UNIDAD EDUCATIVA PARTICULAR JAVIER

BACHILLERATO EN CIENCIAS

MONOGRAPH

"Use of video games: advantages, disadvantages, consequences and their effect on people."

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Gratitude

I thank God for giving me the opportunity to study, I also thank my parents for all they have given me and finally I thank my teachers who have guided me to do the monograph.

Summary

This monograph seeks to demonstrate both the advantages and disadvantages of the use of video games because many people think that video games only bring disadvantages such as the damage that video games generate in people's vision, that people can become aggressive by playing a lot of violent video games, the damage to people's posture, the negative effects on people's social environment, etc.. However, many people are not aware of the advantages behind playing video games, such as the fact that playing video games for at least half an hour a day increases the level of grey matter in our brain, or that people who play video games can develop a good sense of coordination in addition to developing good reflexes, video games help to be quick in making decisions, and so on.

This monograph also explains the origin of videogames, the types of videogames, etc. Also this monograph has reached certain conclusions such as that currently young people have lost interest in sports and that means that there are children who do not do physical activities suffer from cardiovascular diseases such as overweight. In many cases this is because young people prefer to be at home using their electronic devices that do some physical activity or video games can affect negatively to our health in different ways. The risk of acquiring myopia by staring at a screen for a long time because this seriously affects sight. The vice that video games can become if they are not used moderately. The bad posture that video games can produce to a person, in turn the bad posture generates pains. this kind of things are what there is in this monograph about the advantages and disadvantages of using video games you're going to find and you're going to be surprised with the results.

Index

Introduction

The aim of my monographic work is to inform and raise awareness about the advantages and disadvantages of using video games and how they have affected people who use them frequently in both positive and negative ways. And it also seeks to show what people's opinion is about the use of video games through a survey carried out by me on the students of the third year of high school of the Javier school.

The importance of my topic consists of two points. The first is that many people are not aware of the risks involved in playing video games for many hours because they are related to important issues such as sedentary lifestyles, which is very common in today's young people, even though it is very serious. Another problem that can be related to the use of video games is the risk that players may develop myopia, another problem that is important to highlight is that video games can affect a person suffering from epilepsy attacks, etc. The second point is that not everything about video games is bad as many people believe, but there are positive things that video games can do, such as that video games also serve as a learning tool, video games help people with some skills such as better retention, etc.

There are not many books that talk about the importance of video games or the advantages and disadvantages of them, however there are articles that do talk about this and thanks to them I have been able to support everything I have put in my monograph. The fact that there aren't many books about this is proof of why people aren't aware that video games

aren't just a negative thing for society, but there are also positive aspects that it would be good for everyone to know.

The use of video games is important because since most people have had a misconception about the consequences of video games since most people think that video games only have negative consequences for the users who play them.

In my monographic work my first chapter talks about the history of videogames, where they came from, when they came from and the different types of genres that exist in them. In my second chapter I talked about the negative consequences that video games have on people and how they affect the children who are usually the ones who use video games most these days. Finally, in my third chapter I talked about the advantages of using video games, and there are also the results of the survey I did which show people's opinions about the use of video games.

Chapter I

The video games

By videogames we mean all types of interactive digital games, regardless of their support (internal ROM, cartridge, magnetic or optical disk, on-line) and technological platform (pocket machine, videogame console connectable to TV, mobile phone, game machine, microcomputer, handheld computer, interactive video) [CITATION Mar01 \l 3082]

Videogames could be understood as any type of interactive electronic game that offers a series of playful activities, whose common point of support is the medium used, regardless of its medium (internal ROM, cartridge, magnetic or optical disk, on-line) and the technological platform it uses. [CITATION Gar05 \l 3082]

The two quotes are different, but basically they say the same thing, it's a more general definition of what video games are.

Video games are electronic devices where one or more players interact through a driver, through a device that displays video images. These electronic devices can be run on computers, arcade machines, consoles or portable devices. Video games come out every year and are widely sold, making them one of the largest entertainment media in the world. The first video games were based on the use of keyboard and mouse to interact in the games, although nowadays, controls containing buttons and joysticks are also used.

Video games have become an everyday and accessible medium for entertainment and even learning. Nowadays they are more accepted than in the past, it has been proven that those who play video games have better concentration, better reflexes and other skills [CITATION cul18 \l 3082]

I think what the quote says is correct, but nowadays many people are not aware of this and are only left with the mentality that video games are simply bad.

