MONOGRAPH
TECHNOLOGY IN THE ACADEMIC FIELD

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GRATTITUDE

As I have been taught God goes always first above everything. First and foremost, I would like to thank God and our Holy Mother for giving me knowledge through my entire academic year , the ability to improve and the opportunity to undertake this research study about my specific topic and to persevere and complete it satisfactorily.

I would like to express my most genuine acknowledgement to MSc. Monica Mora for her guidance, time and encouragement along this monograph. She has taught me most of the process and rules in this long process of research and I would also like to thank Mr. Javier Zambrano for being my tutor, giving his time to correct and guide me during the whole process of development on this document.

Finally and without hesitation, I would like to thank my parents for their daily hard work without them I would not have the opportunity to study and have a good knowledge. Thank them for always showing support, guidance, and for allowing me to realize my own potential and my goals. Teaching me how to be a better student and guiding me to do my best every day.

SUMMARY

This monograph is a research study about the advancement of technology in the education of students and the way of teaching from teachers.

Explaining in an accurate and detailed way of how the students implement or use technology to perform and complete school chores or works, mentioning how ICTs are applied during school hours. It also explains many examples of how Ecuador has implemented ICTs for students or teachers that want to improve their knowledge or want to have a better way of learning.

Also it is discussed about the pros and cons of this topic "Technology in the academic field" and examples talking about how it influences and the importance of knowing which helps you to improve how a student should be working during class hours and how a teacher should do to make a class more interactive and creative for the students who are willing to learn.

Surveys were applied to be able to deepen more the subject of this long and comprehensive research work, it was applied to 10 students from each course of third of Baccalaureate of the Javier Particular Educational , this survey was given in order to know how important technology it is for students who need to clarify any doubt or complete researches , all this work is dedicated to improve technology or implement it more in high schools or universities so students can have a more interactive way of learning.

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INTRODUCTION

In the following monograph there will be information focused on Technology used in the academic field this means technology implemented in class for students who want to have a better and interactive way of learning. Even though this topic concerns on students, but it will also influence in grades, learning, interaction between students and the teaching from teachers. The importance and impact of technology could be understood by reading the whole monograph and by reading it factors of good and bad use will be known.

Today you can learn that technology is particularly globalized especially when searching progress or impact on something specific, it is presented in all areas of a daily student life, which allows the student to apply new methods for their own knowledge like creating , designing things that will help solve a problem or any future occasion or meet the needs of each individual.

Positive aspects are presented in the use of technology, you can perform various activities such as learning new words, communicate through any social platform, look up for any word meaning , but this monograph focuses on the positive aspects on the academic field such as the opportunities that it offers for study, the investigations that can be done with subjects of their interests, and activate more the knowledge with information that you can look for.

As well as there are positive aspects within the technology, always when good use occurs there may be occasions in which abuse occurs but it depends on the student. Negative aspects are considered abuse and when talking about negative cyberbullying , harassment, etc could be presented since young people do not see and know the circumstances of having limits or a manageable controlled use of technology. People often take advantage of this medium to have a misuse of it and thus harm other people but it can be prevented by giving technology a good use such as only for educational or learning ways.

During this monograph we will analyze all technology used in students and teachers while in class and the impact of it through ICTs and different new learning ways. Monographic maps will be seen as surveys made on all the 5 courses of Third of Baccalaureate on Unidad Educativa Javier. The objective of this surveys are questions about the use of technology and to know a general percentage among these students that perform it on a daily basis.

CHAPTER I

DESCRIPTION OF TECHNOLOGY AND ITS INFLUENCE

1.1 Definition of technology and its characteristics

Technology is known as the main resource or a need for searching such a main information or to clarify a doubt. The concept of technology cannot be defined exactly since over time has varied for the different approaches that have been given. People can search anything with it and it can also be found anywhere. The main tools in the technology are the internet and the computer, these two are essentials to investigate any topic in specific. Technology in the academic field has rules and specific procedures to be able to solve any educational problem.

As Marques P. (1999) said: "The word technology comes from the Greek tekne (technique, role) and logos (science, knowledge); technology means technical, conceived by the Ancient Greeks as art, craft or skill".

