University students' relationship with technology: Psychological effects on students

Anar Kurmanova [1*] **,** L. N. Gumilyov Eurasian National University, Nur-Sultan 010000, The Republic of Kazakhstan https://orcid.org/0000-0003-1045-2492

Sanim Kozhayeva [2], L. N. Gumilyov Eurasian National University, Nur-Sultan 010000, The Republic of Kazakhstan https://orcid.org/0000-0002-5572-1054

Gulbarshyn Ayupova [3], Alikhan Bokeikhan University, Semei 071400, The Republic of Kazakhstan https://orcid.org/0000-0003-3848-9844

Madina Aurenova [4]**,** Sarsen Amanzholov East Kazakhstan University, Ust-Kamenogorsk 070011, The Republic of Kazakhstan https://orcid.org/0000-0003-4878-8856

Bibianar Baizhumanova [5]**,** L. N. Gumilyov Eurasian National University, Social and Pedagogical Department, Nur-Sultan 010000, Kazakhstan https://orcid.org/0000-0003-0767-414X

Zhanat Aubakirova [6], L. N. Gumilyov Eurasian National University, Nur-Sultan 010000, The Republic of Kazakhstan https://orcid.org/0000-0002-4868-7118

Abstract

The concept of digital natives is a frequently heard concept today. We live intertwined with technology. As in every field, technology has also taken its place in the fields of education. In addition to the advantages of technology products that facilitate the life of university students academically, physically, psychologically and socially, they also have negative effects in terms of physical, psychological and sociological aspects. Especially due to the misuse of smartphones, mobile Internet and social media, university students experience many problems such as technology addiction, nomophobia, netlessphobia and problematic social media use. In terms of socialisation, it is seen that university students are more affected by the psychological factors brought by technology, as they use it extensively in their academic studies and access to information. For this purpose, this study aims to determine the views of university students on the psychological effects of technology. Within the scope of this general purpose, a study was conducted with 84 university freshmen. In order to reach the aim of the research, five open-ended questions developed by the researcher were asked. As a result of the research, it has been revealed that university students have problems because they do not use technology correctly. This situation disrupts social relationships and affects communication. The use of technological tools by students may cause social phobia, communication problems, academic success, emotional turmoil and physical harm to physical health. For conscious use, it can be recommended to inform students by giving trainings.

Keywords: University, digital natives, technology, psychology, education, media

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[*] ADDRESS FOR CORRESPONDENCE: Anar Kurmanova, L. N. Gumilyov Eurasian National University, Nur-Sultan 010000, The Republic of Kazakhstan.
E-mail address: kurmanova_ai@enu.kz

1. Introduction

Today, the development of technology has made it easier for people to communicate with each other. Thanks to technology, communication comes from all over the world. With the rapid development of technology, Internet technology is evolving more and more. According to the needs, technology products proliferated rapidly and Web 2.0 technologies emerged (Kompen, Edirisingha, Canaleta, Alsina, & Monguet, 2019). Over the last 20 years, the world has been involved in technological change in various fields such as business, health, finance and education, thanks to advances in information and communication technology (ICT) (Edwards & Bone, 2012). Internet 2.0 technologies provide users with a platform for creating, viewing, sharing, communicating and collaborating, providing new experiences and learning opportunities for users. As a communication tool, Internet 2.0 has provided users with a place where they can communicate with various people 'anytime' and 'anywhere'. The application of the Internet 2.0 technology paradigm has evolved from teacher-to-student instruction (Brown, 2012), leading to student-centred learning (Chawinga, 2017).

Web 2.0 defines the system that people create by interacting in shared environments on the Internet. With this technology, free libraries (Oyelude, 2017; Serholt, Eriksson, Dalsgaard, Bats, & Ducros, 2018), blogs (Weblog), subscriptions to readers and video broadcasts (podcasts and videocasts), wikis, bookmarks, tags, image and video sharing and social networks are created to provide users with an environment in which they can interact (Faizi, El Afia, & Chiheb, 2013). Web 2.0 technologies also provide an environment designed to present content or ideas to a community (Click & Petit, 2010; Karaman, Yıldırım, & Kaban, 2008). The past three decades have witnessed the rapid spread of ICTs, which have revolutionised many aspects of human activity (UNESCO, 2011). In light of the enormous impact of ICT on our lives, many discussions on ICT integration in education have been encouraged, as evidenced by policy initiatives in many countries promoting such integration (Karaman et al., 2008).

Collis and Moonen (2008) define Web 2.0 technologies as 'perceived second-generation web-based services that emphasise online collaboration and sharing'. Web 2.0 technologies are sometimes referred to as social media in higher education (Chawinga, 2017; Gikas & Grant, 2013). Web 2.0 is a tool for social networking, bookmarking and video- and image-sharing. Web 2.0 is a set of tools such as Twitter, Facebook, wikis, blogs and surveys used for communication, peer interaction, collaboration and participation (Chawinga, 2017). The following section discusses Web 2.0 learning-related strategies.

