Computers in Human Behavior 48 (2015) 457–462

Contents lists available at ScienceDirect

Computers in Human Behavior

journal homepage: www.elsevier.com/locate/comphumbeh

Determining the effects of technological tool use habits on social lives

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ARTICLE INFO

Article history:

Keywords:
Technology
Habit
Social lives
Perception

ABSTRACT

Differences have arisen between newly developed technology and the consequently changing generation's integration of this technology into their social lives. In this study, research has been undertaken on students who use many different kinds of technological devices all together and their effects on their social lives. Also, students' habits of technological device use, social media, educational life and communication types are discussed in this study. The general scanning model was used in the study in order to determine the effects of students' technological device use on their social lives. These students are studying in educational departments at universities. The method determined was applied to the sampling group of the research. The questionnaire was determined in accordance with the method and was applied to all the educational faculties of universities during the scanning process. A total of 2334 students participated to the research. When the research findings were analysed in terms of friend choice, the students preferred communicating with people who use technology of the same quality as themselves. Also, the students claimed that they went through some problems with their families and friends as a result of intense technology use. It is obvious that students who spend more time on technological devices are more behind in their lessons and also have some inconveniences in their social lives. For instance; even when they go to the cinema they surf the Internet on their smart phones and while choosing a place to go they prefer places with a Wi–Fi connection. It has been observed that students can express themselves more easily in the Internet environment and they prefer places that are popular on the Internet.

1. Introduction

The quick development in communication technologies as well as general technologies has enabled world cultures to interact. Within this, the interaction between cultures has increased (Karaçor, 2009). As is well known, when an event happened in any country it took time to reach other countries. However, this situation has reversed nowadays. Wherever it happens, an event is heard immediately around the world within a few minutes, thanks to TV or the Internet (Maalouf, 2009).

The development of technology has produced many disadvantages as well as advantages. Unhealthiness and asociality are the two most prominent negativities in much research. When doing research – especially on the new generation's interest in technology – it is not very difficult to observe the negative and positive sides of technology (Atal & Usluel, 2011). But with the development of technology there are more negative sides than positive sides and even in some situations when technology is mentioned there is negative thinking of it and this creates anxiety (Hammen & Brennan, 2001).

When mentioning technology, people remember the most used ones, which are computers, laptops, the Internet, mobile phones, tablet computers, televisions, game consoles and similar technological equipment. However, there are more technological devices that ease life. The refrigerator in the kitchen, washing machines and food processors are also technological devices which ease our lives. When considering these differences, it is seen that the most remembered technological devices are the technological devices that are known as creators of health problems in humans (Karal & Berigel, 2006).

Technology has developed in every area and has rendered people unable to live without it. Nearly all the things that humans use in their daily lives are related to technology. For instance, cars, mobile phones, laptops, the car's GPS systems, and mobile data on phones are daily activities done and used routinely and all those devices are related to technology (Yavuz & Coşkun, 2008). Because of this, it is inevitable that there is an increasing interest in technology. Even though some people use technology as needed, a number of people cannot live far from technology even for one

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http://dx.doi.org/10.1016/j.chb.2015.02.012
0747-5632/

minute of their daily lives (Choliz, Echeburua, & Labrador, 2012; Lee, Chang, Lin, & Cheng, 2014).

Tuti (2005) did a study about the analysis of student self-sufficiency perception, student perception, performance indicators and information technology use in education. The aim of the study was the determination of information technology use in education according to performance indicators in primary schools. It also aimed to analyse students' self-sufficiency perceptions and their perception about information technologies. A questionnaire was developed and used to gather data. The answers of students in the information technology questionnaire showed differences in terms of school type and gender. It was observed that the students' computer self-sufficiency perceptions are high and their perception about information technology use is positive.

All people agree that technology is in every moment of our lives and it makes our lives easier. Even though we mention its positive advantages it is harmful to human health. Due to overuse of technology, there are new illnesses nowadays (Yılmaz, Ulucan, & Pehlivan, 2010).

Mobile phones are also very important in our lives. Mobile phones – known as cell phones by people – have become the fastest communication device around the world. Their developed versions are nearly replacing computers and they are pocket size. These properties are the biggest proof of why they are so important in our lives (Skierkowski & Wood, 2012).