Video games have become another pillar of culture. They were born more than 50 years ago in the United States but it was in Japan that they reached their peak. Nintendo, Pacman and Tetris are some of the protagonists of this story [CITATION Rui12 \l 3082]

Nowadays there are many people who like to play videogames and a great number of people believe that videogames are something that has only recently emerged, but as the text says, videogames emerged more than 50 years ago and in all that time videogames can even be considered culture.

1. Origin

If we are going to talk about video games, we should start in the 1950s, after the end of World War II, the first computers appeared where they tried to integrate pleasant programs such as Nim (1951), Oxo (1952), Tennis for two (1958) or Spacewar! (1962), which in themselves are not video games but are the pioneers of the same. However, they were only experimental prototypes which were not commercialized, but the main problem that

prevented them from being commercialized was that they worked with devices that were very difficult to acquire.

In the 70's, thanks to the decrease in manufacturing costs, the first machines and video games were launched to the public. Atari with games like Computer Space (1971) or Pong (1972) were the first arcade machines to become popular in bars. Then came home video games such as Magnavox Odissey (1972), or the Atari 2600 (1977), which with its system of interchangeable cartridges was innovative in the market.

In 1980 Atari had to compete with two Japanese companies: Nintendo and SEGA. Soon after, a series of affordable PCs with graphics capabilities emerged and reached millions of homes. From that moment on, video games became very popular and became a very powerful industry. Genres that exist today such as driving, fighting, platforming, strategy and adventure took shape in this era. The arrival of the first pocket machines, or also known as "little machines", became popular among young people even though they could only play one game each; an example of this is Nintendo's Game Boy (1989).

In 1990 the 16-bit technology is realized which is a great technological advance with respect to better graphics. In this decade big companies like Sony, Nintendo and SEGA decided to act. Sony launched its first Play Station in 1994, while Nintendo and Sega upgraded their Nintendo 64 and Sega Saturn machines. In the meantime, PCs are making progress with all other systems except Apple's. Over time, more advanced games, such as 3D shooter, appeared. In 2002, Microsoft decided to integrate itself into the game console industry and launched its Xbox. In 2006, Nintendo launched the Wii. Sony decides not to

stay behind so it upgrades its Play Station (both Play Station II and III), while PC players take center stage in online multiplayer games thanks to the expansion of the internet.

Finally, in 2010, the new video game platforms that have revolutionized the world of video games appeared, with significant changes such as graphic improvements, online servers, improvements in the console interface, virtual reality helmets, etc. Games were also created for portable devices such as tablets or smartphones.

1.1 Types of video games

In the world everyone has different likes and video games are no exception as there are different types of them, they differ because their mechanics are different. Players enjoy game types such as:

- **Arcade games:** they are characterized by being simple, repetitive and quick interacting gameplay, they are also characterized by being available in arcade machines and as these are found in places such as bars, shopping malls, restaurants or in turn in arcades.

- **Multiplayer games:** these are games where there are two or more players in the same game, either playing as a team or competing against each other.

- **Online games:** are games in which players from different parts of the world interact with each other via the Internet, either independently of a platform or multiplatform.

- **MMO Games:** This type of game is a combination of multiplayer and online games.

- **Action games:** these force the player to make use of his skills, reflexes and precision.

- **Strategy games:** these are characterized by the diverse amount of objects or characters with which the player interacts, making the player use intelligence in order to achieve a goal. These usually take many hours to pass.

- **Simulation games:** they are characterized by recreating real life situations such as driving a vehicle, building things or interacting with the life of a character.

- **Sports games:** these recreate real-life sports such as football, tennis, basketball, etc.

- **Adventure games:** in these the player must follow a story where the protagonist interacts with various objects and other characters.

- **Role-playing games:** they are those in which the player can create a character that is changing due to the decisions that the player chooses.

1.1.1 Characteristics

- **Graphics**

  They are those that allow us to appreciate the games visually. Over the years the graphics in video games have advanced exponentially so that they were previously projected in 2D (second dimension), but now most games have 3D (third dimension) graphics.

- **Playability**

For a videogame to be enjoyable it must be easy to handle so that learning the controls is not too complex because if a game has a very complex gameplay this would cause players to lose interest in the game because they don't enjoy it causing them to quit the game.

- **Sound**

As well as improving the graphics, the only sounds that were heard at first were the sounds inside the computer, now with current technology there are headphones that allow the player to appreciate the sounds more accurately.

