

The Experience of Remote Teaching in Higher Education: A Scenario of Challenges and Opportunities

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In March 2020, within a short space of time and no prior preparation, the educational offer of HE institutions shifted from in-person teaching to remote online teaching. All teaching and learning activities started to be conducted through digital platforms and technologies, rarely used before then.

This study used qualitative methodology, two data collection instruments were used: semi-structured interviews with 10 teachers from different institutions, and opinion essays about the experience written by 10 students. To analyze the data, we conducted content analysis.

The results obtained suggest that this experience of teaching and learning in a digital environment represented a great challenge, both from the teaching point of view and the way students learn. In addition, it boosted the digitalisation of pedagogical action, advocated for more than a decade by the Bologna Process, opening new paths for the reformulation of teaching and learning processes in higher education. This challenging scenario has opened a window of opportunity for a new paradigm of teaching to emerge, based on the use of digital technologies.

Keywords: digital learning, digital technology, higher education, remote learning, teacher training

INTRODUCTION

The impact of the pandemic, which began in March 2020, and the consequent physical closure of educational institutions, led to an almost immediate shift from face-to-face teaching to emergency remote teaching - ERT (Hodges et al., 2020). In Portugal, there had never been such an experience in Higher Education.

The biggest challenge faced by educational systems in recent times has been the disruption of the teaching and learning processes of students, in Portugal and in the world. This provided a broad reflection

on new teaching methodologies, the creation of digital educational environments and the use of alternative forms of assessment (Guangul et al., 2020).

The reflection on how to teach and learn, in a process based on digital tools, has led to a change in the educational paradigm (Marshall, Shannon & Love, 2020), starting with educational technologies, and involving teachers and students in the same reflection and commitment (Flores & Swennen, 2020). It is important to mention that new technologies and active methodologies, inherent to student-centered learning (Gover, Loukkola & Peterbauer, 2019), were already part of a directive of the Bologna Process, which has taken a long time to be implemented (Veiga and Neave, 2015; Carvalho et al. 2020). In contrast, the advance of this educational change (UNESCO, 2020) took place in a matter of weeks, driven by the health emergency experienced on a global scale. The conceptual framework of student-centered learning assumes that both students and teachers are “critical consumers, creative producers of knowledge, co-managers of the teaching and learning processes and partners in pedagogical negotiation” (Jiménez Raya, Lamb & Vieira, 2017, p. 21), which presupposes a change of culture. Thus, it is of interest to rethink the experience of emergency remote teaching, in the context of Higher Education, in the first period of COVID19 confinement, considering the challenges and opportunities provided by the intensive use of digital tools.

REMOTE EDUCATION AND THE RECONFIGURATION OF HIGHER EDUCATION

During the period of confinement resulting from the COVID-19 pandemic, it was necessary to move from the face-to-face classroom to a virtual classroom by adopting digitally mediated teaching. According to Hodges et al. (2020), the transition from face-to-face teaching to emergency remote teaching (ERT), aimed not to “re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis”. In this transition process, teachers and students had to reflect, adapt, change, innovate and use digital platforms, with new student-centered strategies, suitable for ERT (Vale et al., 2021).

This virtualization of educational systems (Nobre & Mouraz, 2020), highlighted the need for teacher training and forced intensive training in the first period of the pandemic, focused on education technologies, to strengthen digital literacy (Rahim et al., 2020), undertaking a precursor experience of the reconfiguration of education for the digital age (European Commission, 2020). To achieve this, educational institutions had to become a space for change, in order to respond to disruptive changes in the way of teaching, interacting with students and reflecting on knowledge. In this sense, continuous training made it possible to guarantee the use of new technologies, as part of the processes of learning and appropriation of knowledge, in order to guarantee a differentiated and inclusive response for all students, in this initial period of confinement (Huber & Helm 2020; Judd et al., 2022; Flores et al., 2021). Today, teacher training is consensually recognized as a quality factor in teaching and learning. The new roles played by teachers, students and the educational community had an impact on the educational process. It was necessary to address different levels of digital skills and inequality in access to technological resources, both for teachers and students. Studies carried out show that this led to different processes of adaptation to emergency remote teaching by the educational community, with previous experience of distance learning in some Higher Education institutions being advantages, as well as support at the leadership level (Huber & Helm, 2020; König, Jäger-Biela & Glutsch, 2020).

