FLIPPED CLASSROOM FROM THE TEACHING PERSPECTIVE

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Abstract

The use of Information and Communication Technologies (ICT) in our current society has modified, to a large extent, both interpersonal relations amongst individuals and the way in which knowledge is accessed. This new technological context has created new challenges within the educational field, in particular, regarding the principles of teaching and learning. One of the existing proposals to improve the quality of education is to include ICT as an educational tool and, in turn, redefine the pedagogical frameworks.

On the basis of this thought, in this article we will analyse Flipped Classroom methodology as a possibility to introduce new technologies in the classroom, focusing on the teaching perspective. Inverting the class involves changing the traditional model of teaching the subject in the classroom and doing homework at home, applying a hybrid-type education (online and face to face education).

To this effect, after a brief introduction, we will firstly introduce the definition and main features of this methodology. Then, we will expose the new role of the teacher and the selected results from having undertaken a survey on the topic of the Internet and its use in teaching. Lastly, we will proceed to draw the final conclusions.

Keywords: flipped classroom, teacher, information and communication technologies.

1 INTRODUCTION

Over the last decade, students have organised their daily lives by using the Information and Communication Technologies (ICTs from now on), thus becoming digital natives [1]. These new tools have led to many great changes in all social and professional areas, creating new roles and demands which are linked to globalisation and the Knowledge Society.

Within the educational context, this requires reassessing our teaching and needs teachers that will allow the introduction of technological education, as well as socio-constructivist principles that adjust to the necessities of a digital and competitive society. According to the guiding principles from the European Parliament regarding the key skills for the permanent learning in any youngster, the digital competence is one of the eight essential skills that must be acquired by the end of compulsory education, so that they will be able to develop efficiently and successfully throughout their adult life [2]. Therefore, it is evident that, as well as updating the educational system, we can add a new variable to this debate: the link between teacher and student with the world of technology.

For these reasons, when around 99.7% of the centres have ICTs and connection to the Internet [3], teachers must reflect on whether the school helps to achieve these objectives, or whether these changes in resources have only been made to create more virtual scenarios and are not linked to the conceptual change of introducing new technologies into teaching. It would be ideal to foster a complete transformation that focuses on the teaching-learning process. Knowing how to use the Internet, how to communicate globally or educate active and autonomous people with initiative and willing to take on responsibilities and work in a team are essential and transversal skills of this new model.

The need for this redefinition of learning, in which the students gain protagonism and are prepared to face their professional lives in the future, has promoted the search for new educational methodologies which personalise their learning, such as Flipped Classroom. This method encourages motivation in students as they get closer to the world of technologies in which they live, and it also boosts collaborative work and the acquisition of social competences. However, we are presented with an unavoidable question: do teachers have the necessary knowledge and resources to introduce the Flipped Classroom methodology in the classroom?
Consequently, in this brief article, we aim to outline this new methodological line from the teachers’ perspective and how they use the Internet for their teaching. This way, we will consider the didactic possibilities that this new model offers, in which the teacher stops being the main protagonist in the classroom and become a guide for the student. By doing so, the teacher encourages a better acquisition of knowledge by bringing over education to the world in which they live in.

2 DEFINITION AND FEATURES

The Flipped Classroom (FC) is a pedagogical model in which the learning process takes place outside the classroom while this acquired knowledge is put into practice in the classroom. It turns around the class. In other words, it does in the classroom what would be done at home and vice versa. This allows the development of an integral focus in which both teachers and students commit to work together in all the phases of this learning process [4]. Blended learning is included in this modality, in which face-to-face lessons are combined with distance-learning ones throughout the use of technology. This way, the teacher can select the most convenient resources to meet the objectives and adapt better to each educational need [5].

This methodology was created by two teachers, Bergmann and Sams. They encouraged the recording and distribution of the videos with all the contents that were explained in the class in order to better assist those students who were usually absent [6]. However, they soon realised that this same methodology ensured focusing better on the diversity within the classroom and the individual needs of each student [4].

On the other hand, the Flipped Classroom does not imply a turn of 180º to the traditional methodology, nor the introduction of ICT or new and solely tools. It is essential to create a new educational space, in which the best of both worlds is united. In other words, the advantages of online education combined with the advantages of the traditional classroom [7].