Gagne (1971) said that the educational technology: "It can be understood as the development of a set of systematic techniques and practical skills to design, measure and manage schools as educational systems"

Technology has its characteristics like having its own rules, a theoretical base, a field where you can operate it, having access to internet, and more. People need to consider these characteristics so they can have a good use of technology and know how to use it better.

Academic Technology may not be useful to people of low social class but this does not mean it reduces the learning or conditioning of a student. Education will not be reduced as a result of this but little by little technology will be implemented in this social class. By saying all this, students not only need technology to study but technology is a great help in the majority of doubts clarifications.

As raises it Ferrero, R, & Napoli (2007) when they say that "It is not simply easy to have technology, what matters is to make adequate use of it by adjusting it to the objective of the process that applies to achieve good results".

1.2 Overview of academic technology

The Educational technology complements several educational and future purposes for a student, this gives to know about ideology while studying. Building an educational model for the future of every student to go out later in the society.

It has several different criteria in their academic field, but everything is reflected in the position of work and their meanings. Educational Technology has been hard over the years due to the various and different meanings that it has had as explanations but despite the great advancement, it has influenced by various sciences and improvements being physical or digital seeking to be contributed to achieving their ends or objectives.

For UNESCO (1984), educational technology "Understood as the systematic way of conceiving, implementing and evaluating the teaching process and learning, having a knowledge of the technical and human resources and interactions between them, as a way to get a more effective education"

For their part, Escamilla (2009) mentions that the main objective of the educational technology is to improve the practices of the educational process through its use since it could facilitate the combination of instructional design models.

And Heredia (2009) provides information and says "Promote the development and use of technologies of information and communication in the education system to support the learning of the students, expanding their competencies for life and encourage their inclusion in the knowledge of society"

Thanks to this knowledge it is possible to carry out various methods to develop and conclude proposed activities with which you can take as a model and go instructing every day in every possible aspect so it can influence in the future of any student which is willing to learn more from the technology

Educational technology has been throughout its history a discipline integration, which is in a constant change, mainly due to the transformation of educational contexts, polysemic, contradictory. This has been inserted in several scientific currents such as psychology, pedagogy and of course communication. Cabrero (2006)

1.3 Examine the daily implemented time

Today this tool is used by most people around the world, it is an essential factor to the community or students since it employs a variety of expertise and helpful service. There have been people who came to the point of believing that technology is everything and without it, you can not "live" a good life. These people or students often spend their time on this appliance or tool and also tend to put aside the things that really matter like the main chores by thinking about things that are not very important. Many people used it with moderation and quietness in the beginning but it starts to consume time more than someone could ever imagine and without noticing it.

People in this century daily lives in technology that it is implemented almost every hour of each day up to a point that becomes a necessity since the world is adapting and focusing more on technological objects, all this for the benefit of the comfort of a person. This technology can have a good use but people can depend on it and they tend to spend the limit of it and use it not in a way of benefit instead affecting health life, hours of sleep, or even being misguided by a wrong information.

But it has it cons it can be overused and by being overused, it can distract students from concentrating in their academic chores, technology like a mobile phone can distract you at an exact moment and while being a student it can vibrate while in class and this thing is very common on the academic life or instead of vibrating, students use them while in class instead of paying attention to the new subject.

CHAPTER II

INVESTIGATE WAYS TO MAINTAIN A MODERATE USE OF ICT

2.1 Definition of ICT

To properly develop the technology and the source of knowing it, either for personal or collaborative work the use of materials or interactive resources are essential for the exchange of ideas, information and even to process information this is where ICT comes.

ICT stands for: "Information and Communication Technologies" it is referred to telecommunications , especially referring to new ways to implement and improve a better information through technological support and communication channels. It has made a great change in every aspect of a person like social , economical , political , etc but especially in education.

Adapting and getting used to this new implementation in the academic area is something that will slowly be applying and improving through the time. Despite the wait, a positive aspect is that it improves teaching from teachers and learning from students. Not only improves the study or learning from any student, but it makes classes more interactive and easy to learn.