Globally, advances in the strategies used in remote teaching are recognized, as well as in the sharing of materials via digital platforms. However, the same did not happen in the evaluation strategies, especially in the summative evaluation. With regard to remote summative assessment instruments, several challenges arose in terms of equity and equal opportunities, given potential problems of plagiarism and lack of ethical values. In Higher Education, a planned and reasoned assessment is essential, which did not always occur in the pandemic period that imposed some flexibility on teachers and institutions. This situation was stressful for teachers who should be able to carry out a quality evaluation, which includes feedback to students about their learning. In the context of remote teaching, it has become important to rethink assessment practices as a constituent part of the teaching and learning process in the context of Higher Education (Bubb & Jones, 2020).

Currently, although privileging face-to-face teaching, Higher Education continues to maintain digital platforms and tools in educational daily life, in order not to exclude any student, and to attend to the reality of the social dimension in Higher Education (Farnell, Skledar, Matijević, & Schmidt, 2021). Which sets up a hybrid model of teaching and learning (Uys, 2019).

METHODOLOGY

With the purpose of understanding the perceptions of teachers and students about the experience of emergency remote teaching in Higher Education, during the first period of COVID-19 confinement, this exploratory study followed a qualitative methodology. Data collection, due to the recommended social isolation measures, was carried out online using accessible digital platforms and through two techniques: semi-structured interviews with teachers, carried out via Zoom, and balance sheets (opinion essays) produced and submitted in Moodle by students. This stage of the research course took place between the months of June and July 2020 and according to the availability of each of the participants. The group of study participants (n=20) consists of teachers (n=10) from different courses: Engineering, Psychology, Education, Law, Management, Tourism, Communication, International Relations and Architecture (in the text identified with the letter T) and students (n=10) attending different courses and at different levels, who after our invitation consented to participate (in the text identified with the letter S). The interviews were conducted with the support of a script designed to collect information on the following dimensions: implementation of remote teaching through digital platforms, training of teachers in the use and maximization of digital platforms, collaborative work by teachers, planning and reflection on the renewal of practices in the educational community, student motivation and participation.

The collected data, organized into two distinct groups, were initially submitted to content analysis using the NVivo version 12 Pro software. The analysis structure was defined through consensus among researchers and integrated previously established categories, based on the aforementioned dimensions and emerging categories, such as: “interpersonal relationships in the online teaching and learning process” and “access and experience with information technology and communication (ITC)”. In a second stage, the perceptions of the two groups of participants were triangulated. This methodological approach, guided by ethical principles, obtained informed consent from the participants regarding the purpose of the study, data collection procedures, protection of individuality, anonymity of participants and destination of the collected data.

RESULTS & DISCUSSION

The presentation and discussion of the results begins with a brief review of the scenario that enabled the experience of remote teaching in Higher Education, as it was at the genesis of the present study and allows its contextualization.

Remote Learning in Higher Education: The Possible Alternative in Times of Pandemic Crisis

By spring 2020, the transition from face-to-face teaching to remote teaching, or online teaching and learning, became the possible alternative for Higher Education institutions to ensure the continuity of courses and student learning. The existence of available resources, such as the communication and collaboration platforms Zoom and Google Teams and the Moodle learning management system (Uys, 2019), facilitators of videoconferencing, file storage and sharing and communication, paved the way for rapid adoption of emergency remote teaching: “the order to switch from face-to-face to distance learning classes arrived on Friday, March 13, 2020, to start on March 16, 2020, the following Monday” (T6). As the data reveal, the Higher Education institutions, the teachers and the students, were not prepared for the transition to remote learning, however, and in the absence of an alternative, all actors made an effort to adapt, regardless of their level of knowledge and previous experience with digital tools. Despite the existence in the country of some teaching and learning experiences using new education technologies and

the provision of e-learning courses in some universities, accessibility and effective use of digital platforms were not widespread in Higher Education.