- **Price**

The prices of current video games are very high (this also depends on the company that makes them) due to the piracy of online games, because of this the developers suffer great losses due to the users who download them via the Internet.

Chapter II

Disadvantajes of using video games

Over the years since video games first appeared, a lot has been said about them, but what is most talked about is the negative effects they generate on people. This is usually because there are people who become addicted to video games to the point where their family members or close associates become concerned that sometimes people who use video games a lot become anti-social or aggressive because video games have strongly affected a person's character.

2. The negative consequences after playing them for a long time

In the case of children according to studies it has been revealed that kids who play video games two or more hours a day tend to develop attention problems because play video games and watch TV has the same effect on people and this is not good for a child because in the long run this can become a much bigger problem.

"Video games today have certainly been a talking point because they have caused problems and have benefited some teens because in some ways, teens change their attitude or mood, they become aggressive" [CITATION Bar11 \l 12298]

Another problem that people associate with overuse of video games is that people can gradually become aggressive to the point where they not only hurt themselves, but also others. This is also due to the high level of violence in some video games. Specialists believe that the characters in violent video games represent a risk to the psychological development of minors. Apparently, the danger with heroes of violent video games is that young people will want to imitate them or become one of them [CITATION Hid05 \l 12298]

This can be a big problem because as children your mind is susceptible to any idea and without them having any idea can end up causing a misfortune. Currently the games that are restricted for adults are easily acquired by minors and this is also due to the carelessness of parents since they are the ones who should be supervising

their children's activities and yet they do not do so because in some cases they give more importance to other things than their children.

2.1 The damage it causes to people.

One thing many people don't take seriously is the damage that staring at a screen causes visual problems. This happens when our visual acuity decreases causing eye pain, irritation, eye pain, etc. Thus eventually causing a myopia problem.
Epilepsy is a physical problem that is related to the malfunction of a group of neuromas, which causes people to suffer seizures in the form of convulsions, these seizures usually occur spontaneously or by another specific factor. In the case of video games, there are video games that contain a level of psychedelic graphic content to which people suffering from epilepsy are sensitive, but there are warnings that indicate to users that if they suffer from epileptic seizures it is recommended that before playing the game first consult their doctor.
Just as drugs make people addicted to them, video games can have the same effect by making people become addicted to playing video games to the point where people become completely disconnected from reality, losing track of time so that they can spend many consecutive hours playing. When this happens people put aside their daily activities because they only think about playing all the time, people become irresponsible and put aside their responsibilities whether they are studying or doing housework. They leave out important things like family time, sports, etc.
A person's posture may be affected by the frequent use of video games because if a person who plays video games very often to the point of playing several hours

straight if they stay in a stooped posture there may be long-term consequences such as:

- Back and neck pain causing stress, headaches, etc.

- Increased risk of injury.

- Pain in the upper part of the shoulders.

In the case of young people who do not live under the full supervision of their parents, when they play for many hours a day, they become awake and lose sleep over their hours. The average person should sleep for 8 hours in order to perform well in their daily workday. When a person sleeps less than 6 hours, what happens is that he or she is not giving the body enough time to rest.

2.1.1   Effect on the social environment.

Video games have a great influence on the lives of young people, there is evidence that impulsive and aggressive behaviour is caused by a great fondness for young people that over time can affect their social life by limiting them to activities where they can socialize with other young people and generate sedentarism that without time will generate cardiovascular diseases [CITATION inf \l 12298]

The people who are most affected by video games are young people who, at their age, are usually active, go out often with their friends, play sports, etc. But young people who have been influenced by video games strongly from an early age when they reach the stage of their lives when they must socialize and make more friends prefer not to do it because they have forgotten how to do it because they only play and no longer interact with people. This has a serious impact on young people.

There are cases of young people who isolate themselves from others because they only spend hours playing locked up in their homes and do not even leave their homes on weekends. This can cause a person's social circle to shrink considerably.

2.1.2   Damage to health.

The great problem of video games in front of television is that video games, as a consequence of their repetitive and rewarding structure, could generate a dependence on them that would lead children to be constantly aware of the game throughout the day [CITATION Tom \l 12298]

Many of today's young people are no longer interested in sports activities as they used to be, and video games have had a serious impact on this. Younger people today prefer to stay home rather than go out and play sports and this is because they only give importance to video games and do not become aware of the negative consequences not doing physical activity.

