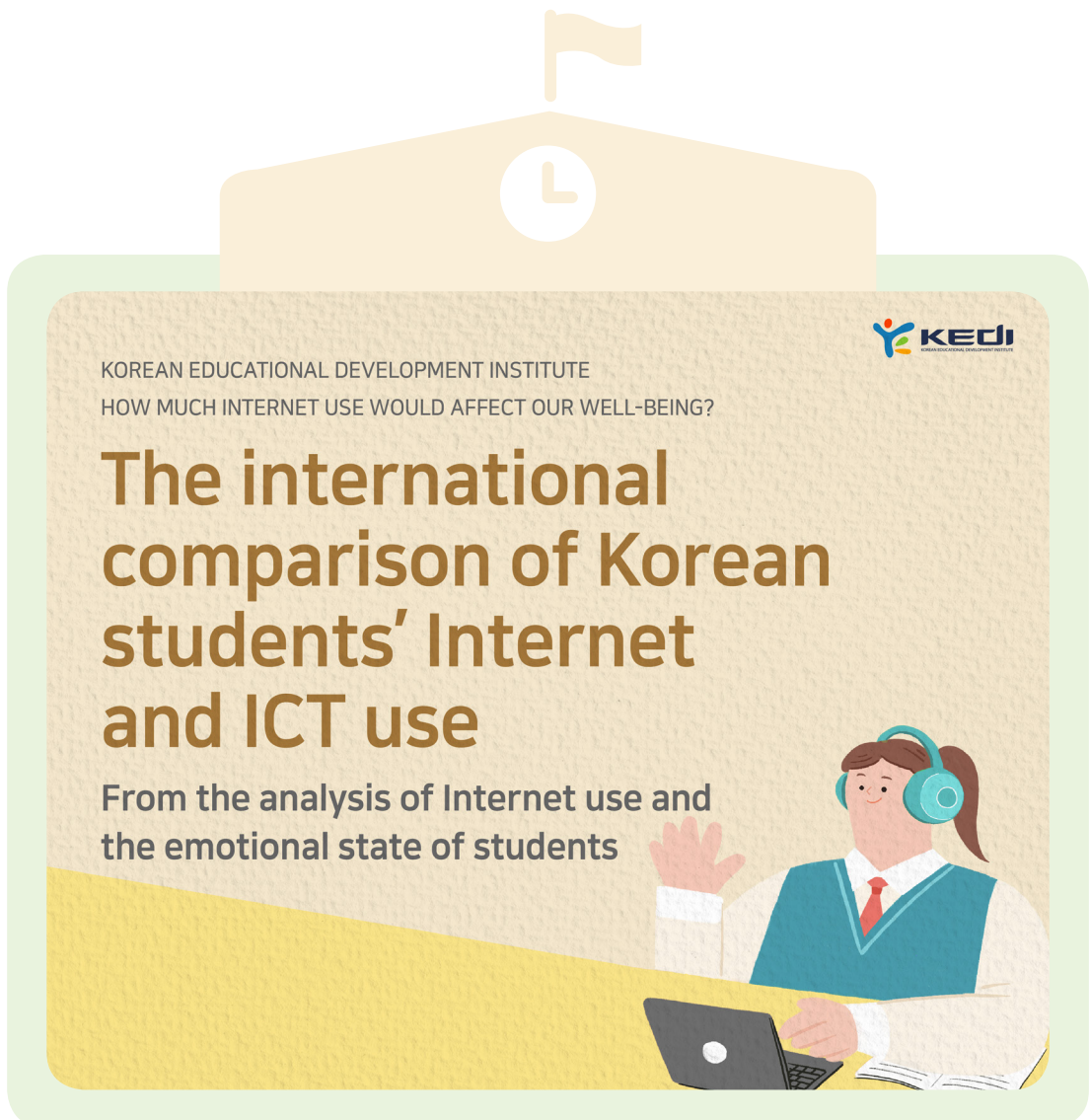


2020 June Educational Issues in Korea I

Korean students' use of Internet and ICT devices



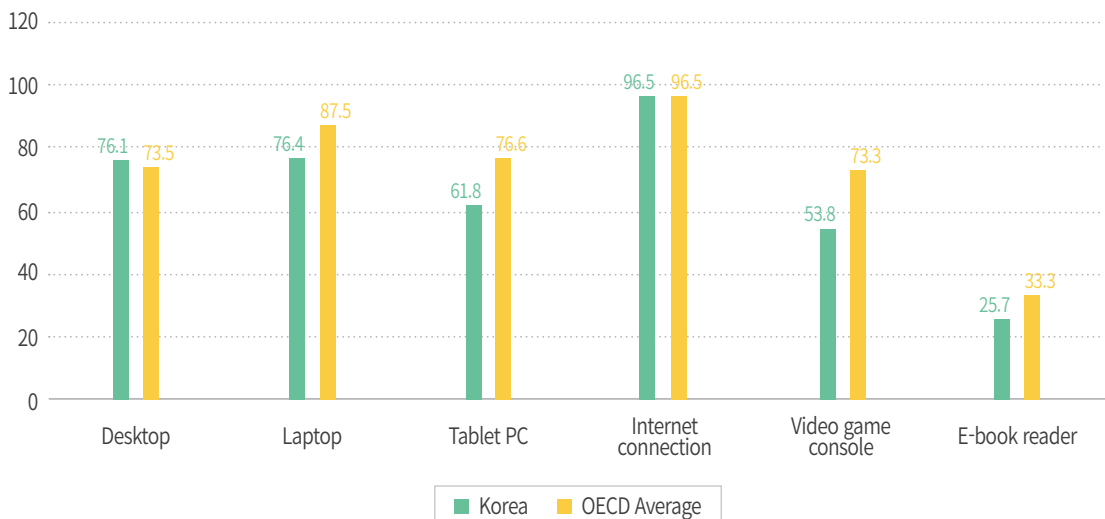
Korean students' use of Internet and ICT devices

 Korean Educational Development Institute Hyo-Jung Han

As the Internet and ICT digital devices became a part of people's lives, adults' and students' lifestyles and learning environments are changing. PISA 2018 surveyed the use of Internet and ICT familiarity of students from OECD member countries and partner countries. In addition, by cross-analyzing students' Internet use and feelings (satisfaction, positivity and negative feelings), PISA provided interesting information about the impact of Internet use on well-being. In this article, we analyze Korean students' Internet use and ICT familiarity using PISA 2018's result.

