UNIDAD EDUCATIVA PARTICULAR JAVIER

BACHILLERATO EN CIENCIAS

MONOGRAPH

"STUDY OF THE INFLUENCE OF ENVIRONMENT AND TECHNOLOGY ON THE

BEHAVIOUR OF YOUNG PEOPLE IN ECUADOR IN THE LAST 15 YEARS"

STUDENT:

DANIEL RODRÍGUEZ

ADVISER:

LCDO. NÉSTOR PÉREZ

LCDA. PATRICIA SÁNCHEZ

THIRD OF BACCALAUREATE - COURSE C

2019 – 2020

Gratitude

First of all, I would like to thank my family who have supported me throughout the realization of this monographic work. I must also thank the teachers who have guided me through the different stages of this work with patience, especially my tutor who was always aware of the performance of each one of us. Finally, I would like to thank the school for the opportunity to do a more demanding job and challenge our limits.

Abstract

In this monograph a discussion that has many different opinions and is of great relevance in today's society is going to be explored and studied, and that is the extent to which technology influences the behavior of young people. The first chapter explores the backgrounds of technology and the responsibility of parents when raising their children, since it is necessary for good cognitive development to generate ties with people and not only with technology. The second chapter appreciates both the positive and negative effects that technology has on our lives. First, how it has positively influenced our lives, from advances in medicine that have saved lives to an improvement in communication that allows us to be always close to loved ones around the world. However, we also see how this has separated us from the people closest to us, reduced our empathic capacity, changed our way of relating to others and the relationship of technology with the development of some physical or mental health problems such as depression or obesity.

The third chapter is perhaps the most relevant to this previously mentioned discussion, and it is a discussion on what is the role of technology in education. Certainly, many things have changed since Alan Turing proposed the bases for the first computer in 1936 and now you cannot educate in the same way that was done during the Industrial Revolution. This is why many schools choose to equip themselves with computers, projectors, smart boards and laboratories that are fully equipped to give their students the opportunity to receive a better education. It is recognized that technology has many applications or uses in schools, but to take greater advantage of this it is necessary to know how to use it responsibly, with is explored at the end of this monographic work.

Index

Introduction

This monographic work is a ***Study of the influence of environment and technology on the behaviour of young people in Ecuador in the last 15 years.*** It seeks to learn about the dangers that our environment and technology can have on a young person's behavior and its future consequences. This monographic work also seeks to preserve the quality of social and emotional relationships of young people from the negative influence of technology such as cell phones, internet, computers, social media, TV, tablets, among others.

It is important to evaluate the level to which technology influences our behaviour because of its presence in our daily life. In a society that achieves new technological advances in an accelerated pace, it is very easy not to realize the consequences that these may have for current and future generations. "People have incorporated technology in the way they communicate, entertain, learn and even how they socially relate with one another. Such a massive technology has brought with it challenges and opportunities" (Kalungu & Thinguri, 2017, p.760).

In Ecuador technology has alienated entire families but has also brought together many from all around the world, it has caused a lot of damage but also a lot of good. Educational institutions need a clear orientation to teach their students how to use these tools properly. If we do not act quickly we endanger the youth that is exposed to a lot of things that the internet has to offer.

Institutions are aware of this issue, such as Mount Kenya University who published a study in the European Journal of Education Studies carrying out an analysis and research into how technology affects both positively and negatively students in Kenyan schools entitled "CRITICAL ANALYSIS OF THE IMPACT OF MODERN TECHNOLOGY ON STUDENTS SOCIAL RELATIONSHIPS IN KENYAN SCHOOLS".

This monographic work is divided into three chapters of which the first one talks about the Influence of technology on the youth and it serves as the context of this issue. The second one about Pros and cons of technology in the youth and the third one talks about Technology in education.