Despite all the positive things mentioned about ICTs , people must be aware that there are negative aspects and those aspects are given limits on the use of ICTs.

"The teaching term comes from the Greek verb didaskein, which means among other options: teach, instruct , explain , let know , show." Escribano (1999)

"To enable ICT to develop their full potential of transformation must be integrated into the classroom and become a cognitive instrument capable of improving and enhancing the adventure of learning."

As designated by Gutierrez (1997) these form a three dimensional dimension: educational agents which correspond to informal education, teaching resources, and objects of study. Therefore, the teachers to be the main users of ICTs , not enough with it to achieve digital literacy but that they should know in amplitude technologies to be used better in classroom.

2.2 Examples of ICT in Ecuador

As many know , Ecuador has been a third world country , the education is very good but it could be much better than the current learning education. ICTs are executed by the Ministry of Telecommunications and the Information Society (MINTEL). MINTEL has joined with

Nation Institute of Pre Investment (INP) with a specific target in creating and implementing a plan called "Strategic Plan for Research , Development and Innovation for ICTs.

The "Strategic Plan for Research , Development and Innovation , helps to deepen the use of ICTs looking for strengths and weakness points presented and managing a concrete analysis of the situation of each school that works with ICTs.

Ecuador has given the chance to implement ICT in the study and learning so that young people who are in mental and educational development could facilitate a better ability to complete their work for each subject given in class , having a way to process and disseminate information at any moment within the classroom. Not only improving education not only improving education in students but also assisting teachers or docents to have a more interactive and didactic class for a better learning.

Mentioning the part of the country Ecuador , ICTs help to the professor or teacher to build a country where information is transformed into educational knowledge process by teaching students to use daily ICTs and use them whenever they are comfort and think they need to use it to clarify any doubt.

As you can see, Ecuador despite using ICTs , It is not 100% updated daily due to lack of
infrastructure in communications and technology , one disadvantage of this is that it
affects the productive development and education for the future jobs of young people
who would represent Ecuador worldwide. ICTs in Ecuador reduces the production and
consumption for the domestic market , those who have low investment in human capital ,
It is difficult to give the initiative to explore new implementations for these sectors to
those who do not usually give the use of the technology daily.

2.3 Pros and Cons of ICTs

As you all know everything that encourages or gives a good for the community, the country , or
even for oneself will always have its pros and cons. In this case it speaks of ICTs and
what it can produce being a good or bad for one's self , having knowledge that everything
in the world or what people know about in excess is not good in any case.

Having an idea and a positive consciousness before implementing or using ICTs , keeping in
mind as they are used correctly and studying and knowing what would be its limitations
or having a knowledge of when the excess comes to the person who uses ICTs.

Referring to the pros , it can emphasize that technology is used to implement ICT and here is where pros could be observed , analize or know about them , and you could say that today it is essential and indispensable to use technology for any occasion and more , technology is also used to create new objects or to find a solution to something important.

Pros , using ICTs could be said that while technology is being used or being implemented , you can see a greater interest in any of the students since the technology is something that is easy to use and is something liked by students and could be considered as a pleasant way of working. It could also generate greater and better interest in the topic. Improves communication between the student to the teacher , being able to provide a easily and effectively way to communicate , ICts also gives more emphasis on the creativity and imagination of a student or teacher.

Usually in every aspect or topic there will always be pros as mentioned before, but now the cons of ICTs will be mentioned. As people know , excessive use of anything could not be a good way to manipulate a human being life , in this case would be the use of excessive ICTs on a daily basis. When excessive use is implemented , greater distractions are generated in the student and this prevents that the school work get carried out in a quick manner , ICTs have much information and due to the excess of information given or searched , this will cause distraction to the student and the student will not be able to complete the assigned work correctly. Another cons could be that students get to realize a

high level of addiction on the part of that students use technology as a daily attachment and by using it , addiction can come and get attached to the student. The use of technology , being alerted is good in this case because not all the information searched or read out of the internet is true , explicit or also incomplete , knowing that seeking for more sources of information reliable and justified on the internet.

