Designing pedagogical scenarios for school and universities

Information about the context

Educational level and number of students: University Bachelor, third year (21 years old); 55 students

Topic: Learning and Instruction, Learning Technology

Subject domain(s): Pedagogy

Duration: 3 months

The object: The scenario - planning an educational activity based on constructivist technology

THE EDUCATIONAL problem

Sapienza Psychology students always complain about the total lack of concreteness in their studies, mainly based on professorial lecture and individual study of theories, without any possibility of implementing them, which negatively impact on students' motivation and active participation in their own learning process. In this course, we tried to overcome this issue by offering a practice as well as collaborative way of learning and applying what students learn.

How do we applied the Design principles

Design principle	*Implementation in the case*
DP1: Organizing activities around shared objects	**3 modules for 3 cognitive artifacts** collaboratively built by small groups of students: 1. a **conceptual map** about the 'good teacher' 2. the **draft scenario** 3. the final **scenario**
DP2: Supporting integration of personal and collective agency and work	**Learning Discussions** in which students, divided in groups, have to bring personal ideas and elaboration of scientific and pedagogical issues **useful for the collaborative construction of each artifact**. The implementation of this design principle has been guaranteed also by **students' role taking** in the learning discussion process and in the face to face activity: *social tutor*, *synthesizer*, *skeptical*, *responsible of the artifact* and *observer of in-class group activity*.
DP3: Emphasizing development and creativity through knowledge transformations and reflection	The **construction of the artifacts** required students to analyze carefully everyone's ideas to improve them and reach an agreement among the participants. The process was supported by the attribution of three specific roles: *synthesizer*, *skeptical* and *observer*. In addiction, different types of knowledge organization and presentation were used: conceptual maps; class brainstorming using Padlet; scientific articles summaries and discussion; power point presentations; collaborative writing.
DP4: Fostering long-term processes of knowledge advancement	Students applied concepts learnt during the lessons and competences promoted during the artifacts building process, in particular in the collaborative construction of the third artifact (the didactic scenario). The **moment of revisions and comments** fostered reflection and creativity.
DP5: Promoting cross-fertilization of knowledge practices and artifacts across communities	Each group presented its work and discussed it collectively with teachers and students in the large group. In this way, it was possible to compare experiences, skills and knowledge that were been developed within each group.
DP6: Providing flexible tools for developing artifacts and practices	Different tools were used: 1. **Moodle**, to host discussions and learning materials 2. **Padlet**, for classroom brainstorming 3. **Google Drive doc, drawing tools** and **spreadsheets,** to collaborative create knowledge artifacts

The activity

3 modules – students divided into 6 groups:

1) **'The Good Teacher':** on-line discussion and construction of a conceptual map (Fig.1) using *Google Drive Drawing tools*, supported by the vision of the documentary 'To be and to have';

2) The **scenario draft:**
- **brainstorming** (Fig.2) about the connection between education and technology,
- **discussion in a dedicated forum** based on scientific articles to build a critic lecture of this issue,
- **creation of the draft scenario** using *Google Drive Presentation tool* (Fig. 3), containing the group idea about the connection between education and technology, the theoretical bases of the scenario and a possible summary. Presentation of the draft in an all-class session.

3) The **final scenario:**
- **discussion on Moodle** about cases and examples
- each group wrote collaboratively its project using *Google Drive Spreadsheet tool* (Fig. 5).

The final version of each project resulted from the process of multiple revisions and comments received from other groups and from '*the expert*'.

Fig. 1 – "THE GOOD TEACHER" Conceptual map

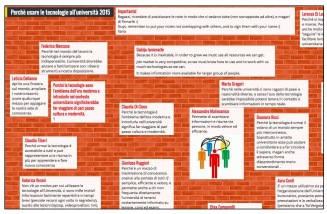

Fig. 2 – Padlet Brainstorming

Fig. 3- Presentation of the draft scenario (Google Drive Presentation tool)

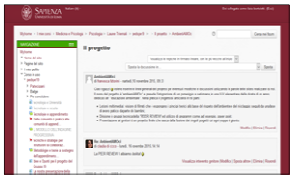

Fig. 4 - Discussion about the project (Moodle)

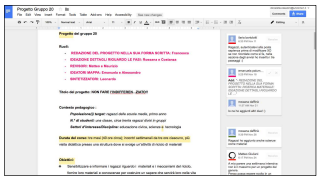

Fig. 5 - The Project sheet (Google Drive Spreadsheet tool)

Fig. 6 - Final Project Presentation (.pdf version)

Main successes and challenges: general high students' participation, in-depth discussion, chance to build knowledge and competences were the main success; problems related to Internet connection were the main challenges

How would you change or improve the solution or practice?

By exploiting other Moodle resources to facilitate the process of discussion

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