The fast development of mobile phones, tablets and applications has been the reason for technology playing such an important role in contributing to education. There are smart phones and tablet computers instead of normal mobile phones now and in terms of size they can be carried more easily. These two results have increased their usability greatly. Educationalists have turned this situation to their advantage and they have started to benefit from technology by using educational applications on these smart devices, which has developed mobile education (Mao, 2014).

However, it has been observed that mobile phones are a health risk for people, especially when they are overused because they are too important and too useful in our lives. In a study held by Tan, Pamuk, and Dönder (2013), the overuse of mobile devices caused people to suffer from anxiety of staying alone. Another study showed that the overuse of mobile phones is a kind of addiction and this kind of addiction threatens people's academic lives and personal health (Çağan, Ünsal, & Çelik, 2014).

Choliz et al. (2012), have done research on whether the addiction to information and communication technology is a new addiction or not. At the end of this study they decided that the prospective studies would explain the negative results of the overuse of information and communication technologies.

Hodis and Bruner (2009) did research on how the negative effects of technology use affect the user's tranquillity. At the end of the study they suggested that a study done among a bigger community would give better results in the future. Also they reached the conclusion that since the avoidance of technology use will not give any positive result from the addiction, the factors and stages that cause this addiction should be fought against. One of the biggest factors of some illnesses in the technology area is Internet use. It is accepted that Internet use provides us with benefits and facilities, but there is no common perception about whether these people's – whose overuse is excessive – behaviour disorders are related to their Internet use or not (Adiele & Olatokun, 2013). Due to the increase of the use of the Internet in the past ten years (Sinkkonen, Puhakka, & Merilainen, 2014), and the fast spread of Internet addiction disorder among youngsters (Kalaitzaki & Birtchnell, 2014), there have been many studies held about the effects of Internet overuse on human health and their behaviour disorders (Kuss, Griffiths, & Binder, 2013). The term Internet addiction contains a wide range of terms that include cybersex addiction, cyber friendship addiction and online game addiction (Craparo, 2011).

Because Internet addiction is a sensitive issue, the studies held about this topic need reliable and valid tools and equipment (Karim & Nigar, 2014). The studies show that; while the correct Internet use relaxes and makes people happy (Pénard, Poussing, & Suire, 2013), people who overuse the Internet suffer from a behaviour disorder or they have the feeling of being alone (Yao & Zhong, 2014).

According to the results from a study held in America, Internet use has increased to 93% since 2006 and remained stable at 93%. Social media use has increased every year to 80% (Floros & Siomos, 2013). According to a study held in Turkey with 300 people, Internet addiction can result in people suffering from depression or having excessive stress (Akın & İskender, 2011). Because of these reasons, Internet use started to be seen as an illness that needs to be treated (Yadav, Banwari, Parmar, & Maniar, 2013).

Nowadays, humans' normal lives are equipped with technological devices (Niculović, Živković, Manasijević, & Štrbac, 2014). Humans, during the day, spend their time engaged in many technological activities such as looking at their friends' photos, checking their friends' shares, communication or playing games (Khang, Kim, & Kim, 2013). Facebook, which is the most used social media tool around the world, has an important role in the increase of humans' Internet use. University students see Facebook – which has millions of visitors every day – as an important social cultural device (Hong, Huang, Lin, & Chiu, 2014). The use of technology being so excessive decreases the productivity of humans in their academic lives (Wentworth & Middleton, 2014).

Information and communication technologies have succeeded in changing our lives and having control of us. While in the past people used technology for different aims such as doing research, communication, or playing simple games, nowadays however, they can use their smartphones or other technological devices while moving around (Leftwich & Sabir, 2014; Salehan & Negahban, 2013).

Even though cell phones were just used for communication, with developing technology and the rise of smartphones, they have become humans' partners in their lives. The increasing smartphone use in the past ten years threatens human health by creating an addiction to them, especially in case of overuse, though they provide advantages (Chiu, 2014).

Another technological factor which threatens human health is game consoles, computers or other games played on portable technological devices (Seok & DaCosta, 2012). As well as affecting youngsters and children in many ways, they can bring personality disorders to light according to the type of games (Griffiths, 2000).

The development of technological devices addresses everyone of every age in their interest area. In the past game consoles addressed only children but with the development of technology they have become an irreplaceable entertainment resource for older people (Ventura, Shute, & Kim, 2012).

