## Practical Teaching in Times of a Pandemic

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#### **Abstract**

This communication seeks to reflect on teaching, particularly graphic design in a time of pandemic (covid-19). The challenges that were unexpectedly posed to teachers, who were forced to change the way of teaching from face-to-face to virtual from one moment to the next. The facilities and difficulties that both, the teacher and the students, felt throughout their classes. Since the Bachelor's Degree in Design and Graphic Production at ISEC Lisbon is essentially practical, it is interesting to understand how the adaptation was carried out. The main advantages of distance learning are the possibility for people who are isolated and infected with Covid-19 to be able to attend classes. Also, there is the opportunity to share works and ideas among colleagues by displaying them on Zoom (during the presentation). However, without the guarantee that all students are watching, as the presence of colleagues is not as evident as in face-to-face teaching, students feel more comfortable, which allows the presentation to run better.

Keywords: Graphic Design, Pandemic, Teaching, Distance Learning

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#### Introduction

The Covid-19 outbreak was first identified in December 2019 in Wuhan (China) and has affected different fields globally, namely economic, political, social, and educational. "The COVID-19 pandemic reminds us that in times of turmoil, decisions made for the greater good can have collateral impacts. It's becoming evident that efforts to contain the virus and limit social distancing are increasing precarity for some people, especially those already in socioeconomically disadvantaged positions" (Eve-Marie, 2020).

Due to the pandemic (Covid-19), the blocking measures and social distancing in most countries have led to the closure of schools from primary to higher education. By mid-March 2020 about twenty European countries had schools (public and private) completely closed, with different measures taken in different countries. The goal of closing schools was to try to minimize contact between students and consequently reduce the number of cases. However, with the closing of the schools it was also seen that the existing socio-economic disparities between students increased: "yet, as is becoming apparent to education professionals like me, the digital divide exists among our students, and, like everywhere else, it reflects deeper socio-economic, gender and race inequalities. Existing disparities influence who are the "haves" and "have-nots" of information and communication technology" (Eve-Marie, 2020).

The shift from face-to-face learning to online learning has inevitably brought many questions about teaching, making technologies even more present in school activities. "After all, the context of work-from-home is far more daunting than working from a segregated space meant only for professional work... There is always an iota of uncertainty associated with the online mode. More often than not, the classroom on the computer screen is a dead board with dots showing only the first alphabet of each attendee's name. Even the teacher has to turn the camera off to ensure longer hours of smooth Internet connectivity... A few of them log in right at the beginning of the class, keep the camera and mic off throughout, and stay on in this 'unheard-invisible' mode until the end of the class. Some of them return to the class towards the end, turning on their mic to say a few things to register their presence" (Pathak, 2022, p.65). Teachers had to use software daily that was only used sporadically, and these tools are essential for teaching remotely. The transition from face-to-face teaching to remote teaching was a completely different experience for some students and teachers, forcing them to adapt quickly because there were no alternatives and because it was a legal imposition (prohibition of face-to-face classes). The educational system and the teachers adopted "emergency learning" through various digital platforms and were forced to adopt a system that nothing (educational system) and no one (educational leaders, teachers, and students) was prepared for.

## Description of the presential and remote classes

The aim is to analyze how the classes of Introduction to Design and Design I - Graphic Design at ISEC were, curricular units of the degree in Graphic Design Production, referring to the first year, in the first and second semesters in the academic year 2020/2021.

A summary of the curricular plan of these two curricular units will be made, to better understand the practical constraints that exist, and then the exercises that were developed in the school year 2020/2021 will be synthetically described.