Chapter I

Influence of technology on the youth

1.1 Early cognitive development

The use of technology has skyrocketed in the last decade and now in society we can identify many of the consequences that it has on its users. I am going to analyze them from the youngest members of society to adults in their professional lives. This first phase of cognitive development is one of the most important in the human being, however the inclusion of technology in it has affected it in such an alarming way that one cannot live or think without technology.

Children are the most affected by this phenomenon as technology prevents their development from being completed as it should be. World Bank (2015) states: "Indeed, research into developmental psychology and education has shown that cognitive control can be exercised and improved in children through early life interventions in preschool" (p.123). We need to focus our attention on the earliest stages of a child's growth, using technology as a didactic resource for exercising the mind, so that it does not become an obstacle for cognitive development.

In the year 1936 a man named Alan Turing proposed the bases for the first computer, huge machines filling an entire room that were too expensive. Today we have at our fingertips much more efficient, lighter and accessible electronic devices, because of this, children are exposed to technology from the time they are born and grow up next to it. This leads to a dependence on it during its development stage, since technology has become the best ally for parents to calm a rage or entertain a baby, creating in them the idea that through misbehavior they receive this "prize".

The behavior of young people can be related to the fact that they have grown up with technology. The problem is that jobs demand so much attention from parents that they again

3

use technology to simplify parenting. "Technology has made it hard for parents to spare time for their children (…). This has resulted to weak parent-children bond" (Kalungu & Thinguri, 2017, p.760). Their children grow up learning from the television programs they watch and the video games they have at their reach. Without a filter this can give rise to the idea that the ideal behavior is that shown by their favorite cartoon characters, who are not always an example to follow.

1.2 Social relationships in youth

This behavior issue continues into adolescence where social relationships are affected by the premature and constant use of technology. The child who cried in order to get the cell phone he wanted from his parents has now grown up and became the young man who will be unable to have an argument with his parents without getting upset to get what he wants. This misbehavior will move away from the family circle during youth and will negatively impact the relationships they have in different ways. "The negative impact of technology to the youth and the society in general cannot be ignored. It ranges from weakening social ties, social division, isolation, stress and breakages in social relationships" (Kalungu & Thinguri, 2017, p.762).

The most alarming one of these aspects is the feeling of isolation that the youngster develops, putting him/her in a vicious loop: In order to fade away that feeling, the use of technology augments and so does the feeling of loneliness and isolation. These feelings can result in an inappropriate behaviour, especially during face to face interactions where almost all participants use social networks to interact with other people and forget to do it with each other. Kalungu & Thinguri (2017) also say: "The current generation of students is moving around with earphones in their ears, they sit in public places by themselves, connected to the

internet and communicating to online friends, but never to the person seated next to them"
(p.761).

1.3 Technology addiction

Technology can be addictive, especially for young people, who may spend half their day using their cell phones. Cell phone addiction is very common among young people, demonstrating even the same withdraw effects as drugs (Leonard, 2015). If there is as much concern about drugs such as cocaine or weed, why not about technology addiction? These electronic resources not only make it difficult for young people to communicate and create addiction, they also affect their ability to solve problems in the not too distant future. Technology addiction has reached a new extreme where despite being aware of the problem, nothing is being done to solve it.

> We aren't oblivious to our very real problem either – a recent opinion poll shows that 82% of the American public believe that smartphone addiction exists. In fact, nomophobia (the fear of being without your mobile device) is now recognized as a serious issue. (Leonard, 2015, párr.10-11)

This irrational fear of leaving home without a cell phone is yet another sign of how dependent people are on technology today.

1.3.1 Nomophobia.

What is nomophobia? Nomophobia is the abbreviation of No-Mobile-Phone-Phobia, and refers to the fear that people feel for being without their cell phone or an electronic device, but also their addiction to them. It is a serious problem that is present in all industrialized countries and that is suffered mostly by young people. Studies shared by Elmore (2014) show that: "The study found that about 58 percent of men and 47 percent of women suffer from the phobia, and an additional 9 percent feel stressed when their mobile phones are off" (párr.3).