2. Purpose of the study

The purpose of this study is to determine the effects on the social lives of students who use many technological devices (TV, tablets, smartphones, social networking) all together in today's world.

The following questions were looked at:

1. What are the students' use habits of technological device?
2. What are the effects of social media on students' social lives?
3. What are the effects of technology on students' daily lives?
4. How does technology use affect student's learning lives?
5. How does technology use affect students' communication?

3. Methods

3.1. Setting

In this study, a general scanning method has been used in order to determine the effects of students' technological device use habits on their social lives. These students are studying in educational faculties at universities in the Turkish Republic of Northern Cyprus. The determined method was applied to the study sample group. A questionnaire was applied to education faculties of all the universities in the country during the scanning progress. Scale was developed by the authors.

3.2. Participants

A total of 7736 students are studying in all educational faculty departments of universities in the Turkish Republic of Northern Cyprus. But in this study the sample was 2234 people, and constitutes the scope of the study. In terms of research conditions, since it was impossible to take the whole scope as a sample, a stratified intentional sampling method – which is not random – was used to determine the participants.

Stratified sampling is a kind of method which provides a representation of determination of sub groups in the scope and those groups' rates in scope size in the sampling (Büyüköztürk, 2008).

The students in educational faculties in 6 universities in the study were determined as sub layer. The target sampling rate was determined as 30%. Büyüköztürk (2008) stated that in order to decrease sampling mistakes in studies with the scanning method and in order to increase the representation of sampling in the scope, this rate will give a sufficient size that can be accepted.

The number of students in educational faculties in University 1 totals 2050 but in this study a total of 629 students participated, at university 2 there were a total of 1877 students at educational departments and 563 students participated, at university 3 there were a total of 1622 students at educational departments in this university and a total of 486 students participated. At university 4 there were 468 students at educational departments and a total of 140 students participated in this study. At university 5 there were a total of 1600 students at educational departments and a total of 480 students participated; and lastly at university 6 there were a total of 119 students at educational departments and a total of 36 students participated in this study.

The distribution of the students' departments who participated in the study is as follows:

688 (29.5%) Guidance and Psychological Counselling, 547 (23.4%) Pre-School Teaching, 210 (9.0%) Computer and Instruction Technology Teaching, 205 (8.8%) Turkish Language Teaching, 155 (6.6%) English Language Teaching, 129 (5.5%), Mental Obstacles Teaching, 90 (3.9%) Psychology Teaching, 87 (3.7%) Classroom Teaching, 84 (3.6%), Turkish Language and Literature Teaching, 32 (1.4%) Music Teaching, 28 (1.2%) Social Sciences Teaching, 17 (0.7%) Primary Mathematics Teaching, 17 (0.7%) Secondary Mathematics Teaching, 16 (0.7%) Geography Teaching, 12 (0.5%) History Teaching, 10 (0.4%) Painting and Art Teaching, 4 (0.2%) Science Teaching and 3 (0.1%) from Educational Sciences Departments. 59% (1376) were female and 41% (958) were male.

3.3. Instruments

The scale for determining the effect of students' (who were used as data gathering tool) technological device use on their social lives, was developed by the authors. The scale is constituted by 5 dimensions. There are a total of 60 items. The dimensions are organized as "Technological Device Use Habits" (24 items), "Effects of Social Media" (12 items), "The Place of Technology in Daily Life" (8 items), "Educational Use" (9 items) and "Communication" (7 items). For every item on the scale classification from each of these five categories were obtained such as "completely agree, agree, indecisive, disagree, completely disagree". The "completely agree" statement chosen by participants is 5 points and the "completely disagree" statement is 1 point so the point system calculation is from 1 to 5 points. Items were evaluated according to a five-point Likert scale. To ensure the scale's validity and reliability. Reliability was calculated based on item analysis with a Cronbach alpha internal consistency of 0.89 for the whole scale.

3.4. Data analysis

Average and standard deviation values were used to determine the effect of the habits of technological use on social lives.

