THE USE OF SOCIAL NETWORKS AS A TOOL FOR FLIPPED CLASSROOM METHODOLOGY: A PRACTICAL EXPERIENCE IN HIGHER EDUCATION FRAMEWORK

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Abstract

The objective of this project is to continue improving the quality of the teaching-learning processes and to encourage motivation, thus achieving less dropout, for this we are going to continue applying the FC (Flipped Classroom) adding, as a novelty, the use of SN (Social Networks), in different ways: as interactive and the effective tools for the development of the FC; to evaluate the different networks available; to encourage students to be an active part in their learning process, through the creation of content; to allow the transmission of knowledge and collaboration through SN, between students and student-teachers; and to evaluate the motivation and academic performance of students with the application of SN.

To develop the project, that will be carried out in the next academic course, we propose the creation of focus groups with students in order to obtain information on the use of networks in their subjects; an extensive bibliographic review of the use of SN in HE; study of the different SN in order to know their main advantages and disadvantages in relation to their application to HE; train of the teaching staff in the use of the most important SN; define of experiences for the application of SN with the FC methodology; and a final satisfaction survey and evaluation of academic results of the students at the end of each of the subject.

Keywords: Social Networks, Flipped Classroom, Teaching-learning processes, Higher Education.

1 INTRODUCTION

In the past few years, different teaching/learning methodologies and pedagogical strategies for HE (Higher Education) have been proposed [1, 2]. The technological development and digitalization of society have introduced many innovative methods [3] with the purpose of increasing the efficiency of the educational process. Active and cooperative methodologies appear as the most effective forms of learning [4]. For instance, the use of active methodologies such as the FP (Flipped Classroom) and Gamification Models are among the most common alternatives for active and cooperative learning in the HE setting [5]. In the last decade, there has been a shift from traditional didactic lectures promoting strategies that actively involve students, in the direction of a more interactive and meaningful learning environment [6].

According to several authors [2, 5, 7, 8], the FC model has some advantages, such as the generation of greater student involvement, since explaining the lesson in the traditional classroom is a very passive learning approach. In fact, when the theoretical lessons do not have to be developed in class, class time can be used for problem solving, collaborative activities and group discussion, increasing student engagement. On the other hand, it also allows a greater adaptation to the rhythm of each student: the traditional classroom generally does not adapt to each student (everyone has to learn the subject that is exposed basically at the same rhythm: '*one-size-fits-all*').

On the contrary, by using the FC technique, students have the possibility to have greater control over the content of the explanations and manage their pace (a pause in the video-tutorial to take notes or go back and clarify when they need it). This, in turn, frees up class time, where higher-order thinking can be promoted and student collaboration and engagement increased.

In short, the application of this methodology produces a greater student engagement or a greater adaptation to the pace of each student [5]. The application of this pedagogical model will be now be extended through the use of different methodologies, like the use of SN (Social Networks) in HE, not

only as a communication tool but also to answer questions about the subject, to carry out group work, to share materials, promoting teacher-student and student-student interaction.

Taking into account the advantages that the FC presents, as well as the new possibilities that are opened thanks to the SN, the objective of this work is to present a work proposal that is being carried out by a group of teachers (who are the authors). of this work). We are all specialists in various subjects and we come from two different countries, Spain and Portugal, all of them working together on the application of FC in their classes and researching the results obtained [5, 9]. All this in order to continue improving the quality of the teaching-learning processes and to encourage motivation, thus achieving less dropout.

With this purpose, this group of teachers are going to continue applying the FC adding, as a novelty, the use of SN, in different ways: as interactive and the effective tools for the development of the FC; to evaluate the different networks available; to encourage students to be an active part in their learning process, through the creation of content; to allow the transmission of knowledge and collaboration through SN, between students and student-teachers; and to evaluate the motivation and academic performance of students with the application of SN.

2   METHODOLOGY

To develop the project, the authors propose to carry out a series of actions that will be detailed in the results section in order to serve as a guide for other teachers interested in implementing this new methodology in their teaching practice. For the development of this project, a series of meetings were held with all the teachers involved, whose educational innovation experience began in the academic year 2015-2016 with the University of Malaga's (UMA) Educational Innovation Project PIE15/174.

The project was extended through PIE19/156, with the addition of more teachers and courses from both the UMA and the Polytechnic of Porto. Both projects applied the flipped classroom educational approach to help students take responsibility for their own learning. Higher education students were expected to be managers of their time and effort, so the projects consisted of giving students a voice and allowing them to be the main actors in the class, which is designed according to their needs and proposals.

Based on the experience of the group of teachers, a series of actions were proposed that would allow combining the NS with the FC. We start by performing a brainstorming technique. Brainstorming is one of the techniques for fostering group creativity by which ideas and thoughts are shared among members spontaneously to reach solutions to practical problems [10]. This makes it an ideal technique for developing individuals' creativity and productivity during idea-generation sessions [11]. In the development of this technique, all the ideas that emerged were analyzed, examining the advantages and conveniences until a consensus solution was reached on how the project would finally be designed.