Remote Learning in Higher Education: Challenges

The sudden digitalisation¹ of the educational offer in Higher Education, in an emergency context, has posed institutions, teachers and students a set of new challenges, in this article we highlight the following:

Teachers Training and Digital Skills

The sudden entry into remote teaching has placed the Higher Education institutions of the study participants with the challenge of training teachers and students to develop the digital skills necessary for the proper use of digital platforms. At the same time, teachers and students were faced with the challenge of changing roles and practices, that is, of replacing the pedagogical approach, which, in the case of teachers, implies the challenge of pedagogical training. Most institutions sought to overcome the first challenge by offering an online training plan, of an optional nature, aimed at teachers (and students) for the acquisition and development of digital skills. The main objective of which was to ensure the efficient use of available digital platforms in the teaching and learning processes.

The number of hours of training attended by each teacher varied greatly. If, for some of the teachers, this training was above all a possibility of improving and deepening their digital skills. For most teachers this was a new world to explore, and training required greater investment. All teachers expressed satisfaction with this training offer. For some of the teachers, it was relevant because it allowed them to overcome the initial challenges and, above all, develop digital skills: “the competence changed significantly (...) from a total lack of knowledge to being able to ensure remote teaching” (T4). For others, users of new technologies in a personal context, as it constitutes an opportunity to know how to use them in the context of the classroom: “the need gave me some time to acquire knowledge and create a basis of confidence to use the platform for teaching” (T1).

Knowledge and Pedagogical Skills for Teaching Online

A significant part of the teachers quickly understood that in the virtual context of remote teaching, “student participation and collaborative work constituted a challenge” (T3) and, on the other hand, that “making a dynamic synchronous class (constituted) a greater challenge than the face-to-face class” (T1). The new context placed them with the challenge of having to change pedagogical practices and resort to alternative teaching and learning strategies and methods that would allow them to engage, capture the attention and interest of students. And it induced that, progressively and according to the specificity of the courses, they had introduced changes in the organization of classes and tried some of the so-called active methodologies, among others: project-based learning, debates, questioning, flipped learning, practical exercises:

Regarding the theoretical component, there was a need to reduce the duration of the teaching moments and the practical activities needed to be adjusted to distance learning and had to be reinforced with asynchronous activities. Small work groups were also created to be carried out collaboratively among the students and with the teacher -considering the resources provided by the platforms for monitoring by the teacher of the work to be done (T5).

Consequently, this first experience of online teaching contributed to the awareness of some teachers of their pedagogical limitations, both in terms of organization/planning of classes and of online teaching and learning strategies and methods, and for their specific training needs, beyond digital skills.

I am aware that I have to evolve more in the pedagogical practices of remote teaching. In any case, I believe that these practices have become even more consolidated in my teaching practice. // In fact, if it were not for this context, I would probably have postponed entering

online teaching and the new pedagogical practices that this type of teaching requires to be successful (T2).

Thus, most teachers discovered, from their own experience, that the online teaching and learning ecosystem had requirements and included components, which alerted to the need for Higher Education institutions to reinforce the continuous training of teachers in the area of pedagogy in general, and in particular pedagogy for online teaching. This trend, however, was not widespread.

A (reduced) group of teachers did not feel the need (or confidence to) change their pedagogical practices. The change, in these cases, was restricted to the incorporation of terminology from the e-learning environment and to the “transposition from face-to-face to non-face-to-face (...) with a minimum of changes in the modus operandi” (T3). In other words, maintaining the organization of face-to-face classes and the use of traditional methodologies in teaching mediated by digital platforms. If extensive theoretical classes, based only on exposition, often translate into a waste of time, in the context of emergency remote teaching, as highlighted by some students, they proved to be a decontextualized practice, which contributed to the demotivation, if not all, of a significant part of the students:

Other teachers were not able to achieve learning with the new technological means that would motivate all students, (...), either because of the long hours of classes, or because of the archaic system (...), for the new platforms implemented, the integration of more active strategies is essential. that can capture students in a positive way (S5).

On the other hand, whenever teachers showed openness to the new modality and made an effort to change pedagogical practices, students reported that digital platforms had facilitated communication between peers, collaborative work and learning, valuing its impact in improving results, but above all the active role they had taken on in their learning process:

We started to arrange online meetings between colleagues in the after-school period, and the work was being done literally in groups, with live text readings, debates on controversial aspects, and that for me was the best part! I learned a lot from my colleagues, and I had the feeling that I was contributing in a unique way to their learning, in peer work (S7).