Today's youth are unaware of how lack of physical activity seriously affects their health and completely ignore the risk of developing cardiovascular disease. Today, there are many cases of 12-year-olds who are overweight because they are not physically active.

Chapter III

Advantajes of using video games

3. The positive effects it has on people

It's eye-catching interfaces and navigation details stimulate several senses at the same time. It makes it easier for users to be more active and participatory by promoting interactivity. They promote and stimulate reasoning and discernment. Encourages visual and manual coordination, stimulates memory and retention capacity. It fosters curiosity, a spirit of research, and increases the child's attention and self-control [CITATION Oli18 \l 3082]

Since videogames have been around for a long time, they have been talked about, but what resonates most is the negative consequences they produce. But not everything is bad, there are positive aspects that video games help people develop skills and abilities that can be applied in the real world.

Studies have shown that people who play video games on a daily basis can improve their visual attention. This can help us to perform faster and easier tasks in which they have to differentiate between objects either by their shape or colour. It has also

been shown that video games make players faster in making decisions by giving them an advantage over others.

Something that video games do but few know is that they teach players some positive and important values such as solidarity, cohesion and the feeling of belonging to a group. Video games also serve to relieve stress, since in our daily lives we are involved in different adversities, be they work issues, studies or personal problems that put us under stress, video games help to keep us distracted and help us to stay out of reality and forget everything for a while.

Because there are many group games available today to achieve the goal of winning, it is necessary to play as a team and coordinate with other players so that this can help people perform better in school or at work. Video games also make their users develop a more competitive spirit by making players always try harder when it comes to getting things done.

3.1 The benefits they provide for players.

New York University Shanghai in conjunction with the University of Hong Kong has conducted a study demonstrating the benefits of video games. Whether for adults or children, playing at least 5 hours a week improves the

visiomotor skills, which are basic for daily activities [CITATION Uni \l 3082

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According to studies, video games encourage people to be creative when drawing pictures or writing stories. Players also tend to improve their reading habits as some video games require a high level of concentration which positively affects reading ability.

Strategy video games can make people smarter because they force the player to create tactics to pass levels and as the player moves up levels the difficulty increases.

Reflexes are very important in some games as they require you to react quickly and constantly which forces the player to work harder and thus gradually improve the speed of their reflexes.

Doctors recommend that sick patients play video games because it helps them to forget a little about the pain they suffer.

3.1.1 Improve motor skills.

"Researchers at Deakin University in Melbourne found from a study of 53 children under the age of 5 that playing video games increases motor skills in preschoolers, as they had finer motor skills than children who did not play" (Universia Mexico, 2015)

Experiments have shown that people who play video games can more easily and accurately solve exercises that require analysis to solve a pattern because players have a better development of coordination and the sense of movement.

3.1.2 Grey matter growth.

"According to the study by Simone Kühn, a researcher at the Max Planck Institute, playing video games for 30 minutes a day can increase the volume of grey matter in our brains"[CITATION Wib \l 3082]

Gray matter is a component of the nervous system and is located in the brain region involving muscle control, sensory perception, memory, emotions, speech, decision making, and self-control. And all these brain regions become more acute as the grey matter increases.

3.2 Help as a learning tool.

One of the current trends in education is "Gamification". This is a tool that consists of teaching through video games, and is an increasingly used resource by teachers around the world. There are multiple games that, under this format, are helping to teach or reinforce concepts already learned [CITATION Uni15 \l 3082]

In recent years, video games have become part of the learning methods because they serve as a reinforcement method because when you make a mistake in a video game what you would immediately do is learn from that mistake and not repeat it again. This tool works for both children and adults, because few people today do not enjoy a game.

Survey

In a survey carried out by myself about the opinion of the students of the 3rd year of High School about what is the use of video games.

They had to give a degree of importance to each question and the results were as follows:

You think video games are good for:

- Entertainment: 8.8% of respondents gave an importance rating of 1 being the lowest percentage, while 30.8% gave an importance rating of 4

being the highest percentage. This indicates that most people think that video games the main purpose of video games is to entertain.

- Destress: 9.9% of respondents gave an importance rating of 1 being the lowest percentage, while 27.5% gave an importance rating of 5 being the highest percentage. This indicates that a large percentage of people surveyed use video games in order to de-stress.

- Study: 33% of respondents gave a grade of importance of 1 being the highest percentage, while 5.5% gave a grade of importance of 5 being the lowest percentage. This indicates that most people think that study is not the main function of video games.

