

Teach at 60 FPS

The capacity of innovation as an only way to motivate students to learn more and better.

- **Presentation**

This essay tries to help in the investigation of the implementation of new technologies in Schools and High Schools, with special attention at one of the most important products right now, the Videogames. The methodology will be easy, one questionnaire before playing the Videogame, play that, and, after, one more questionnaire. Also, I want to know if the teachers want to use Videogames as support tools for their class, so, they have to do another different questionnaire.

- **Motivation**

Generally, the beginning of an essay has to start with the status of the question, and that isn't going to be different now.

Actually, the capacity of teachers to keep the motivation of the students is one of the most important points right now at schools and the news essay around the Education topic.

The statics around the knowledge of the students, at the countries from the South of Europe, is one of the principal preoccupations of the national governments. Antonio Machado, one of the most important Spanish poetry, said: "In matters of culture and knowledge, only what is saved is lost; only what is given is earned"

Regarding the statistics, we can observe the following as a turning point:

- The percentage of school drop-out, understood as the early abandonment of education and training in the population between 18 and 24 years of age that has not completed the level of secondary school 2nd stage and does not follow any type of education-training, in the whole of the European Union, in relation to the years 2010-2016, we find a drop of 3.2 points, from 13.9 to 10.7. At present, Germany has a 10.2; Austria, 6.9, Spain 19.0, Finland 7.9, France 8.8, Italy 13.8, and, Portugal 14.

- The population of 30-34 years with a higher education level in the European Union is 39.1%, while in 2010 it was 33.8%; while, in Germany, it is 33.2; Austria, 40.1; Spain, 40.1; Finland 46.1; France, 43.6; Italy, 26.2; and, Portugal, 34.6.

- The population aged 25-64 that participate in education-training in the European Union in 2010 was 9.3, while in 2016 it was 10.8. In Germany, 8.5; in Austria, 14.9; in Spain, 9.4; in Finland, 26.4; in France, 18.8; in Italy, 8.3; and, in Portugal, of 9.6.

These indicators, all taken from the last EDUCABASE survey (Ministry of Education, Culture, and Sports, 2018), show us the need to improve our education system.

- **Status of the Question**

Currently, the implementation of video games is not implemented in most centers in Europe, there are only pilot projects in some schools and some courses in northern Europe, such as, for example, Finland uses a special edition of the game "Angry Birds "in their classrooms," Minecraft "or" Willy the Kid ", the latter to raise awareness about sexually transmitted diseases (Hudson, 2013).

Various studies and analyzes address this question, but, if we turn to the manual for teachers; "Video games in the classroom" of European Schoolnet (Felicia, 2009), we can observe some positive characteristics of the implementation of video games in the educational area, such as, for example:

- > "They can develop cognitive, special and motor skills [...]"

- > "You can teach facts [...], principles [...], and solve complex problems and increase creativity [...]"

- > "Video games can have an emotional impact on players, they can improve their self-esteem (with adequate supervision) and allow them to participate in social activities"

- > It would not be the first time that video games will be implemented in a world other than entertainment, for example, in training of firemen and military MMORPGs are used

In turn, there are many detractors of the use of video games as an enhancer of the education of students. They accuse video games of continuing to promote the stigma of winners and losers, first, second and third place, that is, competitiveness. Others allude to the fact that the use of video games should only take place in the living room of the house since it is subtracting something specific from young people to impose it (Hudson, 2013).

In short, there are many voices that are raised both against and in favor of the use of video games in classes, therefore, I think a contribution to this research is necessary.

- **Methodology**

The methodology to be followed will be based on online surveys and the use of a video game to be agreed with the centers that want to participate.

Without depending on the chosen video game, which should be about a subject that students have in common, the methodology to be followed will be the completion of a survey, with 15 basic questions, a test time of the game in question, and a new survey with another 15 questions about the quality of the video game and its possible implementation and how it could be.

In turn, teachers must also conduct a survey to know both parts of the education system. In itself, it would be interesting to have the opportunity to ask the parents their opinion of the use of video games in the school environment, but it would mean an increase in the time in the realization of this Project which, in itself, is already quite long and the lack of time hinders the opportunity to conduct surveys to various interest groups.

- **Context and Stakeholders**

The project must take place at two High Schools, Adolfo Portela, and Marques Castilho, with the classes of 12^o Grade, and with the teachers.

The videogame can be one of this:

- Hearts of Iron: III (WWII)
- Valiant Hearts The Grant War (WWI)
- Toy Soldiers (WWI)
- Battlefield 1942 (WWII)
- Brothers in Arms, Hell's Higway (WWII)

I prefer Valiant Hearts, because is more a storyline than a video games per se, so could be better for the first contact in a educational way.

