

The Teaching of the Infectology Subject in the Degree - Two Years of Virtual Experience

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Abstract

Distance education is a teaching modality with its own characteristics associated with the creation of a particular space to generate, promote and implement situations in which the teaching-learning process takes place.

Distance or remote teaching has two pillars on which it is based: synchrony and asynchrony. In the synchronous stage, students participate in a live class, through a virtual environment that allows them to share the space with the teacher and other students, respecting specific days and times. Digital asynchrony, on the other hand, will allow that student to approach content on demand, that is, they will be able to interact with the content at their own pace. The COVID-19 pandemic has led to the implementation of preventive isolation as a public health measure and with this, new challenges are presented for higher education institutions and especially for careers with high classroom content. To evaluate the impact on the students of the Infectology subject in the Medicine career of the University of Buenos Aires, we analyze the last four years of studying the subject. In virtuality, we observe an impossibility of sustaining the didactic pedagogical standard of face-to-face teaching. This teaching modality conditioned the contents and objectives of the subject.

In the pandemic, we also observed a decrease in the number of students enrolled in the final evaluation, a phenomenon that has not been fully clarified, and at the same time, an increase in the percentage of failed students, probably associated with the lack of practical activities in the classroom.

Keywords: Distance Education; Medical Education; E-Learning in Medicine

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Introduction

Distance education is a teaching modality with its own characteristics associated with the creation of a particular space to generate, promote and implement situations in which the teaching-learning process is developed. In this way, the proposal for regular assistance to class is replaced by a new proposal in which teachers teach and students learn through unconventional situations, in spaces and times they do not share [1].

Despite being considered a new modality, distance education began at the beginning of the 19th century. Isaac Pitman in 1840, Anna Eliot Ticknor in Boston in 1873, and in Boston Gazette, March 1928, offered tachigraphy teaching courses by correspondence, in what was considered as the beginning of this educational modality [2].

Initially, distance education sought to respond to the need for training of adults who, due to different circumstances, did not have time to attend educational institutions [3]. With the emergence of Information and Communication Technologies (ICT), training, updating and remote training processes were mediated. Anyone who had the technological infrastructure and a certain digital literacy

could enter the distance educational offer. ICTs are computational and computer tools that process, store, synthesize and represent information in different ways, establishing other supports and channels to record, store and disseminate new content. From distance education, the concept of e-learning arises, understood as electronic learning, or as the use of information and communication technologies to support educational and learning processes based on online content and shared systems of the shared systems Active knowledge and cooperative learning enhanced online [4].

Distance or remote teaching has two pillars on which it is based: synchrony and asynchrony. In the synchronous stage, students participate in a live class, through a virtual environment that allows them to share the space with the teacher and other students, respecting specific days and schedules. Digital asynchrony, on the other hand, will allow that student to address on demand, that is, he may interact with the content at the pace of it [5].

The Covid-19 pandemic has led to the implementation of preventive isolation as a public health measure and with this, new challenges are presented for higher education institutions and especially for races with high face-to-face content.



On March 20, 2020, the Argentine government decreed the mandatory preventive isolation from which higher educational institutions, chose to continue their distance training. For the education sector, the rapid change to virtual education has represented challenges in infrastructure, educational strategies and in the need for a change in mentality by teachers and students [6].

To evaluate the impact on the students of the subject Infectology in the Medicine career of the University of Buenos Aires, we analyze the last four years of subject course.

Material and Methods

The last four years of the Infectology course at the Muñiz headquarters of the Faculty of Medicine of the University of Buenos Aires (2018 to 2021) were analyzed. The year of course was taken into account, the number of annual rotations, the total number of students who studied the subject, the number of students evaluated, the number of students who approved the subject and the total number of students who were failed.

For our subject we had virtual classes, located in an accessible repository through the Portal of the Faculty of Medicine that replaced the contents of the course, previously dictated in person in the classroom of our chair. Neither the teacher nor the students were able to expand knowledge beyond the time and the content previously formulated in the presentation located in the repository. The chosen virtual support was Power Point.

A virtual practical work was also carried out, in charge of the chair assistants, synchronous, in real time that consisted of the presentation of clinical cases.

Results

From the statistical point of view, it should be noted the decrease of students enrolled in the courses that were issued between 2020 and 2021 compared to 2018 and 2019 (Table 1).

Table 1: Students of the courses of Infectious Diseases of the Faculty of Medicine of the University of Buenos Aires, Muniz Headquarters. Period 2018 – 2021.

Year	Rotations	Students	Evaluated	Passed	Failed
2018 (P)	8	689	390 (57%)	378 (96%)	12 (4%)
2019 (P)	8	710	440 (62%)	416 (94,5%)	24(5,5%)
2020 (V)	7	442	32 (7,2 %)	29 (90%)	3(10%)
2021 (V)	7	353	156 (44%)	135 (86,5%)	21(13,5%)

P: face-to-face; V: virtual

Source: Secretariat of the Chair of Infectious Diseases, Muñiz Campus, Faculty of Medicine, University of Buenos Aires.