5

1.3.1.2 Dependence on technology.

The constant use of cell phones due to addiction that young people feel towards them generates a dependence on technology in general to solve any problem they might experience. Not only is the Internet the new guide for young people, they also depend on applications integrated into their cell phones such as alarms, calculator and camera. To prove this, I asked 10 students in the third year of high school to do a three-by-two-digit multiplication, out of which 8 had to use their calculator. Needless to say, these results were alarming and the negative consequences they have on the behavior of people in our country can be seen in the use of cell phones in classrooms, meetings and in movie functions.

<center>**Chapter II**</center>

<center>**Pros and cons of technology in the youth**</center>

2.1 A positive impact of technology

Since this monographic work is a study of the influence of technology and the social environment on the behavior of young people, it is important to demonstrate both the negative and positive effects that it has brought to our lives from different spheres. Technology also has a very positive impact on society, it stands out in the social, emotional and academic spheres, all this linked to an improvement in communication in the 21st century.

2.1.1 Social sphere.

This is the area most influenced by technology as it has experienced several changes over time thanks to it. One of them was the change in the previously mentioned communication. This was one of the main changes that technology brought to society because before to communicate remotely was necessary to travel great distances or send a letter, which could take even months. Technology has allowed us to communicate with people around the planet in a matter of seconds, having easier access to our friends and family, which is crucial for students of all ages. Kalungu & Thinguri (2017) say: "When students have easy access to friends and relatives, they feel more connected and strongly supported leading to a feeling of togetherness and happiness" (p.759).

Technology should not be understood only as cell phones or computers, because it has diversified to be support tools in various fields. One of these is the field of medicine, which technology has changed drastically in recent years. The combination of technology and medicine is saving lives and helping to diagnose illnesses in time to be better treated, as well

as helping to research them. Professional physicians along with advanced technological equipment have been able to perform surgeries believed impossible 20 years ago and save millions of lives.

2.1.2 Emotional sphere.

In the emotional sphere, technology serves as a support for many of our personal relationships and facilitates accessibility to receiving support from a loved one if necessary. This is combined with the creation of new relationships through social networks, which function as a meeting place where common interests, beliefs and hobbies are shared. The management and improvement of these relationships is the result of technology that allows us to keep in constant communication with our loved ones. Mobile phones, emails, social networks and others function as a means of communication much faster and more effective than personal contact, in which body language also plays a major role in the situation.

2.1.3 Academic sphere.

Education may be most affected because teachers and students have had to adapt to the social changes that technology has brought with it. If today's students use the Internet rather than books to look for knowledge, why should the school continue to use them? This is why many schools have stopped using books and instead have computers and smart tablets that allow them to reach students much more effectively than through a lecture or master class. Homework and assignments sent to students have also changed thanks to technology, now it is much more common to see a teacher asking for a task in Word, Excel or PowerPoint than handwritten. In addition, it seeks to develop the ability of students to use different tools to become business leaders and avoid the education that used to prepare young people to work in factories.

2.1.3.1 Regarding teachers.

Speaking in a much more specific way and regarding teachers, technology has provided them with an incredible opportunity. It is now possible to take online courses and always keep up to date in their area of expertise. For universities and colleges today, it is very important to train teachers so that they know how to use tools that allow them to reach students more effectively. Technology not only makes it easy to capacitate teachers, but also serves as a support for them during classes too.

2.1.3.2 Regarding students.

Technology has made it much easier for students to solve assignments. It is no longer necessary to search through a number of books until you find what you are looking for, now everything is available on the Internet. In addition, now the student is the owner of his own knowledge since he can use the tools at his disposal to learn more about topics that interests them.

2.2 The negative effects of technology

In the same way that technology has positive effects on young people, it also has negative effects that put at risk some aspects of our lives that we consider very important nowadays. Some of these were mentioned superficially in the first chapter, however, there are many more.