- Waste time: 28.6% gave an importance grade of 3 being the highest percentage, while 13.2% gave an importance grade of 5 being the lowest percentage. This means that people think that video games are basically a waste of time.

- Having fun with friends: 5.5% of respondents gave an importance rating of 1 being the lowest percentage, while 37.4% gave an importance rating of 4 being the highest percentage. This means that video games are something that people enjoy most when they play them with friends.

- Develop new intelligences or skills: 12.1% of respondents gave an importance grade of 1 being the lowest percentage, while 25.3% gave an

importance grade of 3 being the highest percentage. It is true that the use of video games in the long run can give users a series of skills but people think that this is not their main function.

- Demonstrate a person's knowledge about a specific topic: 14.3% of respondents gave an importance grade of 1 being the lowest percentage, while 27.5% gave an importance grade of 3 being the highest percentage. There are games that test your knowledge regarding one or more specific topics as does the kahoot platform which fulfills this function, however people think that video games do help to fulfill this function.

Conclusions

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

- Video games can negatively affect our health in a number of ways. The risk of acquiring myopia by staring at a screen for a long time because this seriously affects sight. The vice that video games can become if they are not used moderately. The bad posture that can produce video games to a person

after being in the same position for a long time, in turn bad posture generates pain.

- Video games can negatively affect the social environment of a person making her antisocial or isolated from others by the fact that people who only spend locked up and do not socialize with others because they can hook the person making him disconnect from reality or making him lose track of time.

- Currently young people have lost interest in sports and that means that there are children who do not do physical activities suffer from cardiovascular diseases such as overweight in many cases this is because young people prefer to be at home using their electronic devices than do some physical activity.

- Video games encourage people's creativity and improve the habit of reading and concentration. In addition, strategy video games increase intelligence because they force players to think of different ways to solve a problem.

- People who play video games have a better development of coordination and sense of movement because they use those senses when they play and train them constantly when they play allowing them to improve their skills as they play.

- Playing video games 30 minutes a day can increase the volume of gray matter in our brains so this is a good thing that video games produce in people.

- Video games can be used as a learning tool as they can become more entertaining than traditional learning methods.

Recommendations

At the end of this work it is recommended that:

- People who suffer from epileptic seizures before playing a video game should check if the video game has a lot of psychedelic content or not.

- It is recommended not to play more than 2 hours a day to avoid harm to people.
- Parents should be more attentive to their children's activities and control their play

time even more if their children are minors.
- It is recommended that young people do some type of physical activity such as

sports or jogging.
- When playing it is advisable to be in good posture to prevent pain in the spine.

Annexes

Figure 1

Entretenerse

91 respuestas

Legend:
- 1
- 2
- 3
- 4
- 5

30,8%
20,9%
8,8%
27,5%
12,1%
1
8 (8,8%)
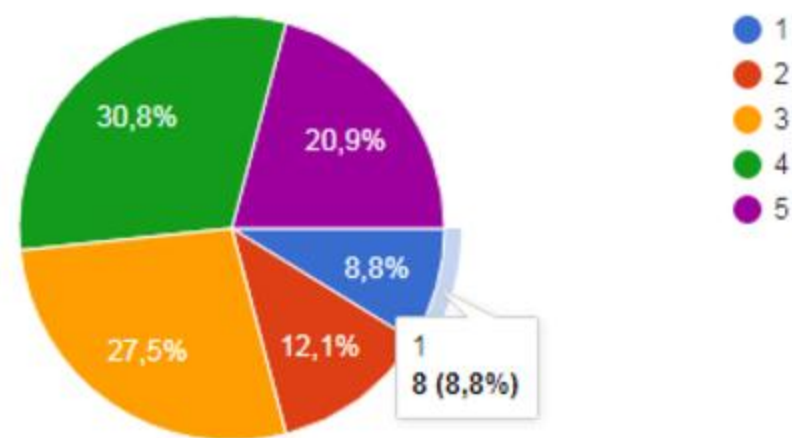
Do you think the videogames are for entertainment?

