

Virtual Reality – New ways to work storytelling and collaborative work



Organising institution: National Association of Educational Innovation and Inclusion in Schools (AENIE)

Country: Portugal

Age: 11-13 years old

Key question: How to use technology to develop computational thinking and writing skills?

Objectives:

The main goal of the general program for Digital Atelier is to help students develop computational thinking and writing skills

Other goals:

- to develop observation skills,
- to learn how focus on certain aspects of a story,
- to develop collaboration skills,
- to stimulate creativity.

Time: 6 hours

Software and apps to be used:

- Oculus VR
- Smartphone

Brief presentation: The main goal of this program will be to help students learn in a different way using technology. This will be made by working storytelling via virtual reality. Students are going to be in the center of decisions since they are going to choose the videos to watch first and they are going to coordinate the activity group by group. The teacher will be a facilitator of the learning process.

1. The teacher will be in charge of stimulating their students motivation to learn as well as their curiosity.
2. The videos will be chosen by the students and discussed in the class. One video will be elected to be worked by everybody in the class.
3. The students will work first in groups of 3-4 elements in order to stimulate collaboration and the development of social skills. After that the activity will be developed with every student in the classroom.
4. Each group will create their own learning path always keeping in mind that nobody should be left behind and everybody must be heard.

Topics covered:

- Computational Thinking
- Abstract Thinking
- Storytelling
- Writing skills

Civic engagement: Each classroom will work on subjects related to their own hometown. The limits to do this are only bound by the students imagination. Oculus VR and smartphones will be used in almost every task from the beginning until the end of the activities. During those activities students and teachers will create documents reporting what happened and what they have learned.

Materials needed:

Oculus VR + smartphones There will be a short presentation of the materials so the students learn the basics to operate alone

Main inspirations taken from personal research:

(using technology to help kids learn is essential nowadays; European Union is pushing technology into curricula more and more)

Since the introduction of LOGO in the “learning radar” by Seymour Papert and after that the “computational Thinking” concept summarized by Jeanette Wing in 2006, learning through technology has been object of study and change more than ever. By using virtual reality to enhance students writing skills we are not only helping them learn in a different way than the traditional but also making them learn in an environment they feel closer to their own lives.

How do you plan to give voice to students to present or show their personal skills and knowledge? They are going to work in groups, and in the end they are going to tell everybody in the classroom what they learned, what they think about this way of learning and they will also focus of course on the stories created. Students will be responsible for taking pictures and creating videos of themselves working.

Proof that students gathered new transversal competences will be their pictures, videos and written stories.

How do you collect information as the starting point of a Digital Atelier? As stated before, each student and teacher will be responsible for recording the progress they make by recording videos and taking pictures along the way.

Teachers assessment of students’s writing skills will also serve as a starting point.

Introducing students to the key question - the research begins:

- We start by showing them how to turn smartphones on and connect them to oculus vr;
- Then we show them how to use the videos gallery;
- After that we ask them what videos do they prefer;
- When the videos are selected we start the activity as groups;
- After that each group will present to the class their own findings and read their stories.

Experimental phase

1. Action that unfolds the practical activity to clarify the question (experimental phase):
2. Active work of the students
3. Presentation of findings and results (visualisation of information): Powerpoint presentations, Videos, Pictures, talk about what they’ve done

4. Analysis of results

Project/design phase - part 1

1. Second action that unfolds the practical activity (project/design phase)
2. Active work of the students: After watching the video selected by the class each student should write down what they liked most in the video and what caught their attention. After doing that they should talk to each other to understand that there are always different point of view for the same object
3. Presentation of findings and results (visualisation of information): Findings can be presented making use of Microsoft powerpoint
4. Analysis of results:

Project/design phase - part 2

1. Third action that unfolds the practical activity (project/design phase): When they learn how to use oculus vr they will be able to start creating their stories based on the video they watched
2. Active work of the students: We can start the third part of the digital atelier by gathering around on the floor and asking the students what would they like to explore using oculus vr, always keeping in mind that it should help them getting better at writing. We want to help them tell us which subjects they would like to explore.
3. Presentation of findings and results (visualisation of information): Findings can be presented making use of Microsoft powerpoint.
4. Analysis of results:

Approach to a new software or a new app: As the activity is developed the students will understand how important it is to be able to properly use virtual reality equipment and take profit of it not only for leisure but also to learn. Virtual reality is being used more and more everywhere. Getting to know how to use it to learn is a great and useful thing.

Links between the Digital Atelier and real life of the students: Every job nowadays uses technology. Virtual reality is being used more and more and students must learn how to use it in their daily life problems. Being able to virtually be in a place impossible to be like inside the human body or visiting Venus is something incredible and can be used as a strong learning motivator.

How do you plan to evaluate knowledge and skills? The evaluation process will be done by utilizing students' and teachers' own records and registries. Self-assessment will be a vital key to this project.

Conclusion: This digital atelier will help students develop their writing skills, which is a really big problem for Portuguese students. Learning to listen to each other point of view to better understand their own is something really powerful in the learning process and cognitive development of the students. From the starting point of choosing a video to the last one where everybody gets to be heard and hear their colleagues, collaboration skills are going to be enhanced and students are going to grow as a person. In this process there are going to occur several computational thinking skills developments also.

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