Figure 1 shows the percentage of students equipped with digital devices at home. Comparing Korea and the OECD average, the rate of Korean students who reported that have digital devices("laptop," "tablet PC," "game console" and "e-book reader") is lower than the OECD average, except for "desktop" and "Internet connection".

[Figure 1] Availability of digital devices at home

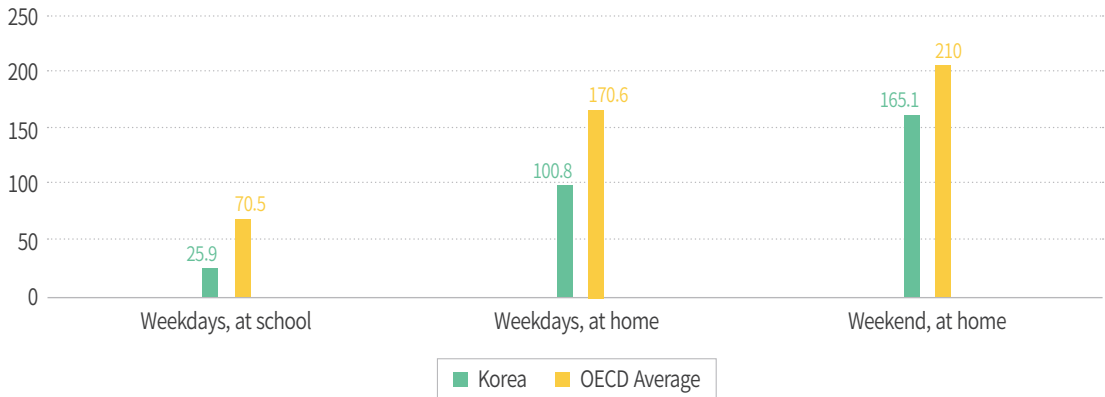


Source : PISA 2018

Next, Figure 2 shows the Korea-OECD average comparison data on the hours of use of the Internet during weekdays and weekends. Korean students' average time spent on the Internet on a typical

weekday is about 26 minutes per day at school and 101 minutes at home. It rises to 165 minutes when it comes to during a weekend day. This was all lower than the OECD average.