Desestresarse

91 respuestas

1
2
3
4
5

27,5%
25,3%
9,9%
14,3%
23,1%
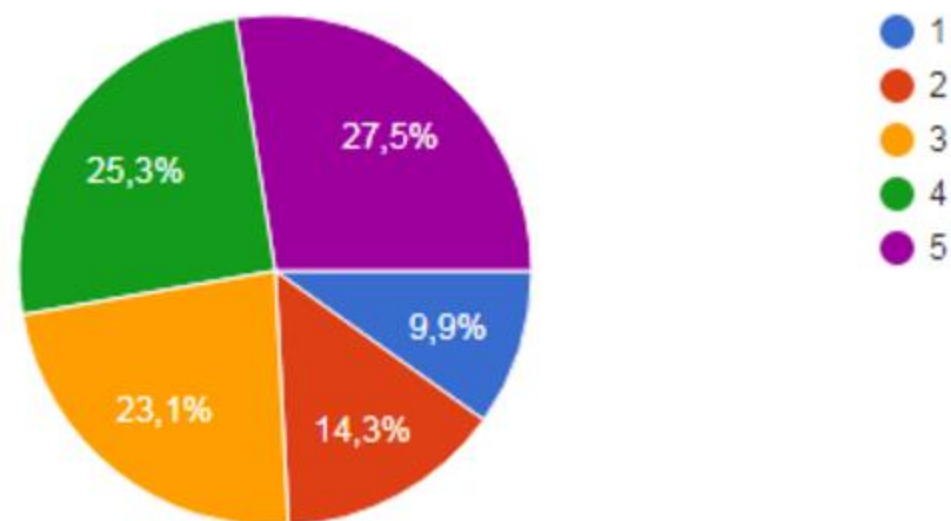
Figure 2

Do you think the videogames are for destress?

Estudiar

91 respuestas

1
2
3
4
5

23,1%
8,8%
29,7%
33%
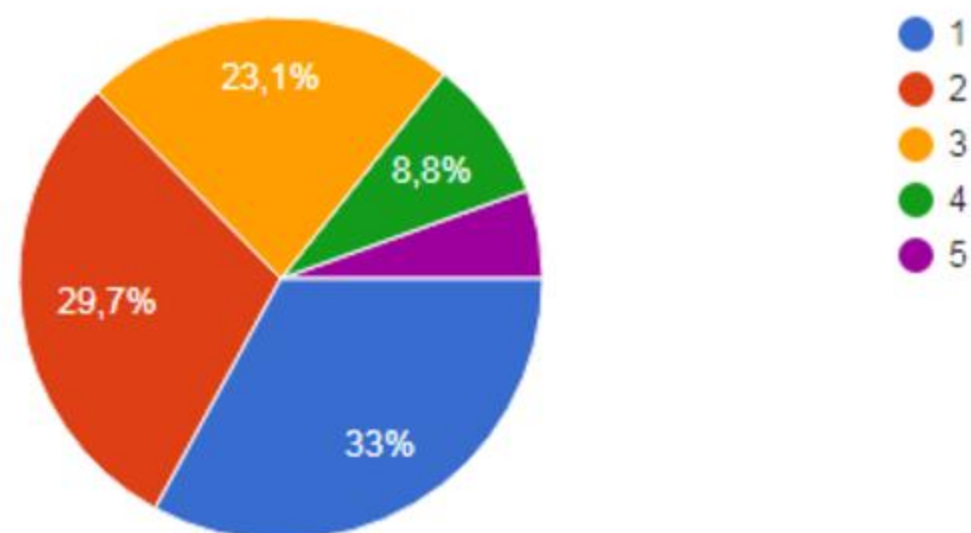
Figure 3

Do you think the videogames are for study?

