Authentic Tasks, Group Work Roles and Gamification: Constructivist Strategies For Teaching and Learning Emancipated Students.

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Abstract: In this paper we present a teaching and learning innovation experience were we have we carried out an pedagogical orchestration of different didactic strategies in two different groups of students of the first year of the Degree in Social Education. The experience has been done in the first period of the course 2013-2014 in the subject "Social Education and ICT" at the University of Murcia (Spain).
We try to go profoundly in the use of authentic tasks, as the base of a constructivist perspective of learning, the use of roles as a strategy for developing basic skills related to the subject –and other transversal-, as well as some gamification strategies for improving motivation in class. All these strategies has been orchestrated with 112 students divided in two classes that were also divided into work groups of 8 members each. In this work we explain the tasks done and the work developed, paying special attention to the didactic strategies implemented in order to help students to be emancipated learners. Also, we present some results and conclusions about the work done during the subject.

Introduction

One of the main challenges in the university level is try to change the ways about the knowledge obtained by the students. Usually we think that the teacher is the person who has the knowledge and is responsible for transmitting it to students. Under this conception we are thinking of students as a static part in the process of learning. Our idea with this work is help students to be emancipated learners, the responsibility of the teachers being to provide opportunities and space to learn. In this way, teachers are a designer of spaces and opportunities to learn, more in the case of this subject because ICT tools take on a special relevance, because it is one of the main parts of the content.

Therefore, the overarching objective is the creation the authentic learning environments taking into account the relevance learning-by-doing like a core value. Herrington, Reeves & Oliver (2010) pose nine elements of authentic task: authentic context, authentic task, expert performance, expert performance, multiple perspective, collaboration, reflection, articulation, coaching and scaffolding and authentic assessment. It is a pedagogical model able to be used to design significant learning environments in University. Thus, authentic learning situates the knowledge in context of real situations with complex and realistic tasks cognitively which challenge learners to solve problems, moreover the tasks require the creation of real products (Herrington, 2009). On the other hand, it is important to note that the emerging technologies make possible to provide ideal conditions for the implementation of authentic learning experiences (Herrington, Reeves & Oliver, 2014; Lombardi, 2009).

The Experience Context

The experience was carried out during the first period (September to January) of the course 2013-2014 with students of Social Education at the University of Murcia (Spain). The subject which we are developing the experience is "Social Education and ICT" that is in the first year of the degree in Social Education. The nature of the subject is understood as a basic formation in the entire degree. The subject has 6 credits (ECTS) for the students and 7,5 credits (ECTS) for teachers.
The main goal of the subject is to address the reality of teaching and learning as a process during the lives of the learners in two ways: from the technological view and the pedagogical view. Both views are needed and

complementary to understand the role of the social educators in society.

During the course 2013/2014, 125 students were matriculated in the subject, 112 of them being active students involved in the work during the course. The students are divided in two big groups, one of them has a class in the morning and another one has a class in the afternoon. There are three teachers (authors of this paper), two of them are responsible for the morning group and another one is responsible for the afternoon group. The work done in both groups was in the same condition because they had been planned in the entire course together (same organization, same tasks, same rules, same roles of collaborative work and same assessment, etc.). For this reason there are no differences among groups and we are going to present the experience as a general experience.

Thematic Topics

According to the topic in the subject and having in mind the role of the social educator in the society, we designed the work during the course. The work was designed around four big topics and around these topics we designed the tasks to be done by the students during the course.
These thematic topics are the most important content for the future of social educators around ICT. We did not start from a technical perspective to develop the subject; we departed from a deep knowledge of the social educators' field. The course was designed understanding the main fields in Social Education in order to offer everyone the perspective of technology and the view needed.
We wanted to approach beyond the organization of content according to their epistemological importance. For this reason we began from the four most important thematic topics nowadays about ICT in education, trying to specify it around the three central themes in the work of social educators: sociocultural animation, community development and adult education (Úcar, 1996; Iturmendi, 1999). The work was designed in this way because we understand that these will be the main areas where the future social educators have to develop the competencies achieved.

In this way, the subject was organised around the following thematic topics:
- PLE: Personal learning environments.
- Social Networks.
- Citizen participation.
- E-government.

Moreover, two tasks were designed in every topic (except in the last one for lack of time in the timetable). The task in every topic tried to offer a double view of the use of technologies:
- For one part, we developed tasks around a personal view of work. It was connected with their own professional development like future social educators.
- On the other hand, we developed tasks from a community view of work. It was connected with the development as a professional inside the community.