2.2.1 Social sphere.

In the social sphere, technology has taken us further away from the people we are closest to. To explain this, it is necessary to contrast this statement with the positive impact of technology mentioned above. The problem is that it brings us closer to who we are furthest away from, but distances us from the people around us. This is drastically evident in young people, who use their cell phones in social meetings and miss out on interaction with others.

2.2.1.2 Lack of privacy.

Social media encourages people to make their intimate lives public, and the sense of privacy that existed years back is lost. It's easy to review various social profiles of a person and find out where they live, who their family is, where they work and so on. This makes us more vulnerable to personal attacks and build an online image that doesn't always match who we really are.

This brings social media users several short- and long-term consequences. One of them is the depression caused by seeing the profiles of other users who have a " perfect life " compared to ours, because they only publish content that projects a positive image of them. One consequence that young people will suffer in their adult life is their social networking history and what it reveals about them. Here we can see the example of James Gunn, a famous film director who was fired from a project by certain publications made years ago that were misinterpreted on the internet.

2.2.2 Emotional sphere.

In the emotional sphere technology drives us apart from each other since we lack face to face contact. Being behind a screen disconnects us from others and makes it difficult for us to understand or show emotions.

2.2.2.1 Lack of empathy.

Technology also causes a lack of empathy and other emotional disorders that feed on it to grow. The absence of empathy is generated by the alienation between people and the fact that they are no longer in a face-to-face conversation. In addition, it is discussed whether exposure to technology has a direct impact on the violent or narcissistic behavior of young people.

> Misuse of technology could be one of the reasons of this decrease, according to some studies. For example, aggressive content and being exposed to characters who lack empathy may influence empathic concern negatively, whereas seeing prosocial acts on social media may help us enhance our empathy skills. (Ogan, 2017, párr.3)

The writer shows us that there is not necessarily a direct relationship between misbehavior and technology. It is the content or purpose we give technology that determines how it will affect our ability to empathize with others.

2.2.3 Health sphere.

As far as our health is concerned technology brings several negative effects towards it. Depending on which electronic device we are using the effects vary from tension and pain in the head, neck and thumbs to eye fatigue and hearing loss. Eye fatigue can even lead people to need glasses at an early age if they are not taken care of (Sinha, 2017).

2.2.3.1 Hearing loss.

Hearing loss is not yet a problem because the most likely to suffer from it are young people who are not yet suffering from it. The ear is at risk of injury from 80 dB (the scale on which sound is measured). Some of the daily activities such as conversations range from 30 - 80 dB in which there is no risk of damage. Speakers, concert amplifiers and headphones can reach up to 120 dB in extreme cases, where excessive exposure to sound can permanently damage our hearing ability.

2.2.3.2 Muscular pain.

Muscular pains are very frequent when we use technology because of our posture or movements when using it. Headaches are commonly caused by the effort our eyes make to see the screen and the stress caused by the use of technology. Neck and back pains are caused by poor posture of our body when using a cell phone or computer while thumbs can suffer tendonitis from excess video games or cell phones.

Chapter III

Technology in education

3.1 How technology should be used in the academic sphere

When we talk about the inclusion of technology in the academic setting we generally think of

how cell phones, wireless earphones, computers and to some extent television distract

students. This is really only one side of the story because, as we saw earlier, there are both

positive and negative aspects. In this part I will talk about how technology should be used rather than how it is currently used.

3.1.1 Useful tools that can be used by students.

There are many tools that allow us to carry out study or research tasks in a much more effective and simple way. In some cases, these have an additional cost that the school or educational institution sometimes does not want or can afford. In other cases, the applications are of free domain and they are of much help for the daily tasks of a student.

Among these tools we have translators, programs that work as calculators, PDF readers, among many others. Next, I will name two free applications that schools can teach their students and that have helped me a lot during the elaboration of this monographic work.