The curricular unit of Introduction to design seeks to prepare students for the area of design exploring its connection with economic, political, social, and technological aspects. Its objectives are

- Sensitize the student to the need for prior and critical analysis of the contexts in which design intervenes; the importance of drawing, as a means of visual reasoning and exploration of ideas; the descriptive memory, as support for self-criticism and an instrument of awareness throughout the project; the construction and analysis of models and prototypes; sustainability and inclusion; moral, ethical, deontological and legal issues applied to Design.
- Promote and develop skills of communication and discussion of ideas; synthesis and visual communication; application of problem-solving methodologies in Design; and present / make known the notion of social responsibility; stimulate experimentation as a technical development;

The curricular unit of Design I - Graphic Design aims to continue the knowledge acquired in the curricular unit of Introduction to Design. Its objectives are:

- Develop skills in analysis, planning, and execution in projects of graphic and communicational scope.
- It is intended that in each project the student makes use of research and exploration of their knowledge along with the information provided, thus enhancing their thinking, creativity, and critical combined with existing skills and those learned.
- Seek those students acquire essential skills to develop and manage graphic/communicational works, from concept creation to production planning.

The 2020/2021 school year started in October 2020 in a face-to-face format, and classes ran within the new normal, however, some classes had to be remote due to the need to put the class in isolation due to a student having had contact with someone infected with Covid-19. At the end of January 2021, due to the pandemic state classes had to be all remote until February 9, 2021 (end of the semester).

The classes remained on the same schedule, however, because there were classes of four hours duration this period had to be adjusted to a maximum of two synchronous hours (virtual class) plus two asynchronous hours (autonomous class, in which the students continued to independently develop the exercises, assignments requested by the teacher). There were two weeks with remote classes in the first semester (with an average of three classes per class, classes that were missing to finish the semester). The students did the final work of the curricular unit and presented it to the class remotely.

The synchronous (remote) classes had a maximum duration of two hours and consisted of classes for the analysis and development of the final work as well as clarification of students' questions. During the class, each student presented his or her work, and the teacher and classmates gave constructive criticism about the improvements that could be made to make the work more complete. These classes became interesting because everyone could see the work of their classmates, something that did not happen so often before. After all, in the face-to-face class, the teacher circulates the room (I mean from desk to desk) and talks to the

students in an individual/personalized way. In this sense, it allowed the sharing of ideas and different points of view, making the presentation enriching for everyone. It is considered that this sharing was an asset because there was mutual help and consequently the learning benefited. In these two weeks, it reinforced the possibility, for those who wanted, to send an email with the work developed for discussion (student and teacher) proposing improvements to be made. Only a few students did this, but those who did ended up benefiting from more constant monitoring, which resulted in enrichment not only for that work but also for future work since the knowledge remains.

As negative aspects we highlight the isolation of students (contributing to social isolation, with all the impacts that this entails); there were fewer social relationships among classmates; inability to deliver the physical work (paper/card), the work is usually printed by students to have a greater sense of how it would look if printed in real size. As well, throughout the development of the whole process they are also asked to make sketches, and prototypes, and to print what they are developing in digital format so that they are aware of how the final work would look like to be delivered to a client.

The second semester began on March 1, 2021, remotely and ran until mid-April 2021 for a total of six weeks, the class took eight classes during this confinement period.

The semester began with the presentation of the proposed contents for the curricular unit of Design I. As it happened in the first semester, this one was also a four-hour class (two synchronous hours plus two asynchronous hours). After the usual introductions of students, teacher, and the curricular unit, a first group exercise was requested (consisting of two to three people) which consisted of the research and analysis of a graphic image, later presented to the class. Also in this class, the students had to group and propose to the teacher the theme they wanted to analyze since all groups had to have different themes. It was interesting to see how willing and quick they were to organize themselves, by sending private messages in the program used for the remote class. Very quickly the groups were formed and the topics that would be presented in the following classes were found. Afterward, the groups were divided into independent virtual rooms to organize themselves and start developing the work.

The second and third remote classes were used for the presentation of the research done by the students, the research consisted in analyzing the graphic image of a product of their choice and for that, they should take pictures and analyze their choices. Something that was well received by the students who divided tasks among the group and each one photographed and analyzed a part of the work. These two classes consisted of presentations made by the students remotely, when a presentation was over their colleagues (students) were invited to ask questions and/or give their opinion about the analysis made.

The fourth remote class consisted of the teacher explaining the syllabus and presenting the second exercise to be developed individually, in which the research done in the previous exercise would be related, in the sense that it was a "preparation" for the second exercise.