4. Results and discussion

4.1. Technological device use habits

As can be seen in Table 1, the answers that students have given for the questions are proof that they are very much interested in technological devices. These questions were about the students' habits of technology use, the time they spend with technological devices and also the problems they have because of the time they spend with the technological devices. When the average of the given answers are taken, most of the students' answers were "agree" and a very big part of their answers was at the "completely agree" level. According to the findings taken from the research, the students have stated that they have family problems ($X = 4.35$, $SS = 0.92$) because of spending too much time with technological devices and also they avoid telling people the amount of time spent on the Internet due to the dense use of technological devices ($X = 4.32$, $SS = 0.72$). The reason for this avoidance can be the reactions their family and friends might give. With their answers, students stated that they heard complaints – in other words reverse reactions – from their friends due to the fact that they spend too much time on the applications on their cell phones ($X = 4.37$, $SS = 0.65$) (see Table 2).

One of the findings in this research is that a high rate of students who answered the scale use smartphones, in other words, they follow technology. With regards to this, most of the students have friends who are interested in technology ($X = 4.41$, $SS = 0.65$). In the research that Erdemir, Bakırcı, & Eyduran (2009) have done, they researched students' self-confidence with technology usage. According to the answers given in this research, students' self-confidence was mostly at the "indecisive" and "agree" level. Since technology makes life easier, this kind of friendship can be more sincere. Besides its positive side, one of the other negative sides of technology is that it alienates students from lessons. The students answered the question "I spend so much time with technology that I ignore my lessons" as "agree" level ($X = 4.33$, $SS = 0.70$). It is not very interesting that the respondents care about a place having an Internet connection while choosing where to go, especially at the time when they feel uncomfortable if they are away from their social environment. On the contrary, it has become a normal condition ($X = 4.28$, $SS = 0.76$). Besides that, technology enables us to have some specific information about places before we go there. People who are good at using the Internet can get information before going to a place and can make their decision more easily ($X = 4.25$, $SS = 0.79$). It can be seen that when people buy a technological device the price is not important for them and they buy it even without looking at the price. Also they

Table 1
Technological device use habits.

Technological device use habits	Mean	SD
Due to the time I spend with technological devices, I have problems with my family	4.35	0.92
I avoid saying how much time I spend on the Internet with portable devices	4.32	0.79
I spend so much time with the applications on my cell phone that I hear complaints from my friends	4.37	0.65
I'd rather stay sleepless in order to pay attention to technological devices	4.34	0.69
I make friendships with people who use the most recent technology	4.41	0.65
I spend so much time with technology that I neglect my lessons	4.33	0.70
I choose to go to places that have a Wi–Fi connection over those that don't	4.28	0.76
In order not to be behind on recent technological applications, I buy them even though they are expensive	4.38	0.70
I neglect meeting friends in order not to miss TV series and programmes	4.36	0.71
I become nervous when somebody disturbs me while I am using technological devices	4.24	0.79
I use the Internet on my cell phone even if I am at the cinema	4.38	0.68
I'd prefer to buy a product online when I can also buy it very easily in the city where I live	4.28	0.76
Most of the people around me use smart phones so in order to be attuned to them I also use them	4.39	0.66
I attend Technology Fairs	4.30	0.75
I can express myself better on the Internet	4.21	0.77
I feel closer to someone whom I have met only on the Internet instead of my friends	4.37	0.66
Even though I try to reduce the amount of time I spend on portable devices, I am unsuccessful	4.25	0.76
Before I go to a newly opened place, I do evaluation by reading the comments on the Internet	4.25	0.79
There are televisions in each room in my house	4.38	0.71
Because I do not care about the events around me while I use technological devices, I can't perceive them	4.31	0.73
Even while I eat food, I follow and use technological devices. (Television, mobile phone, etc...)	4.28	0.78
I spend all of my money in order to have the most recent technological devices	4.29	0.77
I cannot dream of a life without technology	4.10	0.98
I regularly spare a part of my salary on technological devices	4.29	0.76

Table 2
The effects of social media.

The effects of social media	Mean	SD
I spend so much time with social media that I forget to eat food	4.37	0.69
I choose most of my clothes from the photos on social media	4.31	0.74
In order to share on social media, I take every interesting thing's photo	4.21	0.83
To follow social media is on my daily to do list	4.11	0.93
Even if there was a fire in my house I would take and share photos on social media	4.38	0.71
Checking social media is the first thing I do in the morning	4.16	0.92
On social media I never hesitate to share a very special thing in my life	4.28	0.78
I do the Check-in in every place I go	4.16	0.87
I have more than 3 memberships on social media	4.18	0.94
The time I spend on social media during the day is more than the time I spend with my friends	4.20	0.87
I always check the notifications from social media sites	3.95	1.07
I use social media in order to follow technological trends	3.96	1.02

spare part of their salary for technological devices. People can have addiction to television and radio also, not only computers and the Internet.