Flipped Classroom is based on 4 key pillars that sustain the method and indicate the basic line about how to act in order to redefine the learning process [8]. Using their acronyms (FLIP), these four basic pillars are defined:

- **Flexible environment**: Flipped Classroom stands out for offering flexibility within learning-teaching. The student is the one that decides what method to use and when and where is learned; the teacher, on the other hand, receives feedback from the students and adapts to their working pace, providing them with strategies and activities according to the weaknesses they present. This way, the individual and personalised monitoring of the student is improved. Similarly, there must be a commitment of responsibility and achievement from the group-class.

- **Learning culture**: It offers a fundamental change in the teacher’s role as the learning is focused on the student. Thanks to this, new opportunities to value and improve the acquired contents arise. The time in the classroom is dedicated to select and examine new topics regarding learning, giving rise to more rewarding experiences and endeavouring to involve the students more into their learning and to value it more meaningfully.

- **Intentional content**: Teachers often ask themselves about what contents they may teach and what resources are better to meet their students’ needs. The Intentional content allows to adopt the necessary strategies and methods in order to apply the intended objectives appropriately and motivationally, considering the subject taught and the level of education.

- **Professional educator**: The teacher’s role continues to be essential. Teachers are in charge of deciding what to teach and how it is taught, acting as content coordinators in real-time in the classroom. This way, it promotes feedback and interaction at all times and, finally, it evaluates the work undertaken by the students.

On the other hand, 11 Indicators of Excellence have also been proposed in order to ensure an efficient integration of the 4 key pillars in the Flipped Classroom methodology (See Fig. 1) [9]. These are divided according to the one they belong to:
| Flexible environment | - Times and spaces are established so that students can reflect upon their own learning.  
- The learning process of the students is continuously observed in order to personalise and adapt their learning to their individual needs.  
- Different methods are shown in order to learn the contents and demonstrate what has been learned. |
| Learning culture | - Sufficient opportunities are offered so that the students develop significant activities with a specific level of difficulty with the teacher’s help.  
- Activities with different levels of difficulty are proposed in order to make the accessible to all the students. |
| Intentional content | - It goes deeper into those concepts which the students can learn autonomously.  
- Videos with a relevant content and with an adequate level for the students are created and edited.  
- Contents that are truly interesting and relevant to the whole class are chosen. |
| Professional educator | - The teacher offers availability to work with the students individually, in small groups or as a whole group, and to provide feedback in real-time in the classroom.  
- There is continued assessment during the class throughout observation and data collection.  
- There is collaboration and reflection together with other professionals within the education sector in order to assess or change the focus used in class, throughout this teaching approach. |

Figure 1. Indicators of Excellence in Flipped Classroom.

Ultimately, Flipped Learning requires an interactive and dynamic atmosphere in which the teacher and the student can participate actively and creatively in the subject [10].

3 THE TEACHER’S ROLE

The Flipped Classroom (FC) is a pedagogical model in which the learning process takes place outside. The Flipped Classroom methodology frequently finds very diverse views amongst teachers due the uncertainties and insecurities that the unknown generates. For many teachers, it is not easy to adapt their own teaching approach neither to the new guidelines of this methodology nor to the ICT despite using them often in their personal lives. For that matter, the CECE [11] mentions that 60% of the teaching body applies ICT in the classroom, against 35% who do not, of which 5% of these teachers would be willing but do not dare to try. It is evident that, for the correct and satisfactory implementation of this methodology, it is necessary that teachers make use of the new technologies and technological resources in order to adapt to the students’ new necessities and, therefore, for a change in the teacher’s role to take place.

As indicated by Javier Tourón [12], we cannot continue implementing contents from the 19th Century, with teachers from the 20th Century, to students from the 21st Century. With the introduction of this new methodology we could assume that the role of the teacher has been pushed into the background, but this is definitely not the case. The teacher leaves the role of ‘the wise’ in the classroom and becomes a guide and leader of the educational process, in a facilitator of the significant knowledge and constructivist learning. The teacher must make use of the ICT’s in order to teach problem resolution, critical thinking and creativity, promoting a much more active approach in the class in which projects, joint thinking, debates and exchange of views, amongst others, are integrated [13].