The fifth remote class also began with the presentation of the syllabus, then the students spoke about the development of their work asking the teacher's opinion and asking questions they considered pertinent. It was interesting the critical analysis that was provided because everyone saw each other's work in development and could give their opinion about it. This sharing was very enriching because other points of view were approached that the student who was developing the work was not aware of. The weak point in this type of class is that it

is very demanding for students and teachers. Students end up getting bored with the time they wait until it's their turn to pose questions, that is, despite being invited to contribute with ideas/suggestions to strengthen the work of colleagues, it was felt that throughout the class their concentration faded, there were moments when they were not present (absences to go to the bathroom, the kitchen to drink water or simply because their thoughts were wandering), motivating students from a distance is a very demanding task for teachers.

The sixth remote class consisted in continuing the development of the work, i.e., it turned out to be a similar class to the previous one, with students who wanted to ask questions and/or show the evolution of their work, with everyone watching and whenever they wanted, they could intervene with their opinion to help their classmates.

The seventh and eighth remote lessons were used for the students to present their final work, each student presented and justified the choices of their final work. Also in this lesson, the statement of the next exercise was presented. These two classes were the last remote classes, later the classes returned to face-to-face, but not all of them were remote at the same time. As the curricular unit of Graphic Design is theoretical and practical, it was one of the first to leave distance learning and move to face-to-face learning. In this work that the students did remotely, there was a certain tolerance regarding the final result because if the same had been done in face-to-face classes it would have had other monitoring and students would naturally be asked to print the work presented to have a more realistic notion of the final result (we mean to understand what they would be delivered to an eventual client because sometimes something that looks interesting on the computer, when printed is not legible and/or the colors are different).

As of April 19th, 2021, the classes of the Graphic Design curricular unit started to be taught face-to-face within the "new normality", naturally respecting all the recommendations of the Directorate-General of Health.

Learning activities in higher education institutions have been significantly affected due to the pandemic of COVID-19. The education system around the world chose to use online teaching and learning during the peaks of the pandemic, rather than the traditional face-to-face classroom, to try to mitigate the contagion. In this context, facilitating better access to information and communication technologies has become increasingly essential.

The adaptation to the new teaching method was new, both for teachers and students because they had to adapt instantly, reinforced by the fear resulting from the uncertainty of what might happen in the future (it was something never experienced before, in fact, it was transversal, taking the world population by surprise [including virologists, epidemiologists, and scientists], all sectors of society were affected). The uncertainty and apprehension about the future remain worldwide, due to the constant emergence of new variants of the virus (Covid-19), even though a certain new "normality" is now being experienced.

As this remarkable and unique experience was felt in different ways by people, some adapted to the technological change more easily than others, however, there is the issue of mental health that was neglected because some students (especially the less social) saw the remote classes as an opportunity not to leave home, using as an excuse the fact that they felt safer, i.e., not infected with the virus (Covid-19); others took it as a way to have more time for themselves.

# Questionnaire and analysis

In the following school year, and after the usual school vacation break, a short questionnaire was sought to understand the students' perceptions and how their experience of the face-to-face and online class system had been due to the pandemic. The questionnaire was sent to the undergraduate class that had been with the teacher/researcher for the entire school year, i.e., both semesters. The class consisted of twenty-five students of whom fifteen answered the requested questionnaire, eight male, six female, and one undefined. The questionnaire consisted of thirteen questions that will be described below (table 1):

