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Stories of Tomorrow: first year of implementation

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Abstract

We report on the pilot phase of implementation of the project Stories of Tomorrow [1], funded by the EU in the framework of its Horizon 2020 Research and Innovation Program. The project has been implemented in schools of three European countries (Greece, France and Portugal). It has seen the development of some hundreds of stories about the conquest of Mars, created by school kids on a digital platform developed specifically for the project. For the second year of implementation, some changes are in store, including the addition of VR (Virtual Reality) and AR (Augmented Reality).

1. Introduction

The main objective of the project Stories of Tomorrow is to evaluate the application of a series of methodologies (Inquiry-based learning, Storytelling, Interdisciplinarity) to foster Deeper Learning among students of a young age (10-12 years old), at the moment when they apparently seem to lose a measure of curiosity and capacity for wonder, and as a consequence tend to drift away and lose interest in Science-related matters. The use of a computer-based platform for the creation of digital books, allowing them to mix text and assets of diverse nature (images, videos, sounds, external links) is another measure thought to help them relate to Science and Technology.

2. Consortium

The consortium involves a number of partners from several countries, involved in the management, technical development, evaluation and school implementation of the project. A website [2] was created to present the project to a general audience. Other than news about the project, this comprises a list of resources about Mars in diverse media, and it will also showcase the stories created by students in a special section that will soon become available.

Two Summer Schools devoted to the project have taken place, bringing together the parties responsible for management, technical development, and evaluation, along with country-wide and school-level responsibles, that deal more closely with the implementation in classes.

There is also a facebook group where teachers from all the countries involved can interact, show the work of their students, trade ideas and find new references on space exploration. They have also participated in a number of country-level workshops, first to be introduced to the project, and more recently to reflect on the way the first year of the project went, namely to identify and analyse the issues that need reappraisal or changes, or those that were perfectly suited to the age of the students involved.

3. Platform and evaluation

The students were asked to create a digital book using a dedicated platform (Figure 1), that allowed for collaborative work. Students within classes were grouped into teams that had to come up with a narrative, structured into episodes, that told the story of a human expedition to Mars. Ideally, the story should contain at least four episodes (one on the Earth, preparing for the journey; another in space, giving an account of the long voyage to the red planet; and two on Mars, from the exploration of the surface of the planet to the installation of a manned base or colony). Through talks, activities and research, the students were encouraged to stick to firm scientific knowledge when creating their stories. The plan called for them to interact with experts and have access to a large amount of information that they should then strive to include in their stories (without turning them into dry scientific reports).
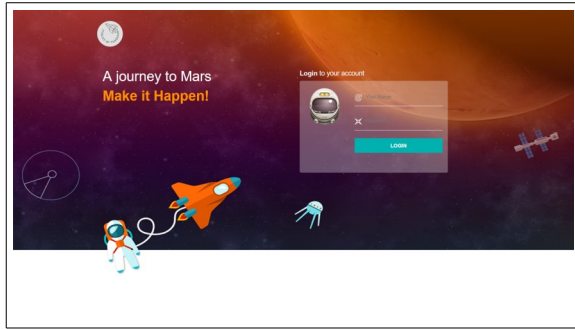
Figure 1: The login page for the platform.

Evaluation of the goals of the project is done through the collection of the answers of the students to a number of questionnaires designed to assess their skills at collaborative work, fascination with science, and knowledge. Also, the platform collects data on several parameters judged to be relevant, such as the number of assets included in the stories, the wordage and vocabulary, and the successive changes made to the stories; furthermore, the stories produced by students will be evaluated by the teachers, according to a prepared grid that focuses on different aspects of their content.

4. National settings

Since the school organization and environment in the three countries shows profound differences, and though there were general guidelines, there were also many differences in the way the project was implemented through this first school year of activity.

The platform is built with a hierarchical structure, such that teachers can check the work of the student groups, and intervene to a certain degree, mainly to sort out any problems. There are national language versions available, since the students are of an age that does not permit the use of a common language.

The number of schools, teachers, students, groups (and respective stories) varied. Though all classes involved were of the 5th grade, this does not mean that they all followed the same approach: in France, for instance, the classes had only one teacher, responsible for all subjects taught, while in Portugal the students faced for the first time many different disciplines and teachers.

The class dynamics were thus very different from country to country, and this is reflected not only in the number of stories but also in the time allocated for work in the project in each case. Furthermore, the classes had different activities and opportunities for learning and asking questions, according to the programming done by their national coordinators.

All this resulted in a wide diversity of stories, some of which do not fully respond to the requirements made at the beginning of the implementation. Still, the efforts made by all involved can not be dismissed. Final numbers are now being collected, and will be presented. All the stories will be available for appreciation on the project site.

5. Conclusions

The project is now gearing up for a second year of implementation. The second Summer School, scheduled for July, is the right moment to assess all that went well and should be reinforced, and also the many details that need corrections.

We strongly believe in the rationale and purpose of the project, and look forward to a new batch of students and helping them turn their imagination and creativity into stories about Mars, using the tools for the creation of digital books. For the next year, some exciting additions are scheduled, such as the introduction of AR (Augmented Reality) and VR (Virtual Reality) that can enrich the books.

Acknowledgements

References

[1] Saraiva, J., and the Stories of Tomorrow team: Stories of Tomorrow: schoolkids and the conquest of Mars, EPSC Abstracts Vol. 11, EPSC 2017-459-1, 2017.

[2] http://www.storiesoftomorrow.eu/