In essence, the Flipped Classroom methodology requires that the teacher promotes participation of all the students, coexistence, self-criticism, morality and co-operation and that, on the basis of all the acquired knowledge by the student, can implement them in semi-authentic contexts in class constructively and creatively. An authentic education must be promoted, in which the teacher defines and produces material, favours the use of resources and tools, creates new knowledge, and adapts to all levels and learning paces [14].
On the other hand, we shall take into account that teachers must also take ownership of a series of responsibilities that will allow them to successfully integrate this methodology. Besides committing to receive continued training and be up-to-date with the last educational applications, Gisbert [15] establishes that the new teacher’s profile must be flexible, versatile, enterprising, and must have digital skills. Also, they must know how to work in a team and collaborate within a group. These are essential features to be able to successfully educate and prepare the new generations in the acquisition of professional competences which companies are currently requesting.

This will also involve setting the textbook aside in order to develop more collaborative tasks, dedicate time to create and prepare new material which is adapted to the particularities of Flipped Classroom, and use an educational platform that enables continued communication among teachers and students as well as give access to the material. In essence, the aim is to allow students to have a greater involvement in their own learning.

4 RESULTS OBTAINED AFTER THE STUDY

This study about the “Use of the Internet and class preparation” gathers the opinions of eight teachers (4 men and 4 women) who teach their subject in English as a second language in Secondary and Baccalaureate in two private schools in the region of Jaen. The main objective is to determine whether it would be possible to introduce the Flipped Classroom methodology in the classroom.

Here below are presented the data of each one of the questions in the study, together with their corresponding chart and a brief analysis.

In question 1 (See Fig. 2), the focus is on whether the teachers tend to connect to the Internet. 87.5% of the teachers connect to the Internet every day, while 12.5% do it only several times a week.

![Figure 2. Teachers’ Internet access.](image)

In question 2 (See Fig.3), we observe that most used device to connect to the Internet is the mobile phone with 50%, followed up by the Tablet and the computer (with 25% each).
In question 3 (See Fig. 4), we see the teachers’ use of the Internet to prepare their lessons. Linked to the first question of the survey, 87.5% of the teachers use the Internet frequently, while 12.5% only use it sometimes.

This information warranties the development of the Flipped Classroom, as the teachers must know how to use the Internet or, at least, must be interested in its introduction into the classroom. As previously mentioned, the CECE [11] indicates that 6 in 10 teachers use ICT in class.

In question 4 (See Fig. 5), we can see the daily hours that the teachers need in order to prepare their lessons. 50% of the total interviewees coincided in that they dedicate between 1 and 2 hours a day, although 37.5% of the teachers emphasise that they tend to go over that (from 2 to 4 hours). One of the possible disadvantages of the Flipped Classroom mentioned by some teachers would be that the time they have to prepare the material for their lessons would increase [16]. However, having analysed these data, we can verify that the preparation time would be almost equal, and this does not affect negatively the inverted approach in any way.
Figure 5. Number of hours teachers spend preparing their classes.

In question 5 (See Fig.6), we are informed about their general opinion on homework. 87.5% of the teachers admit that it helps them to know that the student consolidates the acquired knowledge, against 12.5% tends to assign homework to obtain a grade. However, no one mentions motivation, and so it is necessary that both teacher and the student values this type of tasks positively and not just as an end, but as a mean in which all parts of the process are important.

Figure 6. Teachers’ opinion about homework.

As indicated in the section on Definition and Features, the Flipped Classroom is based on four pillars and, one of the, the intentional content, indicates the type of activities that the students prefer. Also, these must be adapted to all the levels in the classroom [8].

In item 6 (See Fig. 7), they are asked if real situations can be solved with homework. 87.5% of the teachers think that homework sometimes helps. However, on the other hand, 12.5% believe that this happens frequently. A noticeable detail is that no one thinks this happens always.
The learning process must base its contents on situations and contexts as close to reality as possible. This way it can inculcate the necessary competences and skills to students so that they are able to develop any professional role in the future. It is no use acquiring knowledge if this cannot be applied or expressed correctly later on. With the Flipped Classroom, we boost an active methodology, in which debates and drills of situations are introduced, activities which will bring the students over to the real context, as it was mentioned in the section regarding *The Teacher’s Role* [13].