CHAPTER III

ANALYZE FACTORS OF GOOD AND BAD USE

3.1 Good Use

As we know , everything an individual does causes a good use or bad use. This means every time an individual practices , completes something daily it can lead to a good usage or bad usage of the action or the object in use.

Technology and ICTs are very essential and very important since they have a great influence in any aspect of daily life, work, professional level and especially on the daily life of a student, here is where good use occurs on especially in the classroom where sometimes there is no motivation from part of the students or teachers while completing an activity or studying in class. ICTs are an indispensable implement for a good use on technology above all the fields like informational field, policy field, economic field but especially educational field. Having technology in people's daily life is already something natural and common , technology can be seen everywhere like in homes , work place or anywhere that you do not think there is technology implemented. This does not only helps humans to acquire knowledge or the ability of knowing how to use a computer or a smartphone but it increases and helps to improve the technology knowledge for the future

of an individual as in the future , technology will improve and much more than what one thinks of it.

One of the benefits of having technology implemented in any classroom is that they encourage , they make more interactive communication and relationship with other classmates or even with the teacher while they are in another class or a virtual classroom, this benefit increases the interaction without relying a plan for a meeting in a specific place.

A good use can be a benefit for the teachers having the possibility of creating or making more interactive classes than normal classes for the students who sometimes have a deficient ability of learning and this will help them to pay more attention, with the academic search such as Google Academics , Scielo , Microsoft Academic Search , etc or electronic tools or applications such as Microsoft PowerPoint, Microsoft Word , Microsoft Excel, etc.

ICTs have a lot to do with the good use from a student, it improves the interest of the subject to the student by having videos , presentations with exclusive animations and interactive exercises to do in class, it also improves the interaction between a student and a classmate by communicating , exchanging virtual ideas and having a more dynamic and educational way of studying. The communication between teachers or students is essential by clearing doubts or having a backup of learning by asking simple questions to advance with any activity given. And finally the most essential and important is the motivation

and cooperation from the student and this can happen if attractive, funny ways of teaching from the teacher while having ICTs presented and on the cooperative part, working alone might be boring for any student so this is where cooperative classes come and students cheer up by knowing they will work with their friend as a classmate, using resources that have worked well in certain times generating values such as friendship , respect and love between the students.

3.2 Bad Use

People can think having technology implemented in the classroom is the best thing and it will not harm students or teachers while having a interactive class or learning a new topic. Therefore, no one doubts that incrementing and applying more and more new technology to the school environment, thinking it can improve the learning and processing way of a student. But seeing the reality in the world, and specifically in the students in class does not guarantee a proper use of it, despite the fact that their possibilities are endless and no one knows until what point a student can reach by using it. Having technology in class despite that it improves knowledge and learning of a student it can cause a distraction since there are bad temptations that can lead to a bad use of it. A bad use of internet while in class may refer to an individual or other classmates distraction this means instead of searching something related to the class , students can start playing games or start chatting on any social platform. The disadvantage of this is that time is lost and there will be not enough time for homeworks or class activities since there is no complete attention from the student.

People can think technology or the use of the Internet can be an easy thing to use or a a fast way of searching but when searching in a fast way it can lead to a bad information acquired, not every student knows how to properly and managebly use or search on the internet for any educational research or doubt, there is an excess of information available on the World Wide Web, lack of method in the search can lead to a overflowing block in the intellectual work and the own way of working from a student.

Internet does not always provide a positive or good information needed, it sometimes provide the student information not needed, information not reliable and a low quality information. For this reason , here is where teachers come, by teaching students to properly select the viable information and to filter out the reliable sources that internet gives them.

When doing a research as a student, normally the student goes for the fastest way while investigating for a specific topic but this leads to the minimum effort from the student accustomed to the immediacy of searching and pasting the first information given or read. Students just want the grade of the work and are reluctant of using their own time to slowly read the information to consolidate their learning and knowledge but instead of improving their knowledge , they confuse it for just accumulating data from the internet.

Creativity is something essential in young people while being at school or university, searching on the internet makes it easy and students just copy anyone's work and present it to the

teacher just for the grade and they do not care about improving their knowledge. Thus, creativity is destroyed thanks to this easy method of presenting a work and students little strive to cultivate the written expression in classworks.