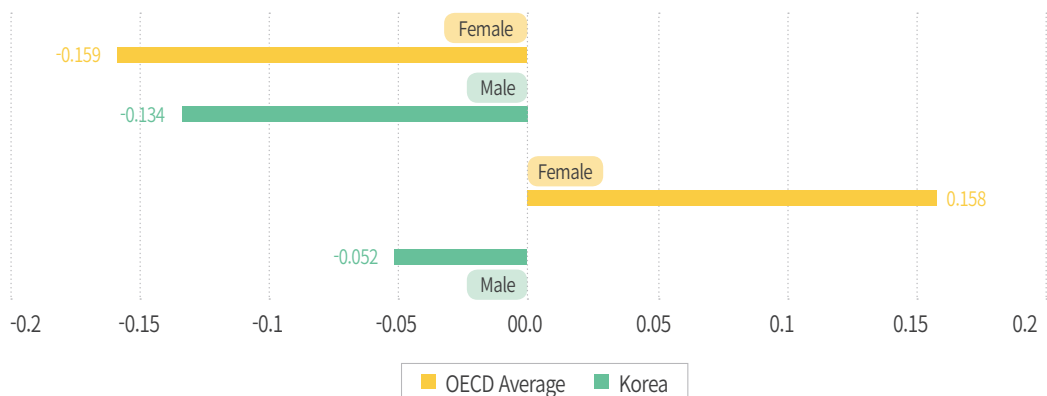
[Figure 2] Time spent using the Internet



Source : PISA 2018

Figure 3 shows an index of the use of digital devices by sex. The activities included games, using e-mail, online chatting, SNS, browsing the Internet, reading Internet news, getting information from the Internet, downloading, uploading or browsing materials, etc. The higher the index score, the higher the frequency of use of digital devices, and each country's index has been converted to a standardized score(0 for average, 1 for standard deviation). On average across OECD countries, male students (0.158) showed significantly higher utilization of digital devices than female students (-0.159). In Korea, male students (-0.052) were found to use digital devices more frequently than female students (-0.134), but the difference was relatively small. This result can be explained by the fact that Korean male students' frequency index score was particularly low compared to the OECD average. On the other hand, the girls' results showed slightly higher than the OECD average.

[Figure 3] Digital Device Frequency Index

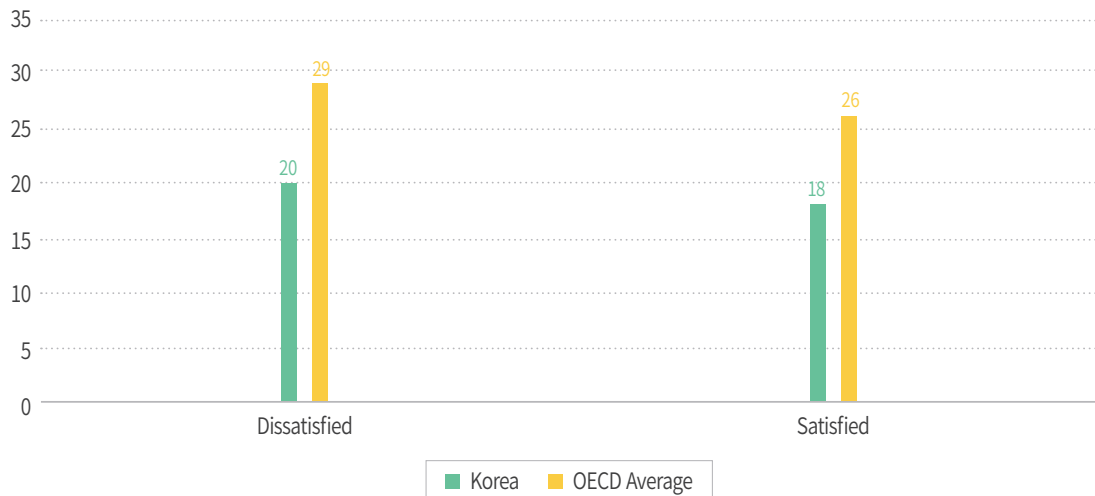


Source : PISA 2018

PISA 2018 also focused on the relationship between the use of the Internet and students' well-being in the rapidly digitized modern society. In fact, this approach has focused more on the negative effects than the positive ones of the digitalized lifestyle, which explains that the excessive use of the Internet and digital devices is often a factor that disconnects students from their family and friends(OECD, 2019). A number of data have shown the results supporting these assumptions of PISA.

