Tips for teaching online as covid-19 took hold

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HIGHLIGHTS

- The traditional method of teaching is not the most adequate for a pandemic. Learners must be encouraged to look for solutions to problems and engage the class.
- The right attitude is to seek continuous feedback from students.
- Students need questions to know what they have learnt.
- Feedback is necessary to improve the class and to make sure students understand the knowledge base.
- The biggest risk is that lecturers could become a talking instrument teaching concepts that learners are not following. In this case, students give up.

ABSTRACT

Spanish Cabinet declared on Saturday 14th of March 2020, state of alarm in Span to slow coronavirus COVID-19 spread and the universities were closed. Later, lecturers were forced to turn to remote teaching in a short period of time. The transition required time and patience to learn the technology, i. e. Microsoft Teams, and identify the best teaching tactics for our chemistry and construction materials. Every day, we gave lecture with new contents and exercises by using Microsoft Teams. In our opinion, there is an essential tip: seek continuous feedback from students. Students need questions to know what they have learnt. In addition, we asked for feedback to improve the class and to make sure they understood the knowledge base. We should have into account that the biggest risk is that we could become a talking instrument teaching concepts that students are not following. In this case, students give up.

Keywords: *Teaching online; COVID-19; Educational Innovation at the University; New Challenges for Higher Education.*

1. INTRODUCTION

Spanish Cabinet declared on Saturday 14th of March 2020, state of alarm in Span to slow coronavirus COVID-19 spread [1]. Accordingly, universities were closing, forcing teachers, lecturers, professors, and scholars to turn to remote teaching. The Royal Decree also established containment measures in the educational field (Article 9) and suspension of face-to-face educational activity in all degrees, and levels of education, included in the Art. 3rd of the Organic Law 2/2006, of May 3, on Education, including University education. However, "educational activities will be maintained through distance and online modalities, whenever possible". Accordingly, at the end of March 2022, we had about one week to draw up a plan for teaching online. For both of us, who had never taught an online class, the transition required time and patience. We had to learn the technology, i.e., Microsoft Teams, which is a collaborative workspace within Microsoft 365 & Office 365. This is a suite of tools for video chats, document sharing, workplace conversations, collaborative teamwork, and so on. Furthermore, we had to identify the best teaching tactics for our chemistry and construction materials classes of more than 70 students each. We were grappling with the implementation of the first step of the reform process in a short period of time.

After almost a year, we think that, in general, we have reached acceptable targets.

2. METHODOLOGY

Recent With technological help from Information technology (IT) department, we drew up an approach for teaching remotely from home.

Every day, using Microsoft Teams, we gave lecture with new explanations and exercises.

We are pleased to have met the Information technology (IT) challenges of teaching remotely. Information technology (IT) could be defined as the use of computers to transmit, store, and retrieve data or information among other uses. This new approach took a lot of time, at least twice as much work as a traditional lecture. Firstly, we had to be familiar with the IT tools and Microsoft Teams. Then, we spent many hours

preparing the online teaching content. Finally, we performed live sessions to teach them.

3. RESULTS AND DISCUSION

Given our experience in teaching online during the COVID-19 period, including the adjustment period, we present a series of tips; the ones we believe meets better the teaching and learning objectives in the context of the New Challenges for Higher Education.

One important tip is to avoid the conversion the entire lecture to video because students do not want to watch slides without a teacher's face. It is best to be succinct, therefore, it is recommended to summarize the essence of the topic in a short video-class no longer than 45 minutes, when in normal conditions could be last about 2 hours.

Another point is to reduce the goals. Lecturers should identify a few key things that they want the students to learn. The class should strategically be focussed on this specific

We have also learned that students cannot always rely solely on the information contained on the video-class that he has attended. We should not use the live conferencing class for every facet of the course.

Another important recommendation is to seek student engagement and feedback. The lecturer should set up the course so that students can follow self-paced enquiry, in which they can explore the topic and new concepts under their own initiative. Accordingly, the instructors should provide an interactive self-paced learning by giving to the students a group of links for further reading and watching. Later, they will select the content on their own interests. It is quite convenient to find out what students most care

about. However, the instructor's expectations

Fig. 1: "Filomena" heavy snowfall in Sanchinarro borough (Madrid) during the COVID-19 state of alarm

must be clear because when you ask students

what they most care about, sometimes, it is not the best topic to be selected. Finally, it will be necessary to ensure that progress is consistent across all students.

Another tip is to ask students what they expect to get out of the online course. A quite common misstep is not listening to the students. They should give lecturers ideas for teaching. This fact will give students ownership of the process.

An important advice is to check in often with students about the content of the class. Teaching online is not possible to see a student's face, then we cannot realize if they understand the class. It is quite recommendable to use interactive elements such as Kahoot (short quizzes) to be engaged with the class.

In addition, consider forming teams of three or five class members so that they can work together, coaching each other. In this case, it is necessary to be sure that students support each other.

Identification struggling students to support them adequately is a question more sensitive in online courses than in conventional ones. Online

learning usually is more difficult for vulnerable students. Such identification could be performed by asking whether students have adequate Information Technology (IT) devices (such as PC, smartphone, and so on) and Wi-Fi connexions. Furthermore, it is recommendable to check how concerned students are about the online learning.

4. CONCLUSIONS

It is only through a comprehensive approach that we can bring a good teaching to the students of the pandemic covid-19 period because lecturers cannot follow a 'sink or swim' approach to online learning. The traditional method of teaching perceives the teacher as having the thorough knowledge, while the students are passive listeners. This method is not the most adequate for a pandemic. Learners must be encouraged to look for solutions to problems and engage the class.

Finally, there is an essential tip for our experience: the right attitude is to seek continuous feedback from students. Students need questions to know what they have learnt. In addition, we asked for feedback to improve the class and to make sure they understood the knowledge base. We should have into account that the biggest risk is that we could become a talking instrument teaching concepts that students are not following. In this case, students give up.

AKNOWLEDGEMENTS

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