In question 7 (See Fig. 8), we have a collection of the most popular homework activities among teachers. 50% of the teachers use *multiple choice questions* often and 25% tend to use a variety of activities such as *true/false activities* and *fill in the gaps*, among others. The lack in the use of videos is noticeable.

In the Flipped Classroom methodology, questionnaires and surveys are often used in order to verify that the knowledge that the students have worked on at home autonomously has been successfully acquired. This way, the use of *multiple choice questions*, *fill in the gaps*, etc. would be justified after the data we have obtained, and this would help teachers plan their inverted lessons, select and elaborate adequate material, and promote creativity in all levels and learning pace, as indicated in *The Teacher’s Role* [13], [14].

Lastly, in question 8 (See Fig.9), we are exposed to a question regarding the Flipped Classroom in order to analyse whether its implementation would be successful or not. While the introduction of this methodology would mean *professional motivation* according to 25%, others think that they would focus on the *individual needs of the students* (25%). We also verify that 25% trust it would be an approach
which would be able to cater to the diversity of the classroom, although others also specify that they do not have sufficient time to enforce it (25%).

In the section about definition and features, we emphasise that the Flipped Classroom methodology would help carry out a much more personalised monitoring of the students and would adapt to the diversity of the classroom better. Therefore, the collection of this data would justify the implementation of the method [4].

In short, the data provided allow us to stress that the Flipped Classroom methodology enables us to work with the different paces within the classroom, promoting each student’s personalities, and customising teaching in a dynamic and active way [17]. Finally, amongst others, the fundamental disadvantage would be the lack of enough time in order to adapt, record and edit all the contents in a video [16]. However, the preparation of traditional classes can be long and tedious, while with just a click the Flipped Classroom offers thousands of useful resources on the Internet which can be used when planning the sessions.

5 CONCLUSIONS

This paper pretends to introduce the Flipped Classroom methodology from the teaching perspective, initially including the definition and basic features, the teacher’s role and, finally, the analysis of various items related to the teaching and use of the Internet.

Specifically, in first place, we have indicated the definition and features of the Flipped Classroom which, as already mentioned, comes from the methodology of blended learning, coordinating the advantages of online classes with face-to-face lessons. In essence, we propose to visualise a video at home about the theoretical contents, while this acquired knowledge is then put into practice in the classroom. Regarding its most important features, 4 fundamental pillars were mentioned. These aim to promote a flexible environment within the classroom, learning culture, where the students can participate as protagonists of their own learning, intentional content, promoting interaction among partners and motivational activities, and the professional educator as guide and leader of the process. It is worth noting that the 11 indicators of Excellence offer the possibility to assess the lessons taught following this method, as well as to reflect and improve it. On the other hand, the teacher’s role becomes essential, as teachers will be the ones who will select and design the activities, guide the
learning process, and advise and assess the students. Teachers are no longer the protagonists and change their traditional roles in order to introduce an active and participative methodology for all the components in the classroom.

This method’s peculiarities require some specific skills and requisites for its complete and effective implementation. Therefore, with the aim of determining whether there really is a didactic application, a brief study among various teachers of a private centre in the province of Jaen was carried out. Once this was completed, the main observation was that the majority of the participants use new technologies daily, which means they are an essential element in their working life in order to increase and reinforce information. On the other hand, as part of the survey, it was proven that homework is still a fundamental pillar in education, although it does not tend to focus on real situations. Flipped Learning will contribute towards the change in the objective of homework, going from only consolidating the acquired knowledge to putting it into practice in daily life situations.

Finally, we must indicate that the Flipped Classroom is presented as a methodology which is able to adapt to the new necessities of the students. Surrounded by a very competitive context, the student is required to dominate professional and digital competences as well as social skills in order to be successful in the work environment. Flipped Learning would allow to make the most of the time in the classroom, promote assumption of responsibilities, peer interaction and, ultimately, it would motivate students in real contexts.

REFERENCES