In the 2018 school year in the eight rotations of students available to the Chair, they studied 689 students (as regular 682 and free 7) 390 students were paid (approved 378 and disapproved 12).

In the 2019 cycle with the same number of rotations, 710 students were attended (Regular 686 and Free 24).

440 students were paid (approved 416 and failed 24).

In 2020 with the introduction of virtuality there were seven rotations and they studied 442 students.

4 exam shifts were summoned and only 43 students enrolled; 32 students were presented to the final virtual evaluation (approved 29 and failed 3).

In 2021 there were seven rotations and they studied 353 students.

In the first four rotations the final evaluation was virtual and the last three in person.

The final evaluation was carried out in all rotations and 156 students were presented (approved 135 and reprobed 21).

In the virtual instances, the decrease in the number of students who were presented to the exams is notorious, as well as the increase of failed students.

Discussion

The conditions of the teaching imposed by the pandemic and the experience acquired in virtuality lead us to reflect on the pedagogical and didactic aspects introduced in the dictation of the subject.

Virtuality imposed modifications in the teaching process, and despite the efforts made to sustain academic activity, didactic innovations could not replace the personal relationship between students and teachers.

Even less, the semiological practice fundamental link in the formation of future doctors, could reach the standards prior to the pandemic.

The design of the classes did not follow a unique format so that we later observed that the objectives of the teaching and the contents of the classes were not announced in all cases at the beginning of the virtual presentation.

Unlike the face-to-face exhibitions that enable questions and answers, different interventions of the students and the teacher, the virtuality contains the content and puts impassable limits to the objectives sought. However, the design of an exhibition that initially contains the objectives of the class such as definitions, clinical characteristics, diagnostic methods, differential diagnosis and treatment, as appropriate to the subject, can offer the student a 20-23 guide from study to address the topic in question.

Understood in these terms, the Study Guide is the document that allows us to ensure that the subject meets the function assigned to the curriculum and, in addition, serves as an element of transparency and comparison mechanism [7].

The inclusion of the objectives allows us to standardize a minimum of knowledge that will then constitute the basis of the contents in the final evaluation.

But replacing face-to-face exchange is an unattainable objective. Medicine learning must necessarily be face-to-face. That is, an experience that involves all the senses: see, palpate, touch, smell, to have greater incidence with the patient, a conscious being in relation to another in the same space and time. As a learning experience, face to face is the possibility of building a knowledge, guided and guarantor of safe and reliable learning. The possibility of reading in the interaction with the patient the signs, signs and suspicions that participate in medical semiosis is part of that knowledge-to do, arising from the relationship between theory and practice [8].

We consider that the increase in cases failed in our students, in the virtual instance could be related to a lower use of teaching given, the lack of practical work in the room and the impossibility of reciprocity of medical knowledge between students and teachers.

Obviously, we cannot teach or evaluate skills and skills that are



part of the degree curriculum, such as the patient exam with meningeal commitment. Competition is the degree of use of knowledge, skills and good judgment associated with the profession, in all situations that can be confronted in the exercise of professional practice [9].

However, we were able to offer a virtual, synchronous, real-time practical work that allowed the exchange of the teacher and the students logically limited to a previously established content, according to a diagram designed and presented to the students at the beginning of the course.

More recently in the transition to the face-to-face, we develop face-to-face practical work, under the conditions of the Biosafety Protocol that was presented at the Faculty of Medicine at the beginning of the pandemic in 2020.

Already at the end of this school year, crossed by the second wave of the COVID in the middle of the year, after the decline of the new contagious, the introduction of vaccination and this new increase in cases in recent weeks, after the detection also of the detection of also the detection of the omicron strain, the perspective for the school cycle that will begin in February of next year are conditioned by the future behavior of the pandemic.

Conclusions

In virtuality, we observe an impossibility of sustaining the didactic pedagogical standard of face-to-face teaching. This teaching modality conditioned the contents and objectives of the subject.

In the pandemic we also observe a decrease in the number of students enrolled to the final evaluation, not entirely clarified and at the same time, an increase in the percentage of failed students.

These two phenomena will require an evaluation of the reasons and circumstances that originated them in order to solve the deficits observed in virtual education.

For the future school cycle, it is expected that the teaching of our

subject acquires a hybrid model that combines the virtuality of the theoretical classes with the exercise of face-to-face practical work according to the conditions established in the Hospital of Infectious Diseases "Francisco J. Muñiz" according to an eventual increase in the number of COVID international cases and the restrictions for the circulation of students and teachers as happened between 2020 and 2021, before the controlled return to the face-to-face.

Declarations

The authors declare that they have no conflicts of interest, that the work has been approved by the ethics committee responsible in the workplace, and do not declare means of financing of the work carried out.

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