Perder el tiempo

91 respuestas
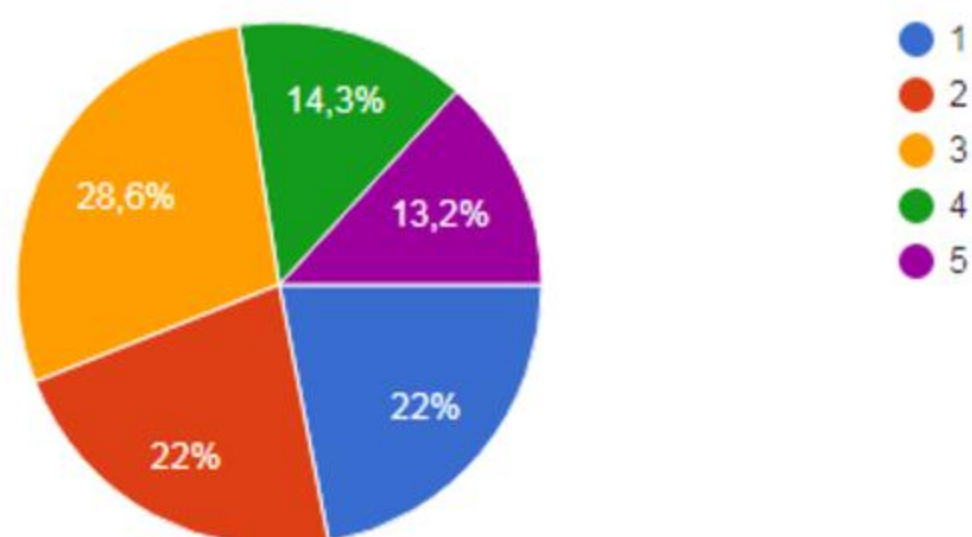
Figure 4

Do you think the videogames are a waste of time?

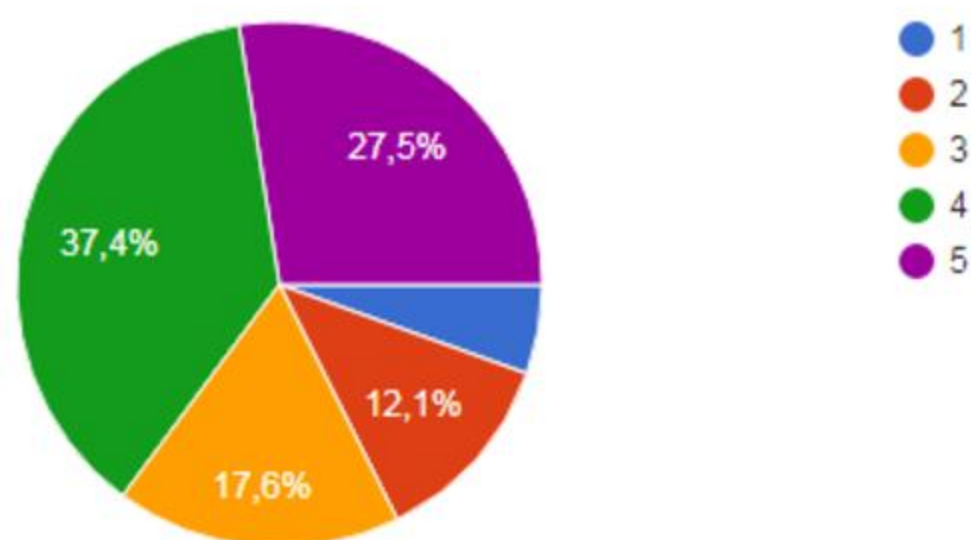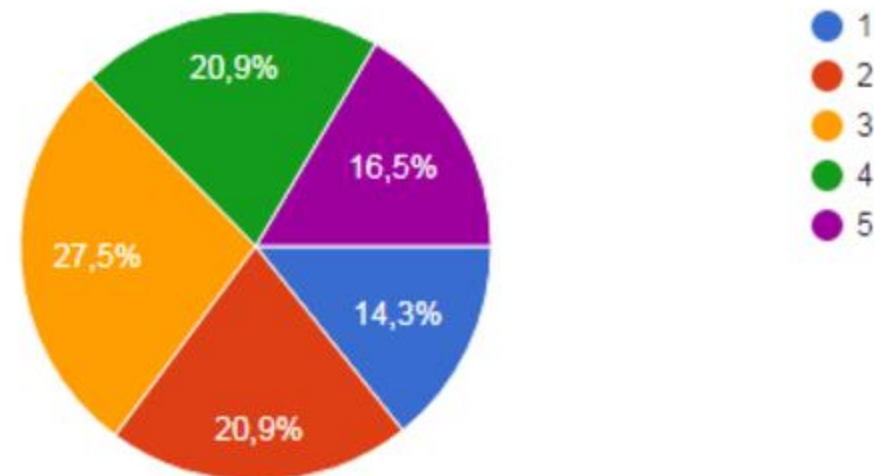## Divertirse con amigos

91 respuestas

Figure 5

Do you think the videogames are for fun with friends?

Figure 6

Desarrollar nuevas inteligencias o habilidades

Demostrar los conocimientos que tiene una persona acerca de algún tema en específico

91 respuestas

Do you think the videogames are for developed new intelligences or skills?

Figure 7

Do you think the videogames are for demonstrate a person's knowledge about an specific topic?

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