3.3 Surveys applied

I applied the discretionary non-probabilistic survey by quotas to Third of Baccalaureate of the Javier Particular Educational Unit where the collected sample has the same proportion of the population in this case the 5 Courses with regard to the focused topic: Technology in the academic field.

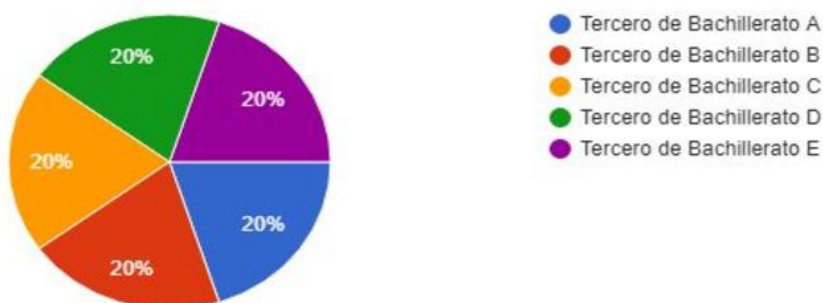Select the parallel in which you belong.

Figure 1. Percentage of students in each parallel

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

Chart 1. Numbers of students who participated in the survey.

3ero Bachillerato A	10 students	20%
3ero Bachillerato B	10 students	20%
3ero Bachillerato C	10 students	20%
3ero Bachillerato D	10 students	20%
3ero Bachillerato E	10 students	20%

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

1. As a student, Do you use technology to complete activities or homeworks?

Figure 2. Percentage of students who use technology for academic fields

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

Chart 2. Answers for the options between Yes or No.

Yes	49 students	98%
No	1 student	2%

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

2. In what specific measure does technology helps you to clarify your doubts?
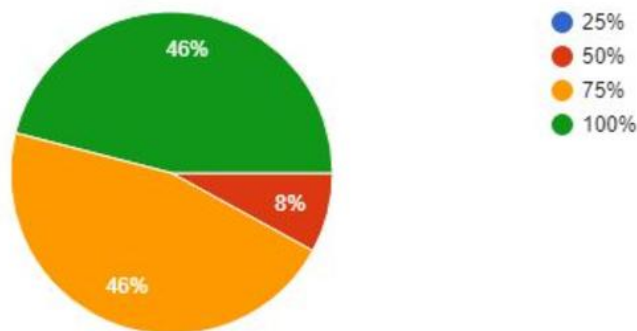

Figure 3. Clarifying doubts

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

Chart 3. Percentage of students that clarify doubts

100%	23 students	46%
75%	23 sudents	46%
50%	4 students	8%
25%	0 students	0%

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

3.On a scale of 1 to 10, Which is the daily technology hours of use you implement for academic purposes.
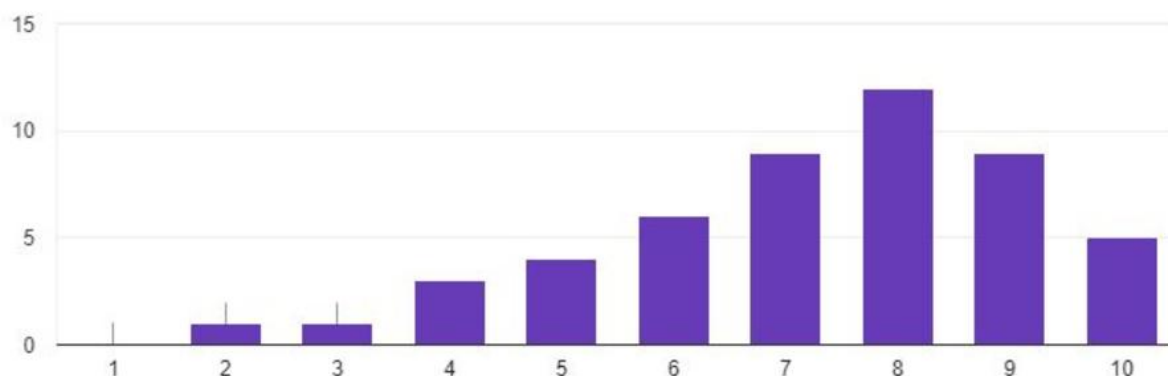

Figure 4. Scale of daily technology implemented.