Questions	Answers
1.Age:	(Free numerical answer)
2. Gender:	(Single choice answer) Female Male Undefined
3. Did you feel motivated to study and to develop the works requested in the curricular units?	(Single choice answer) Yes No Sometimes
4. During the remote classes did you feel motivated in the curricular units of Introduction to Design and Graphic Design?	(Single choice answer) Yes No Sometimes
5. As the curricular units of Introduction to Design and Graphic Design are essentially practical, what difficulties and facilities did you feel during the attendance of the 100% remote classes?	(Free response)
6. In the 100% remote classes, last year (the school year 2020/2021) which did you prefer?	(Single choice answer) Classes with the whole class in attendance Classes with reduced virtual classrooms
7. Last year (the school year 2020/2021) which class format did you most enjoy attending?	(Single-choice answer) 100% face-to-face 100% distance (remote)
8. What did you like the most about 100% face-to-face classes?	(Free response)
9. What did you like the most about the 100% remote classes?	(Free response)
10. How satisfied are you with the return to 100% face-to-face classes?	(Single choice answer) Very satisfied Satisfied More or less satisfied I am confused and cannot adapt Disliked
11. Why is it so important for you to attend face-to-face classes?	(Multiple choice answer) In the face-to-face classes I perform and grade better Facilitates my concentration and study organization It forces me to leave home and have a social life It is important for the development of exercises and projects with other classmates It facilitates the learning process It allows me to have access to resources, such as the library and shared work spaces such as labs, workshops and other spaces It is irrelevant to go to class in person, I can take classes remotely without a problem

12. In the present school year (2021/22) would you like to attend classes in what class format?	(Single-choice answer) 100% face-to-face 100% distance (remote) Hybrid format (face-to-face and remote)
13. How do you rate your level of preparation regarding the contents of the previous school year?	(Single-choice answer) Very difficult Difficulty Prepared Very prepared

Table 1: questions and their answers from the questionnaire.

To question number three: "Did you feel motivated to study and to develop the works requested in the curricular units?", eleven students answered yes, three answered sometimes and one answered no.

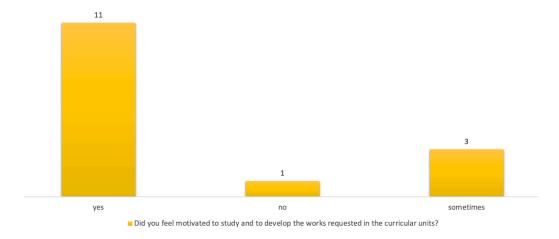


Figure 1: graphic with answer to the question number three.

To question number four: "During the remote classes did you feel motivated in the curricular units of Introduction to Design and Graphic Design?", ten students answered yes, four students answered sometimes and one said no.

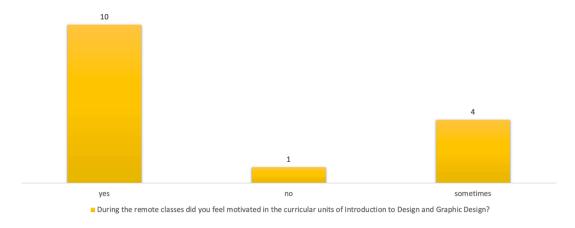


Figure 2: graphic with answer to the question number four.

To question number five: "As the curricular units of Introduction to Design and Graphic Design are essentially practical, what difficulties and facilities did you feel during the attendance of the 100% remote classes?". As this is an open-ended question, the students

answered that the difficulties they experienced were: lack of communication between classmates that could help in the exchange of ideas; lack of direct support and motivation; difficulties (interaction, in seeing the works come to life, printing the works, perception of the subject/works; in creativity and motivation to do some works); as a facility most of them consider the schedule, the organization of their schedule, gaining more time for other activities.

To question six: "In the 100% remote classes, last year (the school year 2020/2021) which did you prefer?", eight students answered that they preferred the classes with the whole class attending and seven preferred the classes with the reduced virtual classrooms.

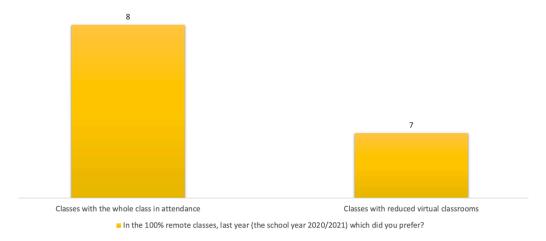


Figure 3: graphic with answer to the question number six.

To question number seven, "Last year (the school year 2020/2021) which class format did you most enjoy attending?" five students responded that they most enjoyed the 100% face-to-face classes while ten enjoyed the 100% remote classes.

