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Disadvantage of the Synchronous Virtual Method of Teaching

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Abstract: The pandemic brought changes in the education system of universities and schools with synchronous distance learning called virtual, mainly through video conferences. The examples show not very good results due to connectivity problems, fixed hours with non-flexible schedules, lack of motivation, low quality of learning, lack of clarity in teaching, boredom, among others. We propose an alternative with a totally "online" teaching-learning asynchronous modality through the description of a practical example applied to 65 university teachers, suggesting microteaching laboratories to train professors.

Keywords: education, microteaching, online, synchronous, video conferencing

Introduction

The COVID virus brought with its pandemic several substantial changes in Education and, in general, in our planet, especially in the Western world. One of the most drastic changes, undoubtedly, was in primary, secondary and higher education.



Face-to-face classes disappeared and were replaced by the so-called 'virtual' classes, which are nothing more than face-to-face courses at a distance, by means of video conferences, with a talking head and many students 'participating', who knows how.

All this seems to be totally anti-pedagogical, although our students and teachers were not and are not prepared to apply other methodologies, such as the totally asynchronous 'online' one, which will be discussed in this document.

Already, since the beginning of the Pandemic, universities initiated truly 'online' subjects as evidenced in the following publication Mohamed, A. et al. (2020) "universities have turned towards e-learning as a more appropriate alternative to ensure the continuity of the educational process. Most Turkish universities today use what are called online 'Learning Management Systems' (LMS)".

In Ecuador, an online school was created in 2004, totally asynchronous, with the approval of the Ministry of Education, operating to date on the 'MOODLE' educational platform, with excellent results, as certified by Salum, J., et. al. (2021) "The Moodle platform has shown great stability, in general terms it has been in a high operational and accessible percentage. The way in which the interactive spaces have been arranged are positively evaluated by the participants".

Microteaching strategies were applied to the online school teachers, as highlighted by Pazmiño and De Agostini, et. al. (2024) "Microteaching laboratories, equipped with advanced technology, emerge as favorable spaces for teacher training and retraining, allowing for detailed observation, immediate feedback and critical reflection. The process highlights specific skills to be developed such as context organization, question formulation, synthesis, illustration with examples, feedback, reinforcement, integrated learning experiences and communication, highlighting the importance of critical reflection".

From the 1970s to the present, microteaching has been introduced as a practice in universities and schools in Latin America, including Ecuador; schools in Quito and Ibarra and universities such as UDLA, UASB, FLACSO, IAEN, UCACUE. We emphasize that microteaching can be practiced in both face-to-face and asynchronous virtual modalities.

Regarding the 'virtual' Ruiz et al. (2015) notes the following "in a virtual environment, learning can be organized in different ways with the use of various tools, strategies and methodologies of collaborative learning; in particular, teamwork (with the use of forums, wikis, mind maps, etc.) is a methodology widely used in the educational context due to its positive results in various studies and research on this application strategy".

As most institutions and teachers had sporadically experimented with videoconferencing, these type of classes were massively implemented during the COVID era in high school and universities, erroneously calling them virtual or 'online', without much or almost no preparation in training and, were implemented through resources such as Zoom, Classroom, Google Meet, Edmodo, Idroo, etc., or other facilities with or without cost, by means of videoconferencing during hours, a teacher in one place and



the students geographically dispersed, at the same time, with their not very inexpensive computers, equipped with video cameras.

A few hours were set for the broadcast where, normally, the teacher participated in front of his or her camera, speaking for secondary school students or, for university students giving presentations, and sometimes, if the technology allowed it, including group work, always by means of video conferences, from their digital equipment.

Of course, as a result of the pandemic, approximately four million primary school students were left without any classes at all, unable to attend school¹.

The following are some of the problems encountered with these synchronous video classes²: (1) connection problems, (2) too many and often unexplained assignments, (3) lack of resources such as computers, (4) generating fatigue for several hours in front of a screen, among others.

Another detail is that sometimes they call platforms to these video conferences, being a real online educational platform the LMS asynchronous ones, where they are organized systemically, according to an instructional design, with different activities such as forums, short videos, tasks, quality material, group work, evaluations, constant tutor support, among other various activities, allowing both participants and facilitators to manage their own time personally, depending on their various activities.

On the other hand, Velazco and Mosquera et al. (2007) emphasize that "traditional pedagogical processes and procedures continue to strengthen students' dependence on their teachers, thus preventing them from taking responsibility for autonomous learning and the achievement of their educational goals. Generally, these are confused with the so-called didactic strategies for learning or with methods that serve as a guide for a specific activity, in this case, the activity of tutorial spaces".

Methodology

At the Catholic University of Cuenca, several training courses have been given to hundreds of teachers in this asynchronous modality with excellent results, with course evaluations made by teachers based on a free and open survey with emphasis, during the course, on formative evaluations, highlighting several advantages, among the main ones: dynamic classes, immediate application for any correction, independence, cooperation, efficient use of ICT, excellent follow-up, autonomy, critical thinking, useful material, immediately applicable and advance at one's own pace, allowing time to review past material besides being able to attend various personal, family, work activities and, in short, for studying on the educational platform without pressure.