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

Chart 4. Daily hours of technology use by numbers and percentage.

1 Hour	0 students	0%
2 Hours	1 student	2%
3 Hours	1 student	2%
4 Hours	3 students	6%
5 Hours	4 students	8%
6 Hours	6 students	12%
7 Hours	9 students	18%
8 Hours	12 students	24%
9 Hours	9 students	18%
10 Hours	5 students	10%

Source: Survey applied to Third Baccalaureate Students.
Author: Michael Huang Huang

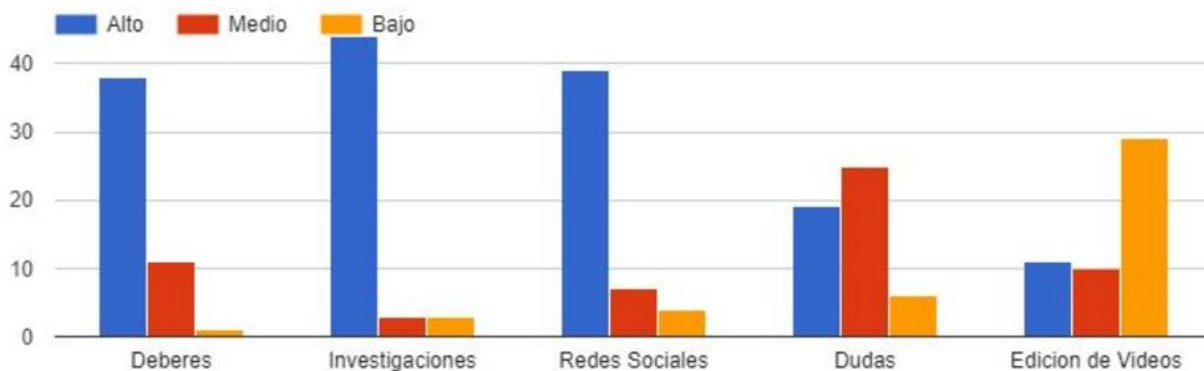4. For which types of academic purposes do you use technology?

Figure 5. Types of academic purposes

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

Chart 5. Academic Purposes

Homeworks	38 High	11 Medium	1 Low
Investigations	44 High	3 Medium	3 Low
Social Networks	39 High	7 Medium	4 Low
Doubts	19 High	25 Medium	6 Low
Video Editing	11 High	10 Medium	29 Low

Source: Survey applied to Third Baccalaureate Students.
Author: Michael Huang Huang

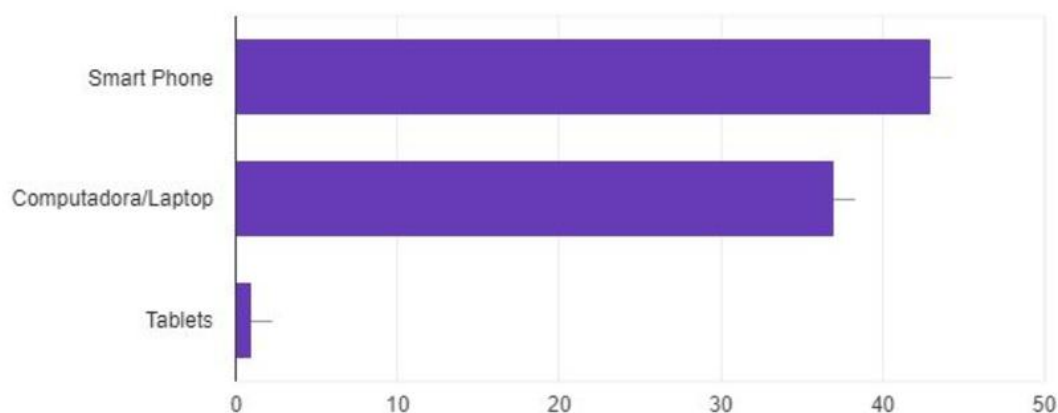5. What electronic device do you use as a student for your school activities?

