering sound student culture in the digital generation for both in and out of the school environment. For inside of the school space, we recommended adoption of policies that encourage active participation by students, change of teachers' perception toward the digital generation, and development of policies that support such changes in teachers. For outside of the school environment, we proposed provision of accurate and equitable information, on short-, mid-, and long-term basis, that reflects characteristics of the digital generation, continuous development of a data gathering system, formation of social consensus on the scope of school intervention, and change of perception toward the digital generation.

Key words: Digital generation, Student culture, Digital media literacy education, Internet·smartphone usage, Parents, Teachers