Devices such as smartphones and the Internet and social networks accessible in this way are being used more and more, and the time that people spend interacting with these tools is also increasing. In addition to opportunities such as socialisation or communication, smartphones also provide access to information, which is used intensively by the young population defined as Generation Z. Because of all this research, when one thinks about college students' smartphone use in particular, it would not be wrong to say that this is a very important element in their lives, as it gives them the necessary socialisation, on the one hand, and the opportunity to access information and contribute to their academic research, on the other hand. However, it is also argued that the impact of such use on an individual may vary from person to person (King et al., 2014).

Unlimited and indefinite use of computers or other digital media being trapped in someone's veil is also a constant problem in the daily lives of children and teenagers. So now children and young people have to join the movement, from reading a book, from work that requires dexterity and patience or from what they do not attach as much importance to acquiring entertainment as they do to digital media. This usage of media by children and young people is in line with the determinations. Certain time restrictions should come from families to reduce hyperactivity. This is also claimed to reduce complaints (Gezgin, 2019; Yeşil, & Fidan, 2017).

Given the complexity of better understanding, the role of ICT in students' learning experiences is crucial. In fact, they use multiple strategies internally and externally to complete their recommended learning exploratory work to improve. Understanding the factors that affect students is also vital. Obviously, the perceptions of effectiveness are increased adoption and integration of social media in higher education (Teo, Sang, Mei, & Hoi, 2019).

People are more susceptible to addictive behaviours when they are younger. There are many psychological problems related to dependence on technological tools. Hammond, Mayes, and Potenza (2014) studied adolescents' behavioural decision-making reward systems in the brain (compared to the cognitive control centre), and as a result of its influence, risky and addictive behaviours without considering the consequences were frequently noted. Kandell's study considered college students to be prone to excessive use of technology, social expectations and roles their relative independence and their developmental dynamics (Lee, Lee, Ko, Lee, Kim, Yang, & Song, 2014), despite the extent of some technological dependencies without any intervention. Although it has been shown to change over time (Du, Jiang, & Vance, 2010), it is related to the health of the young population. It is very important to carry out studies on addictions (Lau, Wu, Gross, Cheng, & Lau, 2017).

1.1. Purpose of the study

Computer and internet technology, which is becoming more and more widespread in the world, is generally used in the information exchange and education process. These tools, which aim to enrich students' learning behaviours and epistemological experiences, not only affect their learning skills by increasing social behaviours, but also negatively affect their relationships with family, relatives and friends. Some negative psychological causes are created by technological tools. Examples of internet addiction are social media addiction, nomophobia, game addiction and trigger addiction. Research shows that college students are among the groups most affected by technology. In this context, it is very important to examine the relationships of university students with technology and to investigate which conditions are affected psychologically.

2. Methods

To achieve the aim of this study, a qualitative research method was applied. While choosing the method, the studies were examined and it was concluded that the number of qualitative studies was quite low. With the qualitative study, it is aimed to get the opinions of the students more clearly. Therefore, the case study method, one of the qualitative research methods, was used. A case study is an in-depth analysis of one or more social events in a time period (Yıldız, Gündoğmuş, Yener Aydın, & Atalay, 2020).

2.1. Universe and sampling

The purposive sampling method was used while choosing the study group of this research. The purposive sampling method is used to provide data about an event or phenomenon (Ary, Jacobs, Irvine, & Walker, 2014). In this study, it is seen that the criteria determined for sampling and university students participating in the research are more affected by the psychological factors brought by technology. Within the scope of this general purpose, a study was conducted with 84 university freshmen. In order to reach the aim of the research, three open-ended questions developed by the researcher were asked.

Table 1. Demographic characteristics of the study group

Variable	Properties	N

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Gender	
Female	52
Male	32

2.2. Collection and analysis of data

In order to obtain the results of this research, a semi-structured interview form was used as a data collection tool. After the semi-structured interview form prepared by the researchers was examined by three field experts, preliminary interviews were conducted with four students to test the intelligibility and applicability of the form. After the pilot study and expert opinions were received, five interview questions were directed to the students. They are as follows:

. What technology tool do you use frequently?
. Which area do you like to surf on social media?
. How much time do you spend on social media?
. What does life without Internet mean to you?
. How do you feel when you do not use technological tools and the Internet?

3. Results

3.1. Frequently used technology tool

Table 2. Technological tools frequently used by university students

Theme	*N*
Smartphone	52
Laptop	38
Tablet	20

First of all, university students were asked which technological device they use frequently. Considering the findings for this purpose, 52 students gave the answer of smartphone, followed by 38 students who said computer and 20 students who said tablet.

Some of the answers given by the students are as follows:

'My answer to this question is, of course, smartphones. A technological tool that I always keep with me'.

'Certainly cell phones, but I spend more time with my computer. I always use the laptop in my spare time when I am at home or outside'.

3.2. Social media platforms

Table 3. Social media platforms

Theme	*f*
Instagram, Facebook	35
Video content channels (TikTok)	21
Dating sites	12
Science/browser	14

University students were asked in which areas they spend time on social media. The answers given to this question were answered as communication platforms, i.e., Instagram and Facebook. There are also replies in the form of video content channels and dating sites. Again, only 14 of the students stated that they use social media for science and art.