Figure 6. Electronic Devices for school activities.

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

Chart 6. As a student which electronic device is the most used.

Smartphone	43 students	86%
Computers/Laptops	37 students	74%
Tablets	1 student	2%

Source: Survey applied to Third Baccalaureate Students.
Author: Michael Huang Huang

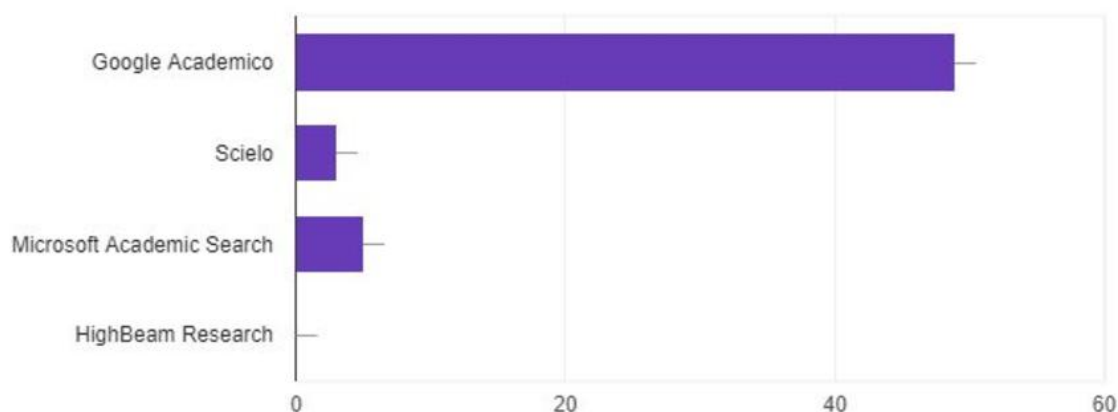6. Select the academic search engines that you have been suggested by your teachers.

Figure 7. Academic Search Engines presented

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

Chart 7. As a student which academic search engine is the most known.

Google Academic	49 students	
98%		
Scielo	3 students	6%
Microsoft Academic Search	5 students	
10%		
HighBeam Search	0 students	
0%		

Source: Survey applied to Third Baccalaureate Students.
Author: Michael Huang Huang

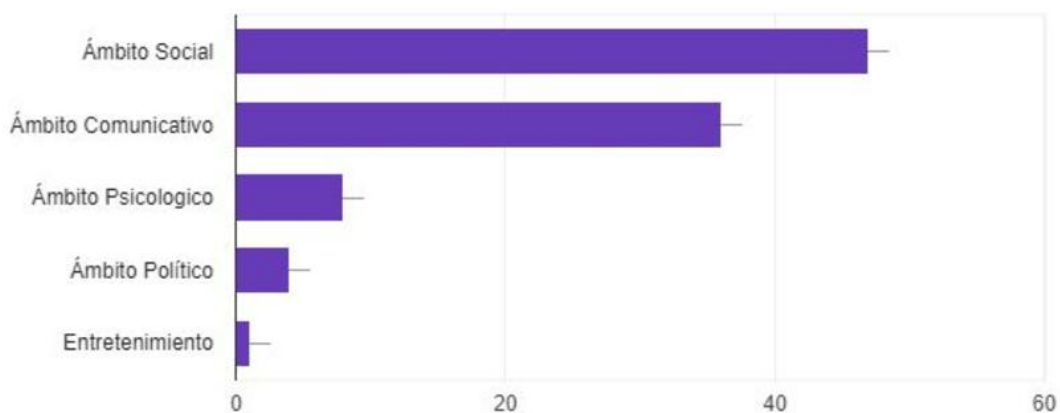7. Outside the academic field , How do you use technology?

Figure 8. Which other way technology is used.

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

Chart 8. As a student which other way you use technology.