¹ UNICEF - <https://www.unicef.org/ecuador/en/stories/recovering-lost-learning-ecuador-after-two-years-pandemic>

² [Ecuador and the Virtual High School Education in Pandemic Times](#)



On this last point I wish to emphasize what several studies related to the efficiently designed asynchronous modality show: 'most of the students agreed that asynchronous virtual classes have positive consequences because it opens the possibility of a better time management'³.

For this work, several six to eight-week courses have been carried out totally asynchronous on online course management platforms. Specifically, during the months of July and August of this year (2024) we have given another course for university professors on the application of the latest technologies, in particular artificial intelligence (AI), aimed at the production of texts, presentations, translations, plagiarism detection by means of AI, among other useful resources for teachers.

In the various online courses, and especially in this last one, emphasis was placed on various aspects, such as: predefined surveys, informal presentations, forum work, formative assessment, visible results, etc.

Course development

The course begins with a brief introspective personal evaluation of the participant, by means of a predefined survey (ATTLS) on self-learning, which allows the participant to evaluate him/herself and become aware of how he/she values other participants, his/her behaviour towards differences with those who think differently, to be objective in his/her approaches, to avoid personal interests in a discussion, to understand opposing points of view, etc., in this way the participant clarifies his/her position in order to offer the best of him/herself throughout the course.

This is followed by professional and mainly personal introductions through forums in order to get to know tastes and expectations, hobbies, weekend activities, a good joke, a photo, and definitely to get to know each other humanly, at the beginning of the course.

In addition, course rules, objectives, guidelines, short videos, intervention proposal, curricular and teacher data are presented, in short, all the relevant information about the intervention of the online learning event.

We continue with work in forums or 'wikis' because, in short, students 'learn by doing', where each participant carries out work, compares it with that of others, offers comments, and in this way everyone learns from everyone else, including the tutor, the course facilitator.

Course evaluations should preferably be primarily formative rather than summative. By being formative, the participant does not memorize, but demonstrates what he or she has learned by doing; in short, as we have already mentioned, the idea is learning by doing. In this way we will always achieve visible results. Nor should we forget activities for the generation of complex, lateral and creative thinking,

³ Benalcázar, M.E.; Barona, L.; Valdivieso, Á.L.; Vimos, V.H.; Velastegui, D.; Santacruz, C.J. Educational Impact on Ecuadorian University Students Due to the COVID-19 Context. *Educ. Sci.* 2022,12, 17. <https://files.eric.ed.gov/fulltext/EJ1324807.pdf>



among others, and the use of tools such as Mentefactos, diagrams, concept maps, etc., whenever justified.

The contents of this course, in particular, were:

TOPIC 1: Introduction

1.1 Review of different AI resources

1.2 Forum to Reflect

TOPIC 2: Using text writing tools

2.1 Using the ChatGPT tool

2.2 Using the Perplexity resource, among others

TOPIC 3: Plagiarism with AI

TOPIC 4: Using text presentation resources

TOPIC 5: Application of translators

TOPIC 6: Formative evaluation

TOPIC 7: Closure

7.1 Reflection Forum

7.2 Course evaluation

TOPIC 8: Review

8.1 Homework

8.2 Video

8.3 References

Activities within each topic, depending on the context, include: forums, short videos, assignments, formative assessments, multimedia, animations, etc.

Results

Based on the course evaluations by the participating teachers themselves, with 19 resulting pages, we can summarize the outcomes as follows:

- (a) Increased knowledge of innovative and highly applicable IA resources, generating confidence.
- (b) High motivation and knowledge, practical, interactive, very well structured, proactive and creative course, with formative evaluation.



- (c) Enriching, invaluable and highly practical experience.
- (d) Generating much interest, satisfaction, curiosity, expectation and enjoyment.
- (e) Work at one's own pace and freedom with excellent planning and a high degree of support from the tutor.
- (f) Adaptability to schedules for increased learning.
- (g) Charisma, preparation and dedication of the teacher with constant support and monitoring.
- (h) Highly useful and applicable activities with an emphasis on ethics.
- (i) Contextualized and up to date subjects presented in an entertaining way.
- (j) It is suggested to continue with this type of courses.

In relation to the preferred modality, asynchronous and others suggested by the teachers, we have the following results:

RESULTS: Asynchronous = (74%), Synchronous = (19%), Hybrid = (4%), Depends = (4%).

Conclusion

In order to generate a high degree of preparation in our teachers and satisfaction in our students, it is necessary to train our teachers, tutors, facilitators, trainers and especially the designers of online courses in a whole range of digital resources, systemic instructional design, knowledge and work in educational platforms; additionally, we need to emphasize on effective didactic resources, current pedagogical processes and useful digital tools of the latest generation.

In particular, a well-designed and structured asynchronous course should have at least:

- Solid and clear structure,
- Contextual content,
- Up to date material,
- Interactive elements,
- Multimedia tools,
- Participatory resources,
- Short supporting videos,
- Planned sequences,
- Constant monitoring,



- Synchronous video office hours, not compulsory.

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