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Unit or project responsible for creating the innovation: Institute of Technology
Theme: Technology enhanced learning
Title: Minecraft for project management
Summary of the good practice: We propose to the first-year students to use the videogame Minecraft to learn the project management. Since we want to ensure that there is no mandatory technological knowledge, the use of a videogame allows us to let the students acquire project management competences without a bias from their high school background. During the first semester, all the students have one month to achieve a project on the virtual environment. During this month the only specifications they have is to build something with automatic systems in small groups (from 5 to 6 students). They spend at least 3 hours per week on this project and may continue during their free time in the whole month. 2 hours per week are in the presence of a teacher to evaluate and exchange on their planning, communication and teamwork. At the end of the month each will present his work to the other ones. Since the goal of the module is to ensure that the students' progress on the project management and not on the videogame, the role of the teacher in the module is very important. He must evaluate the whole project planning, group communication, teamwork and student's leadership for each group. Then on the second semester, a third of the students continue with Minecraft while the rest of them work on a technical project.
Context of the good practice: On the Institute of Technology, students have a different high school background, some of them come from a general formation with a high scientific but theoretical background while the other have a more practical formation. On the first semester the national program of the formation introduces a course of project management. This first initiation has to be practical enough to allow all the students to understand the notions of project management and to develop their transversal skills on this domain (teamwork, communication, planning ...)
Rationale: Since our students came from different background, we want to propose them a way of learning without scientific or technical barriers. The videogame Minecraft is a virtual like Lego and is known by more than 85% of the students and more than 75% have already played. By using the videogame, the students can interact differently with each other and it's not the more academic one which are highlighted but those who have leadership and communication skills.
Alignment with program and module learning outcomes: The module is constructed in strong relation to the national program of Institute of Technology. However, it's mandatory to ensure that the students understand the goal of the module and of the use of Minecraft.
Resources (time and persons): 2 associate professors for 80 students in 14 groups with 2 hours per group. And 3 hours to prepare the Minecraft server and evaluation of the students.

What were the main enabling factors (conditions) in creating and implementing the innovation?

The University of Poitiers has received funds from National Research Agency to develop new practices, so the Institute of Technology managed to use a part of this funding to install and equip a free access computer room with Minecraft accounts and to set up two Minecraft servers for the students' works.

What were the main challenges in creating or implementing the innovation?

The use of a videogame in class, moreover in University is still difficult to present and to accept for some colleagues and students. Some of them still think that they can't learn anything on the game except the game mechanics. There is a strong presentation of the learning outcomes to propose upstream of the module in order to break the false ideas and to ensure that all the students want to work in the game and not only play the game.

What have been the main methods of dissemination so far?

The initiative has been presented in the local press, in two national seminars in French and on the website of the university of Poitiers. There is also a flyer which is distributed to future students during open days of the university and during a gamer festival in Poitiers (Gamers Assembly). Links with high schools are also proposed through the Rectorate.

With which groups or organizations has the innovation been shared so far?

The innovation has been shared with the whole university of Poitiers and Poitiers city and Nouvelle Aquitaine Region in France. The innovation will also be shared with the National Research and Technology Agency in one of their working group on games and pedagogy.

Mainstreaming: What are the possibilities for extending and/or mainstreaming this innovation?

The innovation could be extended to all Institute of Technology in France since the module is part of the national program. The main difficulty is the acceptance from the teachers and professors that the students might know the videogame better than them.

Sustainability: Please comment on the sustainability of the innovation, including elements which need to be put in place to make this sustainable.

The innovation is sustainable, there is only a small cost each year to renew the game servers.

Evaluation: How have the success and impact of the innovation been evaluated? Is there an established way of continuous evaluation?

At the end of each semester the students could fill a survey on the module to evaluate it and to propose ways of ameliorations and other ideas. More than 60% are very satisfied of the module and in comparison, with a less practical way to teach project management, the satisfaction score of students has increased by more than 30%.

In 2017, the innovation has been evaluated by two external experts for the National Research Agency who have concluded that the main difficulty to extend the innovation is the acceptance of the videogame in learning for both students and teachers.

Contributor's reflections: Briefly reflect on your innovation from your own perspective including its strengths and limitations/challenges of implementation/potential implication for wider practice.

The use of Minecraft is a very good opportunity to let the students conduct their own projects without a too large involvement of the teachers in the choice of the project characteristics. They also have the possibility to develop their transversal skills and for the teachers to evaluate them without a technical or theoretical bias.

However, the diffusion and the extension for a wider practice is subject to the implication of hierarchy and of the teachers.

The main difficulty is clearly the acceptance of the videogame use at the University for learning purpose.

Does your unit or other units of your university have any plan to further develop this innovation? If yes, please briefly describe the plan.

Yes, we plan to evaluate the videogame use in school and university with an Interreg SUDOE project this year.

If available, please provide a link to complete the description of the initiative.