The change in the student’s role in the learning processes was also reported and valued by the teachers, who recognized that the introduction and persistence of active pedagogical practices had stimulated the involvement and interaction of students, effectively making them more attentive and participative.

Remote Assessments

Data analysis also revealed that, in the context of emergency remote teaching, the summative end-of-semester assessment also posed challenges for both teachers and students. Although the former received specific training on assessment via the Moodle platform, for some of the interviewed teachers, summative assessment was the biggest challenge. This theme, in addition to being central to the reports, continued to be the subject of questioning, which constitutes evidence that this challenge persisted:

It was in terms of assessment that I felt most distressed. I tried to learn as much as possible in the training sessions made available by the university on the assessment tests carried out by Moodle. I think I still have a lot to develop in this area! Of all aspects, I believe that the difficulties and challenges arising from the assessment moments in the online modality made me critical of this option (...) online assessment should be done in a closed system, otherwise irregularities can be many (T2).

In the group of students, the challenge of summative assessment also emerged. “Some of them reported similar concerns to those of the teachers and considered that it should be carried out exclusively in a face-to-face context, given that neither the instrument used (Moodle), nor the care taken to avoid potential fraud, were able to ensure the fairness of the process. For other students, the online summative assessment did not pose any challenge, on the contrary, they considered that the submission of tests or works through the digital platform was the most correct and appropriate to the context. The assessment challenge also manifested itself in terms of formative assessment and teacher feedback. The reports of some students referred the lack of articulation between the new strategies and methods of teaching and learning and the assessment, underlining that the fact that they did not receive any feedback on the work carried out “did not allow them to overcome the difficulties or mistakes made” (S7). and thus, drawing attention to the role of formative assessment and teacher feedback as strategies for learning.

From Remote Learning to Blended Learning

I believe that the use of digital platforms can be complemented with face-to-face teaching, namely Moodle, Teams, and Zoom, should be maintained in the next academic year 2020-2021 (S6).

I believe that there are advantages in distance learning, in small and medium-sized classes and with more solid pedagogical practices. That is why I advocate a hybrid system and not entirely online (T1).

The face-to-face/non-face alliance will be an excellent recipe because it exploits the benefits of both solutions and mitigates their respective drawbacks (T4).

Finally, the analysis reveals that most participants (teachers and students) prefer face-to-face teaching, however they recognize that new educational technologies facilitate communication between all those involved in the educational process and can promote active learning. Thus, most recommend continued use in face-to-face learning environments. In other words, they recommend a blended learning in which face-to-face and online activities can be integrated. This is a scenario that represents a new challenge for both teachers and students and calls on higher education institutions to develop and ensure effective blended learning.

Remote Learning a Window of Opportunities

Spring 2020 was an unprecedented time for Higher Education, in Portugal and worldwide. Emergency remote teaching had already been used locally to overcome specific crisis situations, but this was the first time that this resource was used globally for all levels of education from preschool to Higher Education. Never before at a national and international level had there been a need to close down Higher Education, so ERT had never been used on a global scale.

Although the experience was not perfect and weaknesses are recognized in the solution found, in line with other authors we also find that it fulfilled its main function: to ensure that teachers had the resources, support and conditions to continue teaching and students had the resources, infrastructure and support to continue learning (Doucet et al., 2021).

In Higher Education institutions, as in schools in general, there was no “contingency plan” to deal with crisis situations, so the first approach was based on existing knowledge and experience, namely in the field of online teaching and digital learning. It is important, however, to emphasize that, contrary to what some initially thought and wrote, this field of research and practices cannot be confused with emergency remote teaching (Hodges et al., 2020), among other reasons for its unforeseeable and unplanned nature. The results of this study showed that, with Higher Education institutions providing access to digital tools, and training for their use, both teachers and students, supported by the personal technological devices, were able to move, more or less easily and safely, from face-to-face teaching to ERT.