The Implemented Methodology

The work done during the subject has been oriented to help students to achievement the competencies of the subject. For this reason a change in the traditional ways of learning and teaching process was needed. The methodology proposed put the students in the middle of the process. If the idea is to work around competencies, teachers must forget their roles as a transmitting content, trying to be an emancipated element in the learning process of their students. Following we add detail of the most important parts in the methodology implemented.

The work was done around groups of work with 8 people maximum. The work done in groups had to be understood as a unit along the semester. All groups had to work in a continuing way and documenting all work done related with the tasks proposed. For this, every group had to keep a blog updated every week with the contribution of every member. In addition, every member of the group had to interpret different roles every week. The roles were proposed in order to help students to work in different views. The roles were rotating and every week the students had to change the role. In the following we present the roles of group work implemented:
- Facilitator: They are the leader of the group. They have to share out the work, encourage their classmates, meditate in the problems and try to keep everyone in the group motivated. At the end of the week, they have to send a justifiable report with a point score for every member in the group (following the criteria proposed in a rubric). Also, they have to keep the blog, and all the sites (social media, YouTube channel, Twitter…) of the group.

- Historian: They are responsible to tell the history of the group during this week. They have to do a weekly feature in the blog. We encourage students to use different ways and formats to tell their history.
- Explorer: Their work is to look beyond the wall of the classroom, looking for interesting information from social educators, associations, NGOs, secondary schools…They have to comment in the selected web or blogs and write a review in the blog. Also, they have to look at other blogs inside the classroom and make comments in one of them (the most interesting this week).
- Content curator: Responsible for compiling and putting in a simplified way (map or diagram) all sources used during the tasks. The sources had to be put in a sequence about the use done. The sources had to be linked.
- Translator: Responsible for defining the five most important themes about technology and social education worked in this week.
- Thinker: It is one of the most important roles. They are responsible for reflecting the work done during the week. The thinker has to think about how they work and put in common the reflection of every member in the group.
- Star (2): The star (two in every group), was responsible for bringing about the outcome of the work done during this week. Every week the products were different.

Every role had to be assumed in every activity by one or two members in the group, in that way all group members had to practice every role (at least) once during the course. The teachers presented the content in every task at the beginning of every week afterwards during this week in the timetable of the class, students worked in the task and presented its works one week after. In that way, Monday was the day to present activities and to start the new one. Every task was detailed in a document with the most important aims, the key information to start to work and a rubric assessment in order to help students to achieve the task.

The Tasks

As we said before, the work was designed around tasks/challenges every week. Around these tasks the group had to work autonomously. It worked around seven tasks.

About Personal Learning Environments:

- **Task 1: Discovering the PLE concept.** The main goal in this task was to discover the concept of the PLE by the students. Also, they had to understand the meaning of the PLE in their formation and professional practice. In this task students had to do an exposition in "Speed learning" format: simultaneous presentations like "speed dates" which every group was doing in a consecutive way. In this presentation the Stars had to explain in 6 minutes: meaning, implications and parts of the PLE. Also, they had to illustrate how the PLE of a person related with social education (Students in the last year, social educator worker). The Stars could use a poster in order to illustrate their explanations. At the end of the document provided, the basic information about PLE was indicated but students were always encouraged to look for new information (with the advice to be critical with the information found).
- **Task 2. PLE and adult learning: Training proposal.** Having in mind the concept of PLE worked in the previous task, the main goal in this task was to work around how the learning was understood in the concept of PLE. The way to understand the learning around the concept of PLE, has clear repercussions in the design of formal and non-formal training actions. In this way, we proposed to students the following challenge: look on the Internet for an adult training course with the main information detailed: learning goals, contents, assessment, in order to analyse what elements of this has corresponded with the pedagogical principle of PLE. Following on, the student had to redesign the content of the course according to these principles. The results of the task were two leaflets with the information of the course made by the students. These leaflets had to be uploaded on the Internet. Also, students had to elaborate a video (max. 2 min) in order to present the course developed. This task was complemented with basic references about the topic worked.

About the social networks, there are other two tasks:

- **Task 3. Branding.** In this task students worked for developing their "personal brand" and the "brand" and identity of the group. Also, they had to create a mechanism to spread the group brand. First of all, students had to go in depth of the root of the group making a mood board in order to define themselves through the tool Pinterest. Then, they had to do the storytelling of the group in order to tell their history. Finally they had to design and try to apply some offline and online strategies to spread the

group and the work done.