The questionnaire showed that students neglect to meet their friends in order not to miss TV programs ($X = 4.36$, $SS = 0.71$) and while doing this, they do not even ignore using the Internet on their cell phones even while watching cinema.

According to the answers given, one of the reasons why people spend too much time on the Internet is that they can express themselves better on the Internet. While the students who participated in the scale state that they cannot dream of a life without technology ($X = 4.10$, $SS = 0.98$), they are unsuccessful even when they try to reduce the time they spend with their technological devices.

4.2. Social media use

The answers that students gave show that most of the students have too many relations with social media and even that they are more interested in social media than their normal lives ($X = 4.37$). The answers related to social media given by students are at the "agree" and "completely agree" level. The answers given on the scale show that social media has an important status in the community. Social media is at the top of people's to-do list and they connect immediately to social media after waking up ($X = 4.16$). This situation causes people to spare more time on social media rather than their friends ($X = 4.20$) or it causes people to be more interested in social media even if they are together with their friends ($X = 4.16$). Today's social media has become the reason for users to share their lives minute by minute with other users ($X = 4.21$). These people almost have no private life and they share their every moment with other users, not only in this regard but they also notify every place they go by checking in on social media ($X = 4.16$). In regards to this, people have developed some of their own characteristics. For instance, in order only to get more interest on social media they developed the photography dimension and today there are more people who take every angle they see around them ($X = 4.21$). However they do not check the notifications from social media ($X = 3.95$) and it occurred that they do not completely use social media to follow technology ($X = 3.96$). In addition to this, in a study that Kalafat and Göktaş (2011) held, it was revealed that social networks are also used for educational aims.

4.3. The place of technology in daily life

As can be seen in Table 3, the place of the technology is very important for students because the students use technology in

Table 3
The place of technology in daily life.

The place of technology in daily life	Mean	SD
Using technological devices makes my life easier	4.30	1.02
I feel unhappy without technological devices in my life	4.15	1.05
I can develop different point of views with the information I get using technological devices	4.24	1.04
I feel very angry when there is not an Internet connection	4.20	1.04
I feel uncomfortable when my cell phone is not with me	4.30	1.01
I want a mobile phone or a car with a GPS system to find my directions	4.22	1.01
I regulate my daily activities more easily thanks to technological devices	4.22	1.01
I feel nervous if somebody disturbs me while I use a technological device	4.23	1.01

Table 4
Educational use of technology.

Educational use	Mean	SD
I think that technological devices contribute to my education	4.14	1.15
I find most of my homework from the Internet	4.28	1.15
I use the social media to keep myself informed about the trends in education	3.95	1.13
Most of my time I spend on the Internet is for education	3.94	1.13
I am a member of social media groups which are about my lessons	4.22	0.99
I immediately do research on my mobile phone about a topic that I could not understand in the classroom	4.11	1.00
Instead of asking my teacher about a problem during the lesson, I prefer asking him or her from the Internet	4.17	0.98
A while after lessons start my attention directs towards technological devices	4.09	1.00
If my lecturer uses a technological device or tool during the lesson, my interest towards the lesson increases	4.08	0.91

Table 5
Communication.

Communication	Mean	SD
Because of technology I spend less time with my family	4.29	0.84
I still keep on using technological devices even though they weaken my interpersonal relationships	4.29	0.83
Because I focus on technological devices I neglect face-to-face communication with my friends	4.21	0.87
In order not to miss TV series or programs I reject meeting my friends	4.40	0.77
The biggest reason why I use technological devices is to communicate with my friends	4.12	0.86
Everybody tells that I spend too much time on technological devices	4.31	0.81
With technological devices I communicate with more people in a shorter time	4.18	0.90

every moment of their lives. In a study held by Çevik and Alkan (2011) there are positive perceptions of candidate music teachers about technology. On this part of the scale, the questions asked to students were about daily use of technology. When considering the answers, it is seen that nowadays technology has a very important place in human life. The students who participated in the questionnaire defended that technology makes life easier ($X = 4.30$). The answer to "why technological devices are used that much" is that it makes life easier. With regards to this, when there are not these types of technological devices or when there is no Internet ($X = 4.20$), or when people are disturbed while using them it creates anxiety in human beings ($X = 4.23$) although the technological devices are used often. Thanks to technology, people can also develop new point of views ($X = 4.24$). In this period of time in which every kind of technological opportunity can benefit, people do not hesitate to have devices which have GPS systems in order to find their way (4.22) (see Table 4).