3   RESULTS

3.1   Project planning

To start up the project, a series of phases will be carried out. First, focus groups will be created with the students in order to obtain information on the use of networks in the different subjects. The purpose of these focus groups is to find out if they have used social networks in the development of their subjects, what they have been and for what purpose. Regardless of whether they have used them or not, we want to know their opinion about the formal or informal use of these resources in the development of university teaching, as well as which ones they consider most appropriate for these purposes.

Based on the information obtained in the focus groups, a bibliographic review will be carried out on the application of the SN in HE. Next, the different social networks will be studied in order to know their main advantages and disadvantages in relation to their application to higher education. Likewise, the most important social networks will be analyzed looking for the best options to apply it in the range of subjects taught by the teachers that make up the group. In order to obtain a comprehensive view of the operation of these networks, the group's teaching staff will carry out various training actions on the dynamics of the operation of the different SN. With all this information, it will be defined for the different subjects which social networks can be used and in what way.

In order to assess student satisfaction with this new methodological approach, at the end of the teaching period for each of the subjects, students will be asked to complete a survey in which they will answer a

series of questions about the degree of satisfaction of each of the aspects related to the project. In parallel, the teachers will carry out an analysis of the academic results obtained by the students.

3.2   Evaluation of the impact on the improvement of student learning processes

Although carrying out focus groups is not an objective in itself, but rather a means to be able to design strategies that improve the implementation of social networks together with the FC methodology, we consider that it is necessary to carry them out properly to validate the conclusions obtained. In this sense, within the members of the group there are teachers who have experience in this type of technique. Likewise, there are excellent computer tools for the qualitative analysis of the data obtained from a focus group, such as: Atlas/ti®, Decision Explorer®, NVivo, etc.

Prior to choosing the data analysis software, the interviews carried out will be coded and categorized taking into account the objectives of this project. In addition, a SWOT matrix will be developed to examine the weaknesses, threats, strengths and opportunities of the use of social networks in conjunction with CF in higher education. The publication of the analysis of these data and the elaboration of the SWOT matrix would be a form of control and evaluation of the execution of one of the actions and/or objectives of the project. Finally, two focus groups will be held, one at the beginning of each subject, which has already been mentioned, and another at the end in order to be able to evaluate the efficiency of the actions carried out based on the results of the first study and to propose improvement actions for successive occasions.

For the evaluation of the use of social networks as a means of communication or as a method of work in class and outside of it within the FC pedagogical model, an anonymous questionnaire will be passed to the students at the end of the school period of each subject in which They will measure subjective aspects such as those related to the degree of satisfaction. In addition, the academic results, the levels of attendance and participation of the students in social networks will be analyzed in order to extract other quantitative results of the performance of the students after the application of this educational innovation project.

Currently, the teachers who are part of this project have extensive experience in teaching courses on the FC pedagogical model in university teaching. For this reason and to evaluate the project that is the object of this document, it is planned to teach a course on this topic, but with the novelty that on this occasion the contents related to the different social networks and messaging applications will be added, as well as the use of social networks in the FC pedagogical model. For this, it is planned to invite outstanding researchers in this matter who will be able to guide the group, as well as other teachers, and make an evaluation and constructive criticism of the way in which the insertion of social networks in the FC is being applied.

The extensive experience in FC that this educational innovation group has, together with the improvement that is intended to be applied in this new project (the inclusion of social networks as part of the methodology) will be very useful to carry out the bibliographic review of what is published to date. This bibliographic review of FC and social networks could result in a review work that could be published so that the results are known by the teaching community. The publication of this revision would be a form of control and evaluation of the execution of one of the actions and/or objectives of the project.

The project, that will be completely developed in the next academic courses, is expected to have as results to confirm that the informal Social networks used by the students, apart from the formal channel implemented by the professor, give an opportunity to enhance the motivation and the way the students understand the content of the subjects, and also to improve the communication of the tasks.

4   CONCLUSIONS

In recent years, the flipped classroom methodology has become increasingly popular in higher education. However, this is a flexible methodology that supports the inclusion of many resources. The elaboration and execution of this project aims to improve the quality of the teaching-learning processes and to encourage motivation, thus achieving less dropout, for this we are going to continue applying the FC adding, as a novelty, the use of SN, in different ways: as interactive and the effective tools for the development of the FC; to evaluate the different networks available; to encourage students to be an active part in their learning process, through the creation of content; to allow the transmission of knowledge and collaboration through SN, between students and student-teachers; and to evaluate the motivation and academic performance of students with the application of SN.

In short, the project presented here is intended to serve as a guide for those teachers who want to implement this new approach in their daily teaching practice. Likewise, the aim is to help students develop attitudes and skills, as well as acquire knowledge that allows them to make decisions for the benefit of their own learning and that of others. For this, we consider it essential to emphasize the development of teaching-learning techniques that are attractive to them so that they acquire the necessary skills to become successful future professionals.

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