Some of the examples of the opinions of the student candidates are as follows:

'I spend most of my time on social media on Instagram and Facebook. I'm posting stories, wondering who's watching, wondering how many followers you have'.

'I spend most of my time on TikTok and integram. I can watch what other people are doing for hours'.

3.3. Time spent on social media

Table 4. Time spent on social media

Theme	F
1–2 hours	2
3–4 hours	15
5–6 hours	40
7 and more	27

According to the answers received from the students, it is seen that the time spent on social media is between 5 and 6 hours by the maximum number of students. Afterwards, the students stated that they spent 7 or more hours on social media. At the least, two stated that they spent between 1 and 2 hours.

3.4. What does life without Internet mean to you?

Table 5. What does life without Internet mean to you?

Theme	F
Very boring	45
Meaningless	25
Big gap	25

University students were asked what life would be like without the Internet. The answers to this question were grouped into three. There are 45 students who say that life without the Internet would be a very boring, 25 students say it will be meaningless and 25 students say it will create a huge void.

3.5. How do you feel when you do not use technological tools and the Internet?

Table 6. Opinions on not using technological tools and the Internet

Theme	F
Missing	45
Annoyed	24
Sad	21
Insecure	20

University students were asked how they would feel without technological tools and the Internet. When the findings of this question are examined, 45 students said they feel incomplete, 24 students said feel angry, 21 students said feel sad and 20 students said they feel insecure.

Some of the examples of the opinions of the student candidates are as follows:

'We are in the age of technology, especially when I think I don't have a cell phone, I think I get extremely angry. I don't know what to do'.

'I actually had this feeling. We went to the village last summer and my phone was not working. We stayed 3 days. For 3 days I was extremely bored and involuntarily nervous. When we got to the city and my phone started to pick up, I was relieved'.

4. Discussion and conclusion

The main aim of this research is to see whether university students use technology correctly or not and the negative effects they have experienced against this situation. As a result of this research, it was concluded that the students did not use technology correctly and they spent too much time; and as a result, they were affected negatively and psychologically.

First of all, university students were asked which technological device they frequently use. When the results for this purpose are examined, it is seen that the most used technological tool is smartphone, followed by laptops and tablets.

The most used technological tool by university students is the mobile phone. Accordingly, the use of social media was asked. When the results of this finding were examined, it was asked in which areas they spent time on social media. The results given to this question were answered as communication platforms, i.e., Instagram and Facebook. The results of video content channels and dating sites were reached. It has been concluded that a very small number of student groups use social media for science and research. This situation is quite sad. It is very thought-provoking that university students want to use social media on the other platform instead of working academically. Internet use in studies of young people, which has become increasingly widespread, is not for homework, research or learning, but it has been shown that they use it for communication purposes and social media purposes (Demirel, Yörük, & Özkan, 2012; Mertoğlu, 2020; Yang, Lu, Wang, & Zhao, 2014; Yılmaz, Şahin, Haseski, & Erol, 2014).

The results of the students' use of social media led to the need for another research question. The goal was time spent on social media. If we look at the results of the time university students spend on social media, the time is quite high. The number of students who stated that they spend between 5 and 6 hours is quite high. Likewise, the number of students who say that they use social media for 7 hours or more daily is also quite high. These are very long periods. It can reveal many health problems, psychological problems and communication problems.

University students spend a lot of time on social media. This result gave rise to the question of what university students would feel without the Internet. It has been concluded that they will have difficulties without the Internet; that life will be very boring; that the passing time will be meaningless; and that they will experience a great void without the Internet. This led to the conclusion that university students see the Internet as a necessity for life. In his study, Gezgin (2019) examined the facts and problems faced by students due to unconscious, excessive and problematic use of technology. He explained the results in the form of content analysis. As a result of the research, he

concluded that university students were affected by Internet addiction, game addiction and nomophobia (Gezgin, 2019).

University students were asked how they would feel without technological tools and the Internet. When looking at the results of this question, we see that the answers given are consistent with the other findings. It was concluded that they felt incomplete; they were nervous and tense; and they felt sad. A small number of students stated that they would not feel safe with their cats. It can be said that this result is due to the fact that students do not associate the personalities they create on the Internet with real life. An application made is ideally suited to the state of the university's psychologically good technologies and social media. Korkmaz and Dilmaç (2021) examined the relationships between problematic Internet use, psychological well-being and social support in university students' welfare and the excessive use of the Internet or the negative consequences of Internet use affected the psychological well-being and social media addictions of university students. Söner and Yılmaz (2018) found that the psychological well-being of students with a smartphone is higher and there is a negative significance explaining the relationship between conflict, a sub-dimension of social media addiction and psychological well-being. Sharma and Sharma (2018) investigated the relationship between Internet addiction and psychological well-being of university students in Central India. The study confirmed the negative impact of Internet addiction on psychology. Another researcher, Çardak (2013), studied the psychological well-being of university students and their Internet addiction, and proved that students with high Internet addiction have a poor psychological well-being. The findings reveal the negative effect of Internet addiction on psychological well-being.

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