4.4. The effects of technology in terms of education

Nearly all of the students thought that technological devices contribute to education very much ($X = 4.14$). They also stated that they find most of their homework on the Internet ($X = 4.28$), and they search on the Internet for the topics they do not understand ($X = 4.28$), and also instead of asking their teachers face-to-face the students prefer asking them from through the Internet ($X = 4.17$). The students also become members of social media groups that are about their lessons ($X = 4.22$). We can infer that technology does not always provide a benefit to education because of the situation that their attention goes towards technological devices shortly after the lesson starts ($X = 4.09$). Besides this, the time they are on the Internet is not about education that much and they use social media at a medium level for education ($X = 3.94$). The studies on this topic by Gülbahar, Kalelioğlu, and Madran (2011), Özmen, Aküzüm, Sünkür, and Baysal (2011) also support the view that social media is used for educational aims.

4.5. Communication

In Table 5 we see that because of using technology the students spend less time with their families, in other words, because of technology their communication with their families is lessened ($X = 4.29$). But even though people are aware of this, they do not reduce using technological devices ($X = 4.29$). This situation does not only affect people's relations with their families negatively but also the relations with their friends to the same negative degree ($X = 4.21$). According to the answers, people's use of technology to communicate with their classmates or normal friends reveals that the face-to-face meetings decrease very much ($X = 4.21$). The reason for this is that the students can communicate with more people in a shorter time by putting in less effort through technological devices ($X = 4.18$). In his study about the rate of using mobile phones, Güneş (2008) stated the advantages and disadvantages of mobile phones. There is not much difference between the findings obtained from that study and from this study.

5. Conclusion and future studies

Nowadays fast development of technology has become a reason for us to change our lifestyles. The results from this study's findings show how technology is important in students' lives. The students having problems with their family because of technology use hear many complaints from their social environment. They hear these complaints because of their intense use of smart phones as well as not telling about their time duration on the Internet to other people around them. This situation creates inconveniences in their lives. That is why, while choosing their friends, they prefer to communicate with people who use technology of the same quality as themselves. This shows that the technology creates variable communication problems in our lives. This means that when the family introduces technology to their children they should put a use limit on them and they should teach them that the technology is not a life aim but only a life tool. To increase social activities and facilities in order to bring the students together is among the teachers' duties. They especially should focus on decreasing these inconveniences. The use of technological devices has been increased in order to provide a better education for students at school. The use of these technological devices provides better education for them but it is also the reason of their not being able to stay away from the technology. It can be the reason for students not being able to get away from it in or out of the school. At schools, the social activities and technology need to be planned proportionally

and they must be adapted in the most beneficial time duration. It is obvious that some students are behind in their lessons, they go through social life problems, they use the Internet even if they are at the cinema and while choosing a place they prefer the one that has a Wi–Fi connection. Also it is obvious that they can express themselves easily on the Internet and they prefer the places that are popular on the Internet. As well as this, the students expressed that when they see a new technological product they do not care about its price and they just want to have it. They also explained that they do not want a life without technology. Students who use social media very intensely feel the need to share every single moment of their lives from the morning they wake up. The students are so interested in their social media accounts that they do not communicate with their closer friends. The students who feel the need to share or check-in at every place they go on social media do not control their friends' notifications regularly. Moreover; they spend their time sharing something continuously. The students who say that technological devices make their lives easier express that they can find a place with a GPS system more easily, when they do not have their smart phones they feel uncomfortable and when they cannot connect to the Internet they feel anxious. When the devices are used for an educational aim, the students say that they do homework research on the Internet. They also said that they can communicate with their teachers and they can be members of various educational social media groups. However after some time, they expressed that their attention goes from lessons to the technological devices. The government has also some duties for preventing the inconveniences that technology brings about. The government should create social life environments for directing people to social life such as sports areas for children, walking trails, parks and natural areas. Future studies will be about how technology and social activities can be balanced by developing educational programmes towards the most used technological devices of students. Their opinions about this issue will be taken.

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