- **Tools**

The tools necessary for the realization of this Project are, basically, the access to an equal number of computers to students surveyed, to be able to perform this session in a classroom large enough to house these students, and, the time necessary to be able to perform the session.

- **Timeline**

- March 7, pre-questionnaire for students and teachers.
- March 14 and 21, group session with Adolfo Portela, and Marques Castilho's class.
- March 22, Analyze the results of the study
- March 23, Reflection about Personal Project
- March 28, Dissemination for the project

- **Timetable**

00:00 - 00:30	Presentation
00:30 - 01:00	Explaining the Video Games
01:00 - 02:00	Play it!
02:00 - 02:30	Post-questionnaire

- **Development**

In this moment, is necessary talk deeply about every step that I have to do to develop the Personal Project.

- Meeting

The first step is having an interview with the principals or "directores du turma", for explaining the project and try to know their opinion about how to do it.

- Explanation

With the explanation, I want to know how I can develop the Project, it is possible to have a lot of computers available, it there is any problem with the class for come Wednesday or another day, know if there is any problem to develop the Project as its writing, and another different possible problems.

- Motivate teachers and students

I think that this point is too important, too much important. Because, without them, it's impossible to have success in this Project.

How can I motivate them?

The only way to motivate them is telling the truth about the Project and telling them that without them, it's impossible, and, also, because this project is for them.

- Pre-questionnaire

I need to know the previous knowledge about the Video games that students and teachers. The perfect way to do it, it's thrown online. We are talking about implementing new technologies at Education System, so, it is obvious that the only way is online.

- First study

With this pre-questionnaire, I can start to know the different opinion about new technologies and video games at Education System.

- First Reflection

After analyzing the pre-questionnaire, I can write the first reflection.

- Session

At the session is the moment to explain and develop the Project. For that, I want to have the most amount students for the most number of answer possible:

- Presentation:

Present the Project, Psientífica, E.V.S., myself, and the importance of making an E.V.S.

- Explaining the Video game:

During 30 minutes, I will be explaining and answer the different problems that students can have with the game.

- Play it!:

In this moment, the students only have to play and enjoy the game.

- Post-questionnaire:

At the same session, they have to answer the post-questionnaire, so, I will be there to answer their troubles.

- Second study

After the only session, I am available to analyze the post-questionnaire, so, I can write the second and last study with the information.

- Second reflection

With all the information that I collect, I can write the last reflection trying to understand that information and mix all the knowledge that I will have.

- Dissemination

That is the most important action, try to disseminate this information. How? Newspaper, having a meeting with someone inside at "Soberania do Povo".

- Last Reflection

Every essay has to have the last reflection, where I can explain my thoughts about have the opportunity of making a Project about something that really likes, Video games and Education.

- **Startup**

For the implementation of this Project, I would need to meet with the Directors of the Schools in which I want to carry out the Project, both Adolfo Portela and Marques Castilho.

During this meeting, it would be agreed that the subject and part of the Program of that subject will be accompanied by the video game in question.

After this, I would like to have the opportunity to talk with the teachers or “directores da turma” of the 12th Grade of each class to ask for the maximum diffusion of this Project, in order to have the possibility of having as many students as possible. In turn, the teachers will disseminate the pre-questionnaire through the virtual classroom of each class.

With the completion of the pre-questionnaire, I will have the opportunity to know what is the opinion of students about whether or not they play video games, what kind, how long, if they would welcome the use of these in classes, and so on.

After this, only the day and time for the realization of the video game test session would be agreed.

- **Dissemination**

The results of this project must to be disseminating, for that, the local newspaper is the best idea.

Have the chance to explain the results, the different ideas amount the students and teachers, and what they want to a educational video game, or if they don't want it for a educational propose.

Soberania do Poubó could be the perfect newspaper, because they know our work as a volunteer and have this kind of essay is always interesting to disseminate before anyone.

- **Pre-questionnaire**

<https://goo.gl/forms/YaDKqhANbvUQ7jp72>

1. Age
2. Do you like video games?
3. How often do you play video games?
4. What kind of video games do you play?
5. On what platform?
6. How long?
7. What days of the week?
8. In what room do you play?
9. How much money do you spend on video games?
10. How do you finance the purchase of these?
11. Do you think that video games can be used for teaching purposes?
12. Do you think they can be used in all subjects or only in some? Which?
13. Do you think that video games influence players in violent, xenophobic or discriminatory attitudes?
14. What purpose do you play for?
15. If you play online, what is your reason for playing?

- **Post-questionnaire**

<https://goo.gl/forms/LiBAJuHuhyb7W3id2>

1. Did you like the video game?
2. Has it been easy to understand?
3. Do you think it would be a game to implement on the subject?
4. Do you think the game fits the program of the subject?