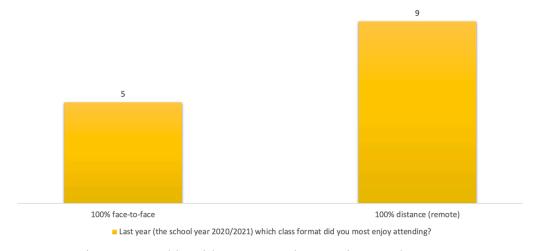


Figure 4: graphic with answer to the question number seven.

To question number eight: "What did you like the most about 100% face-to-face classes?", the students answered that they liked to get to know their classmates and professors, the direct support, and the possibility to talk to people; to get answers from the professor faster; others answered that they did not like anything.

To question number nine: "What did you like the most about the 100% remote classes?", they said they liked the safety, being ability to organize their time better; the reduction in commuting costs; being able to be more concentrated, and having more time to do their work.

To question ten: "How satisfied are you with the return to 100% face-to-face classes?", one answered very satisfied, seven answered satisfied, four answered I am confused and can't adapt, and three answered that they don't like it.

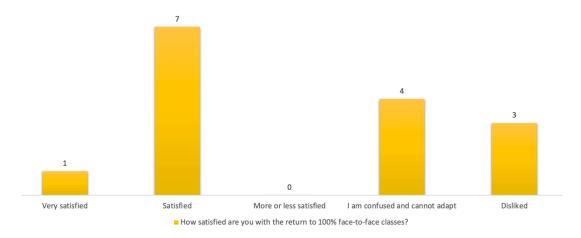


Figure 5: graphic with answer to the question number ten.

In response to question number eleven: "Why is it so important for you to attend face-to-face classes?", they answered that they force you to leave home, to have a social life; that it facilitates the learning process that it is important for the development of exercises and projects with other classmates, facilitates the learning process; allows access to resources, such as the library and shared workspaces such as laboratories, workshops, among others; in face-to-face classes, they consider that they perform better, that it facilitates concentration and study organization; on the other hand, one-third of the students think that it is irrelevant to have face-to-face classes, preferring remote classes.

To question number twelve: "In the present school year (2021/22) would you like to attend classes in what class format?", one student answered 100% face-to-face, three answered that they liked 100% remote (remote) and eleven answered they liked in a hybrid format (face-to-face and remote).

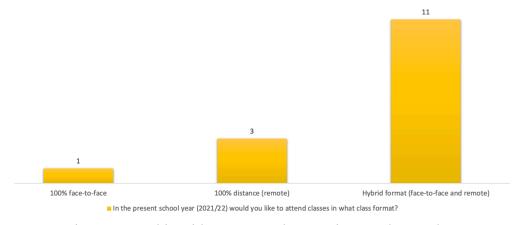


Figure 6: graphic with answer to the question number twelve.

Regarding the last question (13): "How do you rate your level of preparation regarding the contents of the previous school year?", three students answered that they had difficulty, five answered that they were prepared, and seven answered that they were very prepared.

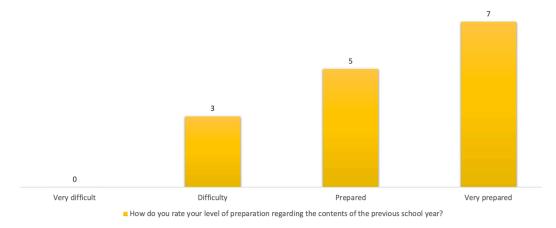


Figure 7: graphic with answer to the question number thirteen.

With this questionnaire, we can conclude that most students felt motivated both in the curricular units of Introduction to Design and Graphic Design. About the units of Introduction to Design and Graphic Design, the students felt difficulty in exchanging ideas with colleagues about the work done in class and also in seeing the final product (prototype). As an added value they consider that they were able to organize themselves more practically and effectively, and consequently, they were able to gain time for more activities, because, for example, they stopped "wasting" time on public transportation.