The first is a more accurate translator than the one offered by Google's service but lacks the amount of supported languages. Using DeepL Translator, the website recognizes the context of what was meant to be said and has the option of changing words to better accommodate what one is looking to say which avoids grammatical or meaning mistakes when translating a text.

> While that limits the use of the service somewhat, as you cannot use it to translate Chinese, Japanese or hundreds of other languages, translations of supported languages appear to be of higher more human-like quality than those by Google or Bing Translate, and other established services. (Brinkmann, 2017, párr.4)

The second is a website called Sci-Hub that allows to unlock at no cost files or scientific research documents that originally had a certain cost. It is a very useful service when looking for information, statistics and reliable sources that we can rarely find on our own or at no cost. This happens because, despite the great amount of information that exists on the Internet, we access a really small part of it.

3.2 How to use new technologies

Now that we have seen the amount of technology that directly influences education, we wonder if it could really have negative consequences in the short or long term. These new technologies should preferably be used in the classroom, and with the company of a teacher in charge of clearing the doubts of the students. Useful tools such as DeepL Translator, Sci-Hub, Spinbot and calculators capable of solving mathematical problems just by looking at the slogan can be very useful if they are used for academic purposes, but when they are used to make work easier, copying or oversimplifying tasks can generate learning problems for students.

With this I mean that the applications, websites or other tools we use for education should always be used looking for the greatest benefit for students and teachers alike. At this point we enter the responsible use of technology that invites us as students to use it only for academic purposes.

3.2.1 What is responsible technology?

It is known that technology, especially cell phones, television and computers, have the same effect on our brains as some drugs, which means that they can become addictive. This is why when we talk about the responsible use of technology the fundamental thing to do is to set limits and know the tools we use.

By setting limits we are controlling technology and not the other way around. The problem is when we don't set limits for the time or type of use that is given to technology. A clear example is that if in a classroom with computers the teacher does not set limits for what can be done with them, very few students are going to use them for the assigned task.

3.3 Present applications in education

Technology has several applications today and to be expected in the future, however within education there is more than one area that could benefit from the inclusion of technology.

3.3.1 Technology in school security.

The first is the area of security of the institution. By installing and using security cameras the well-being of students and teachers can be safeguarded while monitoring the activity of the previously mentioned. In spite of the many benefits that this has, the use, and sometimes abuse, of the cameras causes an environment of disagreement between teachers and students, especially if they are located inside the classroom. "The study found that cameras positioned outside of schools – at entrances, exits and in parking lots – do appear to be associated with students feeling safer (...). But inside the school, these cameras may have a different impact on students" (Kelly, 2019, párr.5).

In certain educational institutions in the United States, metal detectors or sensors similar to those used in airports are used as a security method due to the increasing waves of violence suffered in that country. This prevents objects from entering the school that could threaten the lives of people inside.

3.3.2 Technology in school resources.

Among the resources that schools can use to include technology are the computers, projectors and smart classrooms that are increasingly common in the world. There is a lot of talk today about how new technologies and tools have changed the kind of professionals the world needs. You are no longer looking for an automated person for industrial processes, you are looking for a leader capable of solving problems creatively.

3.4 Future projections

In the future, education in Ecuador plans to fully implement technology as an active part of the training of students and teachers. We do not know for sure what will happen with education, but we do know that every year new technologies are discovered and the limits of what cannot be done are crossed. Printed books will be completely replaced by their digital counterparts that promises more content in a much smaller space.

For young people who grow up with this method of study it will perhaps be much easier to keep the focus on a task, something our generation suffers from due to the transition period between ancient and modern education. Studies have shown that the attention span of people has been reduced from 12 to 8 seconds, which puts us below the goldfish average 9 seconds (Schaum, 2016).