- **Task 4. Lincoln-Douglas debate about Social Networks.** In this task the groups prepared a debate around different topics about social networks and digital identity. The groups had to prepare arguments in favour and against of some topics proposed, because they did not know the role to do in the debate. The arguments had to be based on readings and references founded. There were three different roles in the debate: proposition, responsible for starting the debate and develop the position in favour; opposition, responsible for developing the "against" position and the judges, responsible for finding some mistakes in the references used by proposition and opposition. We developed three rounds of debates in order so every group had the opportunity to participate. In every round, the rest of the groups played as a public and decided which group was the best in the debate.

About citizen participation we developed another two tasks implemented both in a collaborative way:

- **Task 5. Community mapping.** In this task the students worked in a collaborative way with students from University of Barcelona (Murcia morning group) and students from University of Salamanca (Murcia afternoon group). Every inter-university group of students had to complete a map in Google Maps, indicating unique map points in their city around the same topic. The students set the topics and these topics had to be "interesting things for the community". Every team on each university was assigned to the topic randomly. The same action was done in every city and the interuniversity groups were organized by topic. The topics mapped were: centres for work orientation, centres of sociocultural action, centres to help drug addicts, free social dining, marginal neighbourhoods, public places for child free time, refuge, street art and voluntary centres. The points had to be included in the map from on site and include: name of the place, a brief description, link on the Internet with more information (if it already exits) and a picture of more than one member of the team in the place. In order to include the map in their own space on the Internet, if the teams already have a blog created, the map had to be included on a new page on this blog. If the team did not have any spaces on the web (blog or similar), they had to create a Webpage or site where they could embed the map. This site had to include: the map created, an introduction about collective mapping, an introduction about the topic worked, a justification about the interest for the community in the topic mapped, an invitation to anyone who can include more points in the map (for this, the map must to be open and students should keep it during the course. In an exceptional way this task was developed during three weeks.
- **Task 6. Citizen participation.** In this task students worked in a collaborative way with their classmates of the morning or afternoon class at the University of Murcia. The task developed a concept of citizen participation. Every group had to look on the Internet for initiatives around the citizen participation and propose a new one. These initiatives were grouped around these topics: education, equality, sanity, economy, university and culture. The result of this task was a common presentation using a "PechaKucha" style (two times, one in the morning and another one in the afternoon). If the groups could not take part in the two presentations, the alternative way was to include videos in the presentations.

In the last part of the content, we developed only one task:

- **Task 7. E-government and collaborative creation.** In this task we developed the concept of e-government. Every group had to make one document with the most important information about e-government in the city of Murcia. On a fixed date, every group had to put their information found in a shared document created by teachers. The students did not know the structure of the document until 15 minutes before. The groups only had 15 minutes to contribute in a new document and recreate the information and reach an agreement about the content in order to create a new document between all. Also, every group had to capture in a video the screen of their computers. The result of this task was the video recorded and the final document.

Every task had a final delivery developed by the stars during this week. For this, the tasks with their elaboration and presentation and the work done around every role, configured the diary work during the course.

Gamification and Badges

The gamification could be defined easily like the use of the organization and rules for the games in diverse contexts, with the intention of people assuming a concrete conduct and are motivated with the use of

these dynamics.

In the subject we implemented one of these strategies to motivate students, the badges (insignia, emblem). In order to do it, we used the tool "ClassBadges". The groups had to register in the page of classbadges using the class' code provided by the teachers. The badges put in play were related to three roles: the thinker, the translator and the content curator. Every badge was detailed in the following way:

- Silver thinker: the reflections in our group usually are dialogic and critic reflections.

- Gold thinker: the majority reflections in our group are critics.

- Novice translator: the expressions defined are majorly valuable remakes of the knowledge.

- Master translator: the content in the expressions defined has a high level of quality, is a valuable remake of the knowledge.

- Novice content curator: compile and organize in a simply way the relevant information in different formats and languages. The information is current. More than five references (apart from the basic proposal done by teachers) are included.

- Master content curator: compile and organize in a mind map the references of the information used in different formats and languages. The information is current. More than five references (apart from the basic proposal done by teachers) are included. The diagram or mind map exploits the process followed in the use of the information.

The groups got the badges for the work and development inside the group, never for the competition with other groups. The responsible team member to give the badges was always the teacher. The badges were awarded every week when the task was done. The badges could be kept or lost, depending on the work done in this week.

The badge of high level (gold or master) secured the maximum of the mark in this part of the work. The badge of second level (silver or novice) secured a 7.5 in this part. If the groups kept the badge/s more than three weeks, they were exempt to include this part in the final portfolio (explained after).

Assessment

The assessment of all the work done, was according to the kind of work implemented. For this, we implemented different mechanisms of assessment around three main blocks.