5. In what subjects do you see the use of video games more feasible?
6. What do you ask for an educational game? (Graphics, history, gameplay, adaptation to the subject)
7. If you have to choose, would you choose in an educational video game, story or graphics?
8. Do you think that the big companies of video games have to take part in the implementation or must do it independent companies?
9. Do you want to study a subject around new technologies and video games?
10. Do you think those normal video games are available to have an educational implement?
11. Do you think that companies must create specific video games with educational propose?
12. Actual video games are available to play at school?
13. During which ages do you prefer implement the video games in the Educational System?
14. Have you any suggestion, any video games, to teach at school?
15. Do you think video games are available to teach?

- **Questionnaire for teachers**

<https://goo.gl/forms/g7dfa1GI2At0N1S33>

1. Do you like video games?
2. Do you play video games?
3. If you have children, and they play video games, how long do you let them play?
4. What do you think about its use for teaching purposes?
5. Do you know didactic video games?
6. Would you see your implementation with good eyes?
7. In what subjects do you see the implementation of video games in the curriculum?
8. If you play video games, what are they? And, would it be possible to include them in the curriculum of a subject?
9. Do you think that video games influence players in violent, xenophobic or discriminatory attitudes?

Project development

Due to some complications, the project could not be carried out one hundred percent as described above, but this did not affect the results.

Although the project tried to implement the largest possible number of students, in the end, it could only have 37 students, between 15 and 19 years of age.

Also, I couldn't do the questionnaire for the teachers, because they didn't were to motivate to do.

Being a smaller number of students, the implementation of the video game was easier, therefore, the video game "Valiant Hearts" was the ideal one, since the students showed interest in the history of this video game and in History.

In addition, during the development of the project, there were complications that led to change some points, not essential, such as focusing only on one institute, Marques Castilho, in this case, the number of students, as mentioned above, and the way of approaching to the key point of this project, whether or not students want to promote the use of video games in the field of Education.

These changes, it must be emphasized, had no negative effects on the outcome of the Project.

Results

In the previous questionnaire, the questions previously exposed gave the following information: 91.9% of students, that is, 34, like video games, while the rest, or do not like it, only one, or have no opinion about it. 27%, 10, always play video games, while 9, often or almost always play games. The rest, with less assiduousness, while only one never plays. The type of video games that most play is Shooter, 35.1%, 5 play sports games, while, 4, play video games of strategy, action or racing. The platform they use most is the computer, 89.2%, 33, while the rest, 4, play on PlayStation. A week, 18 students play more than 3 hours, 10, between 2-3 hours, 5, both 1-2 hours and less than 1 hour. More than half, 19, play almost every day, while 11, Saturday. 27 of them play in their room, while 10 play in the living room. In relation to what young people spend, we can see an important disparity, from those who spend less than € 25, 12, who spend more than € 200, 15. Others spend between € 25-75. The way they finance these expenses are diverse, from some who work, to others who only buy video games when

they receive money from their relatives or gifts. When answering the most relevant questions of this questionnaire, we can observe the following points: To the question, "Do you think that video games can be used for teaching purposes?", 24 answered yes, 3 no, and 11 maybe; "Do you think that video games can be used in all subjects or only in some?", 12 yes, 4 no, and 21, maybe. The subject where you would see the best use of video games is in History, followed by foreign language and geography. An interesting question was one that reflected on whether video games encouraged violence or not, we can see how 18 say no, 11, maybe, and 9 yes. Everyone plays for fun and to pass the time. In the last question, about online games, they responded, mostly playing for competitiveness and because they can be in contact with more people.

In the questionnaire after playing "Valiants hearts", we can see the following answers, which were declined, to 25, for which, in the next project we have to find some way to maintain the interest to participate by young people. 24 of them enjoyed the video game while only one, no. 21 of them were able to understand the video game, while three of them had difficulties. 19 of them think that this video game could be implemented in the subject, while the rest, 6, respond that maybe. To the question: "Do you think the game fits the program of the subject?", 18 answered yes, 2 no, and 6 that may be. The subject with the most possibilities in which to implement the use of video games is History, followed by Geography and Foreign Language. The students, at the time of demanding a video game, they ask for quality in the room, 15 of them, while the rest, they ask for gameplay and that it adapts to the syllabus of the subject. Although, it is true that, if they have to choose between history and graphics, most, 62.5% prefer both. 80% prefer that the big video game companies take over the realization of educational video games. In relation to the question of whether they want a subject about new technologies, 72% would agree that it should be included in the curriculum. But, if you wonder about whether video game companies should create specific video games with educational interests, 48% would agree, 40%, maybe, and 12% would not. In turn, there is a tie around whether the current video games can be included in the classrooms, 40% agree and the other 40%, no, while the rest think that maybe. Students prefer that video games be included in the school syllabus between 1st and 12th grade, that is, almost in the total of primary and secondary school education. Finally, 79.2% think that video games can help improve the education system.