Although there are significant organizational and pedagogical differences between digital learning and remote teaching, the latter shares some of its components, namely the use of multiple technological and digital tools. This circumstance contributed to the fact that the experience under analysis, even though it was temporary, proved to be a window of opportunity for increasing digitalisation and innovation in Higher Education. In a time of crisis, the important thing was to encourage each of the actors (principals, teachers, and students) to do the best they knew and were able to do to ensure the continuity of the courses (Doucet et al., 2021). However, the use of digital systems and technologies in teaching and learning processes alone is not able to ensure a scenario of pedagogical innovation. Therefore, it was up to the teachers to make the pedagogical choices that best fit their students' needs and the virtual context.

As the study revealed, not all pedagogical options were the most appropriate, however, as there was no training offer in the area of pedagogy, it was not expected that teachers would become, in such a short space of time, specialists in teaching in a virtual context. However, in line with other studies (Nobre & Mouraz, 2020), the results showed that, with the exception of the aforementioned exceptions, ERT had positive impacts both on conceptual change and on the change in teachers' practices and, therefore, on their pedagogical training. This occurred mainly in the field of practices, it was not planned, teachers sought to discover alternative methods, share positive experiences with peers, and share the responsibility for learning with students, progressively making them co-managers of their learning processes.

Another dimension that, in the context of emergency remote teaching, was subject to change was the assessment of learning, this however posed some challenges, on the one hand, the fear that the virtual context could compromise the right of students to reliable assessments. On the other hand, the progressive use of more active and participatory methodologies required that teachers, in line with them, began to use alternative forms of assessment, formative assessment, the respective feedback, or "assessment for learning" (Clark, 2014) creating opportunities for success and developing transversal skills for lifelong learning in students. Despite the challenges it posed, it is undeniable that this experience of remote assessment (re)opened the debate on assessment, created a space for questioning and reflection among both teachers and students, and therefore constituted a relevant opportunity to rethink assessment in Higher Education.

Finally, most of the actors involved claimed to have a preference for the face-to-face teaching model, however, they recognized that digital platforms made communication more flexible in time and space and, to that extent, facilitated interaction between all actors in the community. In this sense, both teachers and students considered that digital platforms were an asset to the teaching and learning processes and that they should be integrated into the classroom teaching environment, thus giving rise to a mixed learning environment.

CONCLUSIONS

In the context of the COVID-19 pandemic crisis, ERT took on a major role in Higher Education in Portugal, as in most countries. However, due to its emergency nature, its implementation, in most cases, was not accompanied by all the necessary resources and support, which contributed to compromising essential quality standards in terms of teaching and learning.

Despite the difficulties identified and having been experienced in a very different way by the different protagonists, we believe that this unprecedented experience not only achieved its main objective, but also configured an opportunity for the renewal of teaching and learning processes in Higher Education. The study carried out showed that ERT online had a set of positive impacts on Higher Education.

It was a strong driver of the digitalisation of teaching and learning and boosted the development of digital skills of teachers and students. Thus achieving, in a short space of time, an objective pursued by the Bologna Process over the last two decades. It induced a part of the teachers to seek information, training and to change their pedagogical practices, pressured by the challenges posed by educational technologies and by the mediation of the teaching and learning processes by digital platforms.

It embodied an opportunity to adopt an alternative pedagogical approach to the traditional one and to privilege student-centered learning, to reconfigure the teacher's role as a facilitator of learning, providing

students with greater autonomy in the educational process. In other words, it represented an opportunity for a paradigm shift in teaching and learning in Higher Education, another of the aspirations of the Bologna Process.

At the same time, it drew attention to the potential of virtual learning communities in the continuing education of teachers. In this period, the pedagogical training of teachers resulted mainly from the teachers' initiative, their self-mobilization, individual research, and pedagogical experience in a work context, but also from shared reflection among peers in a virtual context.

It generated interest and deepened the analysis and reflection around the blended learning model, a model enhanced by the pedagogical use of technologies and digital platforms, which has been asserting itself as a bet for the future in Higher Education and opening path for the study of new pedagogical models.

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ENDNOTE

- ¹ “Digitalisation is the transformation of all sectors of our economy, government and society based on the large-scale adoption of existing and emerging digital technologies” (RANDALL et al., 2018, cit. by GAEBEL et al., 2021, p.7).

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