• Method of assessment A:

Continuous assessment: The development of every task as well as the final product in everyone had to be included in a diary of work with a blog format. Every member of the group had to include every week one post (at least) in relation with the role developed. This work was evaluated by the facilitator of the group and for the teacher weekly. This part of the assessment supposed the 20% of the final mark.

Final assessment: On the other hand, the final exam was an oral presentation and defence in groups of the final portfolio in the subject (method of assessment C). The presentation was completed with some oral questions asked to every student (two for everyone). This part supposed the 25% of the final mark.

• Method of assessment B:

By another way, given that every task had a final product, this product and the performance of the group during the development, was evaluated by the teacher. This part supposed a 20% of the final mark. In some cases this point system was the same for everybody, and in other cases was different depending on the work developed by everyone.

• Method of assessment C:

All work done during the subject had to be compiled in an electronic portfolio in order to do the final assessment of the subject. The e-portfolio supposed the 35% of the final mark. Regarding the requirements for the portfolio, we recommended the use of Google Sites. The portfolio had to include 8 different pages:

- General page with the group data: name, presentation, members, the 10 best moments to describe the history of the group, URLs (blog, YouTube channel…).

- Three different pages with the three tasks selected by the group (of the seven mentioned before). Every activity had to include: the final product, the main expressions defined in this task, one mind map with all resources used in the task and the reflection. If the students kept the badges content curator, thinker and translator during three weeks, they were exempt to include in the portfolio the corresponding parts. Also, they had to include a self-assessment about the task (being 1 the minimum and 10 the maximum) indicating the mark that they considered in order to reflect the work done in the task.

- General mind map, with the most relevant resources implemented during the subject.

- Glossary with the 10 most important expressions worked during the subject.

- Competencies. In this page the groups had to include how the tasks developed helped to achieve every competency. Finally, the list of competencies had to be included and (if in general) every member of the group had achieved every competency.

- Extras. The last page was a kind of reflection. In this page students had to reach an agreement about the following questions: we remember most… the most difficult was… the easiest was… the most fun was… the activity which we have learned more was... what we have to improve for other subjects is… , If we pass the subject, how? If we do no pass the subject, why?

Conclusions

As we said at the beginning, the University, being responsible for the training of future professionals, must to try to help students to be emancipated learners in order to offer to the society people capable of continuing learning. The subject which we developed this experience is about ICT tools for education, but also the knowledge about ICT is one of the main skills for future professionals in a lot of fields of knowledge, especially for professionals in educational fields.

The development of this subject around the tasks has been an interesting and enriching experience as much for teachers as for students. In general, the opinion of the students about the level of learning obtained through the work around tasks has been very satisfactory. The task in which students declared that they had obtained more level of learning about ICT, has been the task of Branding (task 3), found the 97% of the students that had marked the grade of knowledge obtained between 6 and 10 (in a scale where 1 is the minimum and 10 maximum). About the learning obtained about Social Education, we found that the best activity in the opinion of the students to obtain it has been the task of Community Mapping (task 5), found the 96.5% of the students that had marked the grade of knowledge obtained about it between 6 and 10. Also, we have found tasks less interested and useful in the opinion of the students. The task in which students stated that they had obtained a low level of learning about ICT, has been the task of PLE and Adult Learning (task 2), found the 35% of the responses between the options 1 and 5. In the same way, the students considered the task 2 with a low level of knowledge about Social Education (30% of the responses between the options 1 and 5).

The group work and the performance of different roles have been very interesting in the opinion of the students. The most difficult role in the opinion of the students has been the Thinker, found the 93% of the responses accumulated in a high level of difficulty. Although the Thinker is the role that students found like the most difficult, they found this role the most applicable for their professional future (91% of responses have indicated a high level of applicability).

The opinion from students about the level of achievement of competencies has been very acceptable, understanding that the biggest part they had obtained was the competencies proposal through the development of the tasks implemented. Moreover we have found that the most part of the students find the tasks done applicable for their future as a Social Educators, being the most applicable task of Branding (task 3) in their opinions (96.5% of the students had marked the grade of applicability between 6 and 10). It has not been easy work because previously a change in the conceptions of learning by teachers and students is needed, understanding that this is a way of working different and sometimes unexplored territories. The possibility to be wrong exists but this is a possibility when you try to teach and introduce students to new ways and ideas about knowledge.

When people work in education they know that there is no recipe to do their work. But we are sure if we want to help students to develop competencies we have to stop being the sole source of information, we

have to change the way we do our work and especially help our students to be emancipated learners. This proposal is a way to do this and our intention is to try to be useful for others, sharing our experience and the didactic strategies implemented.

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