Figure 4 shows the relation between internet use and students' life satisfaction. PISA 2018 asked students to rate their life satisfaction on a scale from 0 (not at all satisfied) to 10 (completely satisfied). In this analysis, the responses were classified into the two groups as follows; a student is "not satisfied"if he or she reported between 0 and 4 on the life-satisfaction scale; a student is "satisfied"if he or she reported between 7 to10. And the relation between these two groups' life satisfaction and internet use outside of school was analyzed. The results showed that the average time spent using the Internet during the typical week was 18 hours for the 'satisfied group' and 29 hours for the 'unsatisfied group' in Korea. For the OECD average, the results were 26 hours and 29 hours, respectively. In other words, the amount of time students using the Internet tend to be shorter when they feel satisfied with their lives.

[Figure 4] Internet use and students' feelings



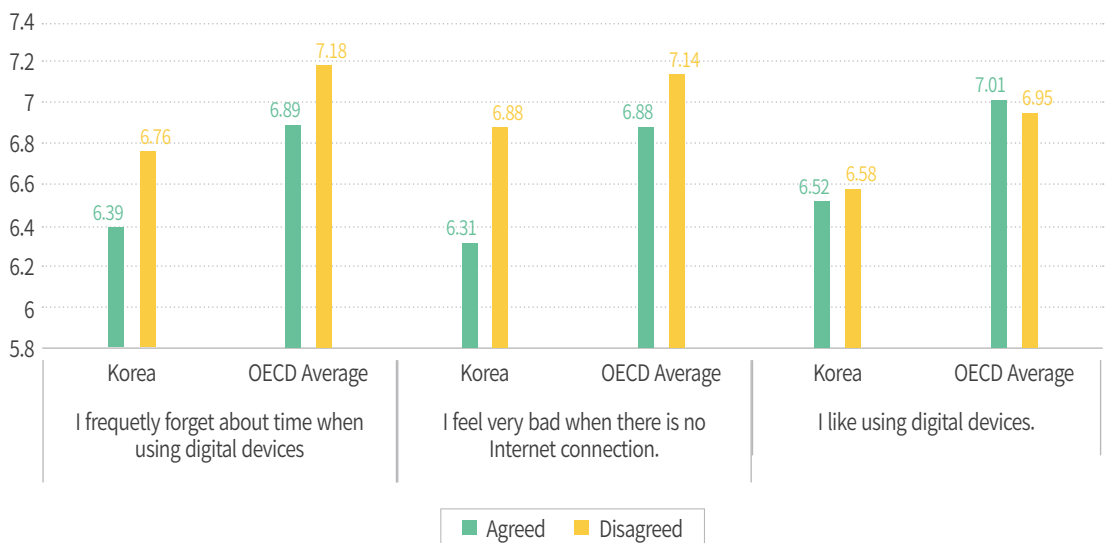
Source : PISA 2018

Similarly, Figure 5 shows students' life satisfaction and Internet and ICT digital devices experiences. PISA calculated The average life satisfaction level of those who agreed and those who disagreed with the question of favorability and dependence on Internet and ICT device, such as "I forget about time when I'm using digital devices", "I really feel bad if no Internet connection is possible" and "I like using digital devices". It can be seen that the group agreed to the suggested statements is more dependent on the use of the Internet and ICT device than the group disagreed. Overall, in both Korea and the

OECD average, the group dependent on ICT devices was less satisfied with life than the other group, except the OECD average for the statement “I like to use digital devices”. In other words, the more dependent on the Internet or ICT digital devices, the lower the level of life satisfaction.