Conclusions

At the end of this monographic work, it can be concluded that:

a) Technology can create addiction in young people and limit or damage their ability to empathize with others, influencing a lot in their behavior. To care for a child's cognitive development at an early age, it is necessary to set limits on the technology they can access and the amount of time spent using it.

b) It is necessary to evaluate all the points of view or aspects of this debate in order to reach a satisfactory conclusion. Technology is not all bad or good or black and white, it is necessary that people who make use of the new resources that our digital age offers do so in a responsible manner.

c) Technology can be used positively in education as long as it is with the guidance of a teacher, if the student does it autonomously the positive side of this could be lost and turn into a distraction. It is necessary that we evaluate the education of our era and make responsible use of the resources we have to improve such education.

d) The social environment, time with family and friends, and technology play a very important role in determining a young person's behavior and development for adult life. This is especially true if a young person is expected to be a professional and well-rounded adult.

e) Technology has seen enormous advances achieving one breakthrough after another since 1936 when the blueprint for what would be the first computer was proposed. This is why it is necessary to assess its influence on society, since new technologies (for example mobile phones, wireless earphones, among others) have not been on the market for more than 50 years.

f) When balancing the benefits and negative consequences that technology can have on society, different conclusions can be reached depending on which one is given attention and how this is done. It is then concluded that one cannot blame for all the problems, new diseases or increase of already discovered diseases that have been brought back by technology since technology is responsible for the fact that many diseases have been eradicated at all and many others can currently be combated.

Recommendations

At the time of completing this monographic work, it is recommended:

a) That as a society, being aware of how much importance we give to technology in our lives and regulate the use of it so that it does not affect behavior. Especially in young children and young people, who are marked considerably by the absence of family and friends in their behaviour.

b) That social and affective relationships be cultivated in schools, universities and at home. In addition, that these spaces also serve as a way for young people to interact

with each other without the excessive use of technology which could interfere, thus positively influencing their state of mood, thoughts and mentality.

c) That schools teach their students the responsible use of technology to ensure a learning space where these resources can be used to their full potential. Always promoting integration through technological resources.

d) Young people make responsible use of the new technologies that are at their reach day by day, so that they can enjoy their positive consequences and manage cell phones, social networks and the Internet in an appropriate way.

e) To protect the environment and the surroundings in which young people mature and grow up, as this has a great influence on their lives. Providing spaces where they can develop their emotional capacities without the interference of external forces.

f) Let the debate continue about how technology influences our lives so that new ideas can be generated about the subject that will let us have a better understanding of what is in store for Ecuadorian society in the near future.

g) Children who are exposed to new technologies such as television, cell phones, tablets or computers have a time limit for using them. This prevents these devices from interfering with their daily responsibilities or their full development. It is extremely necessary for parents to separate time from their day to spend with their children so that they have a model when it comes to forming relationships or bonds.

h) The people in charge of the development of new technologies and innovation do their work with social conscience taking into account how these could affect their users and not only thinking about profits.

References

Bleger, J. (1996). *Psicología de la conducta / Psychology of behavior.* Buenos Aires,

Argentina: Editorial Paidós.

Kalungu, J., Thinguri, R. (2017). *CRITICAL ANALYSIS OF THE IMPACT OF MODERN*

TECHNOLOGY ON STUDENTS SOCIAL RELATIONSHIPS IN KENYAN SCHOOLS.

Retrieved from: https://www.oapub.org/edu/

Salkever, A., Wadhwa, V. (2018). *Your Happiness Was Hacked.* Retrieved from:

https://www.oreilly.com/library/view/your-happiness-was/9781523095865/?ar

Verhaegh, J. (2012). *Assessment and development of cognitive skills using tangible electronic*

board games: serious games on the TUI TagTiles. Retrieved from:

20

https://research.tue.nl/en/publications/assessment-and-development-of-cognitive-skills-using-tangible-ele

World Bank Group. (2015). *World Development Report 2015: Mind, society and behavior.* Retrieved from: https://openknowledge.worldbank.org/handle/10986/20597