Social Field	47 students	94%
Communicative Field	36 students	72%
Psychological Field	8 students	16%
Politics Field	4 students	8%
Entertainment Field	1 student	2%

Source: Survey applied to Third Baccalaureate Students.
Author: Michael Huang Huang

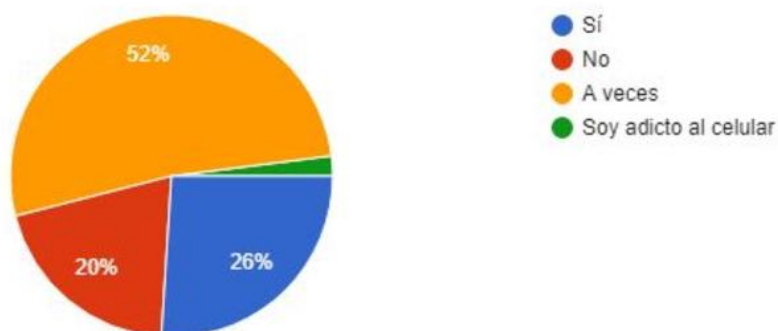8. As a student , do you consider having a moderated use on technology?

Figure 9. Moderated use on Technology.

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

Chart 9. Moderated use of technology on students.

Yes	13 students	26%
No	10 students	20%
Sometimes	26 students	52%
Other	1 student	2%

Source: Survey applied to Third Baccalaureate Students.
Author: Michael Huang Huang

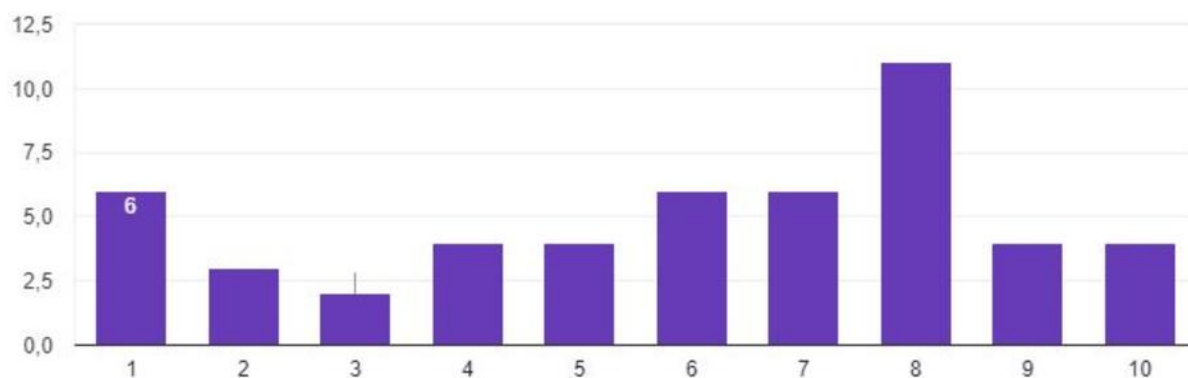9. How often are you asked to use ICTs on class

Figure 10. ICTs on class.

Source: Survey applied to Third Baccalaureate Students.

Author: Michael Huang Huang

Chart 10. Percentage of ICTs used on class.

1	6 students	12%
2	3 students	6%
3	2 students	4%
4	4 students	8%
5	4 students	8%
6	6 students	12%
7	6 students	12%
8	11 students	22%
9	4 students	8%
10	4 students	8%

Source: Survey applied to Third Baccalaureate Students.
Author: Michael Huang Huang

CONCLUSIONS

At the end of this monographic work it is concluded that:

- Technology is very useful and essential for academic use, helps the advancement of learning and improves the way of learning in any student.
- All depends on one's own to take a good advantage of technology, being a support for school activities and using it in an unsuitable manner affects the process of teaching and learning.
- ICTs is a very useful tool for students and will have a great impact in the future for the academic part thanks to the new technological development.

RECOMMENDATIONS

At the end of this work it is recommended that:

- Knowing that the internet is very diverse and there is so much information, it is best to read everything in detail and take a good conclusion to clarify any doubt or research.
- Find information from several websites since not all websites have valid information for school research and this could be affecting the work grades or simply would affect the knowledge and learning of any student.
- Practice daily looking for information or clarifying doubts on websites to learn how to manage effectively and clearly the way of using internet for academic use.

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