Meanwhile, one thing to note is that Korean students’ life satisfaction is significantly lower than the OECD average (see figure 5). This result contradicts the previous result of Figure 2 that Korean students’ Internet usage frequency is lower than the OECD average. In other words, unlike the PISA’s assumption, Korean students are showing a lower level of life satisfaction despite their low level of dependence on Internet use. It seems to prove the low level of well-being of Korean students, which has been consistently found in PISA surveys. It also suggests the need to investigate factors that have a negative impact on Korean students’ emotional well-being, in addition to the Internet usage.

[Figure 5] Life satisfaction and dependence on Internet



Source : PISA 2018

Lastly, the two tables below indicate the proportion of students who experience positive and negative emotions by the time spent on the Internet. The Internet users were categorized by the amount of time spent on the Internet; “Low Internet Users”(0-9 hours per week), “Average Internet Users”(20-29 hours per week), “Heavy Internet Users”(more than 40 hours per week). Table 1 presents the percentage of students who feel positive feelings of happiness, liveliness, pride, joy, and cheerfulness, by the time spent on the Internet. On the other hand, Table 2 shows the percentage of students who felt negative emotions of fear, misery, fear and sadness, according to their time on the Internet.

According to Table 1, the OECD average showed that the “Heavy Internet Users” were less likely to report positive feelings than other user groups. On the other hand, the “Low Internet Users” and

“Average Internet Users” were more likely to report positive feelings. However, there was no common pattern covering all emotions. Meanwhile, a similar tendency has been found in the feelings of happiness, vitality, and pride in Korea. “Heavy Internet users” were less likely to report those positive feelings than other users. However, it does not apply to the feelings of joy and cheerfulness. When it comes to these two feelings, there is no certain link between Internet use and feeling.

[Table 1] Internet use outside of school and students’ feelings(Positive feelings)

		Korea	OECD Average
Happy	Low Internet Users	87.0	90.4
	Average Internet Uses	86.0	92.4
	Heavy Internet Users	84.1	87.0
Lively	Low Internet Users	82.4	83.4
	Average Internet Uses	82.7	83.3
	Heavy Internet Users	81.2	76.8
Proud	Low Internet Users	69.3	72.8
	Average Internet Uses	65.3	71.5
	Heavy Internet Users	59.3	67.4
Joyful	Low Internet Users	89.9	89.2
	Average Internet Uses	89.6	90.6
	Heavy Internet Users	90.0	85.3
Cheerful	Low Internet Users	85.7	88.3
	Average Internet Uses	86.9	89.4
	Heavy Internet Users	87.5	84.6

Source : PISA 2018

Table 2 presents the results of an analysis of negative emotions. Korea and OECD averages showed a similar tendency. The percentage of students who report fear, misery, and sadness is the highest in both Korea and the OECD average when they are “Heavy Internet Users”. On the other hand, the group with the lowest percentage of students who report negative feelings differed depending on the type of feelings. In case of feeling afraid, “Average Internet Users” were more likely to report negative feeling than other users group in both the OECD average and Korea.

[Table 2] Internet use outside of school and students' feelings(Negative feelings)

		Korea	OECD Average
Scared	Low Internet Users	47.0	34.1
	Average Internet Uses	47.8	34.4
	Heavy Internet Users	48.9	35.1
Miserable	Low Internet Users	28.9	34.6
	Average Internet Uses	27.9	38.5
	Heavy Internet Users	35.5	44.2
Afraid	Low Internet Users	68.2	45.9
	Average Internet Uses	70.1	48.2
	Heavy Internet Users	68.8	48.0
Sad	Low Internet Users	49.1	45.3
	Average Internet Uses	53.2	50.7
	Heavy Internet Users	59.7	54.8

Source : PISA 2018

The common patterns found in Table 1 and Table 2 were that the “Heavy Internet Users” are more likely to report negative feelings. And positive feelings have the opposite result. But there was not a single group that consistently reported a higher rate of positive feelings and a lower rate of negative feelings. In other words, it can be assumed that there is not much difference in positive/negative feelings among “Average” and “less than Average” Internet Users, even though the “Heavy Internet Users” are less likely to report positive feelings.

References

- OECD. (2019). PISA 2018.
- OECD. (2019). PISA 2018 Results (Volume III): What school life means for students' lives. Paris, France: OECD.