Regarding the preference for remote classes, most of the students said they preferred to have remote classes with the whole class rather than in small classrooms. The fact that the classes were for everyone had the added value of always sharing their questions and work together, because when they wanted to present the progress of the work to the teacher, the classmates also saw what they were doing and were invited to give their opinion.

Most students (two-thirds) liked attending the 100% remote classes better, because as mentioned they felt more secure and had more control of the time to do the assignments and other activities. About the 100% face-to-face classes, most of the students answered that they liked the fact that they could talk directly to the teacher and get a quicker answer/guidance about the work they were doing. Regarding the importance of face-to-face classes, most of the students answered that it forces them to leave home, that they have access to other resources/spaces that they don't have at home, and that it facilitates the development of the work/projects because they interact with other classmates and there is a more spontaneous exchange of ideas. Regarding the return to 100% face-to-face classes, more than half responded positively, i.e., they feel satisfied or very satisfied. The remaining seven students said they did not like or had difficulties adapting to the 100% face-to-face class format.

It is also interesting to note that most students would prefer to be attending the current school year with classes in a hybrid format, i.e., face-to-face and remote. This indicates that for the students, the most "balanced" class format would be a mixed class modality, in which they would gain from the positive points they listed, both from face-to-face and remote classes.

Although the academic year (2020/2021) was different, with uncertainties and rapid changes, the students consider that they were prepared, i.e., that the contents taught prepared them for the following years of the degree, as well as for the future.

### **Final Considerations**

We can conclude that there was a change in teaching and learning that for some time had been trying to be implemented little by little, however with covid-19 it had to be executed faster, even with flaws and without tests, that is, it was implemented and improved at the same time it was happening. It was and continues to be a learning experience for schools, teachers, and students. On one hand, there was the uncertainty of the virus and what came from it, it seemed that we were guided by something (virus) that was still strange to us, we lived day by day with the uncertainty of whether the next day the classes would be presential or remote because when the virus appeared little was known and in Portugal if a student had been infected and/or had had a risk contact with the class, all the students would have to stay in isolation, and the teacher would be forced to give the class remotely. These situations often happened on the spot, i.e., if the teacher had a lesson prepared to be more practical, he or she would have to conduct it remotely, which could make it difficult for the students to grasp the knowledge.

These students lived a unique experience, whether it is considered good or bad, it will be something that will shape them for the rest of their lives, and this reason, it is important to consider this experience, to take something away, to understand what was learned, and not to stop in time, that is, not to go back. As seen through the short questionnaire proposed, the students liked having remote classes, because it was an experience that they lived and that now seems to be difficult to take back in its entirety. The theoretical-practical units, as the name indicates have to have a good practical part that is essential to be done face-to-face, the immediate interaction with colleagues is important and for some, essential.

It is important to be able to transmit to the student the way he should proceed in the case of design, that is, the process he should follow, the way he should "think" and this is something that in the remote mode can be difficult to demonstrate and to see if the student is doing it the right way. In remote, design classes you can't see the student executing, while in face-to-face classes you can have another notion of the path the student is developing and if he is doing it consistently and coherently. Last school year (2020/2021), there was content that needed to be developed differently with constant interaction, and because everyone was at their computers, that didn't happen. Students ended up having more time to develop their work because the class was not all synchronous, having an asynchronous part, but on the other hand, there was not the possibility of experiencing some realities that students who are currently finishing the 1st year experienced.

In the face-to-face classes last school year (2020/2021) we tried to compensate for the gaps that may have existed in the remote format classes, i.e., we wanted them to develop the work with the teacher's direct monitoring and to make prototypes of the works requested, something that enriched the works and consequently, They were enthusiastic, although at first, they felt a certain reluctance to elaborate the physical and printed prototypes, because besides being a generation more turned to technology and digital they were accommodated, and it was necessary to encourage them, reminding them that with the print they would have a better perception of the final (real) result.

As with everything in life, there are pros and cons, however, the most important thing is to know how to take advantage of opportunities to evolve, so it is considered that students had the opportunities possible within the pandemic period.

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