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University students' perceptions of teaching during lockdown period in Spain: a qualitative study

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Abstract

Purpose – The study aims to provide relevant information on the educational processes experienced by university students in Spain during the period of compulsory confinement. To this end, the key factors of the emergency educational model implemented by the country's universities have been analysed.

Design/methodology/approach – The study investigated, through qualitative, exploratory research and 30 in-depth interviews, how university students have lived the process of change to alternative forms of education during the crisis, what training experiences stand out and what factors related to virtual education they identify as relevant keys.

Findings – Participants usually focus on three main topics: (1) The impacts of changes in training development with regard to methodologies and forms of assessment; (2) The facilities and difficulties in this new modality of online training; and (3) The consequences of the crisis on higher education in the medium and long term.

Originality/value – Students participating in the study offer relevant and critical information on the adaptations developed by Spanish universities during the Coronavirus crisis. This information can be fundamental for the conscious decision making of the institutions, so that they can develop educational processes more adequate to the needs and possibilities of the university students in times of crisis.

Keywords Non-face-to-face education, Higher education, Distance teaching, COVID-19, Pandemic, Teaching perceptions

Paper type Research paper

Introduction

The year 2020 will be remembered in higher education as the year in which it was necessary to move, urgently – and to some extent, improvised – from face-to-face education to online education, due to the health emergency resulting from COVID-19. This global crisis has involved the intensive use of technology in society and in education (Guitton, 2020). In March 2020, UNESCO estimated that, in the space of two months, around 850 million students had switched to alternative forms of teaching worldwide (UNESCO, 2020a). At present, in the absence of similar previous experiences, it is difficult to anticipate what the real impact will be of the face-to-face closure of universities and the implementation of distance education in the training of students worldwide. In the case of higher education, it is estimated that approximately 20,000 institutions and around 200 million university students had to modify their training routines due to the closure of institutions (Brown and Salmi, 2020; UNESCO, 2020b).

The implementation of adequacy in teaching was then mandatory by higher education institutions. Faced with this problem, non-governmental organisations such as UNESCO and the IDB provided basic instructions for the creation of viable distance education alternatives. These recommendations were welcomed by the nations and were implemented to a greater or lesser extent by higher education institutions according to their possibilities (Díez-Gutiérrez

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and Gajardo, 2020a). Key recommendations include: (1) Adapt education to the psychosocial situation of students; (2) Select diverse and safe technologies for students; (3) Implement a flexible and fair formative assessment; (4) Ensuring the inclusion of all students through constant communication (García-Peñalvo *et al.*, 2021).

Special emphasis should be placed on the last point (4). It highlights the importance of respecting the criteria of educational inclusion in turbulent times. In this point, it is an ethical duty to pay attention to the variables linked to social inequality so we can offer proposals consistent with the international treaties signed by nations. This should not, therefore, be alien to higher education institutions as they are characterised by autonomy. Regarding this, at the international level, emergency distance education (virtual, online or non-face-to-face) has led to an exacerbation of inequalities worldwide, especially in the social aspect: economically disadvantaged students, territorially isolated students, ethnic minorities or women (Doyle, 2020; Wells, 2022). Although the statistics are clear, yet there is a lack of detailed knowledge of the experiences and perceptions of those groups who experienced this situation first-hand. Especially in those regions that have resorted to strict forms of isolation, for example, through the confinement of their population.

Given the current, diverse and complex context, it is essential to know how alternative teaching formulae were applied from the point of view of the students.

Literature review

The impacts of COVID-19 on university student education have emerged spontaneously. The UNESCO, in an exploratory research carried out in 30 universities at the Ibero-American level (UNESCO, 2020b), pointed out that the main problems that students are facing in the pandemic crisis are: (1) resource problems, (2) loss of connectivity and (3) situation-related anxiety. The psychological impact on university students has been analysed (Lee, 2020), identifying high levels of anxiety and depression and uncertainty about the future. Digital access divide have been identified (Díez-Gutiérrez and Gajardo, 2020b; Mishra, 2020; d'Orville, 2020), as well as the digital use divide and competency gap that affects students in higher education (García-Peñalvo *et al.*, 2020; Morgan, 2020).

Universities around the world had to improvise, as a matter of urgency, the adaptation of a system designed for face-to-face (Blackman *et al.*, 2020) to the online format (Zubillaga and Gortazar, 2020). The didactic methodology and assessment methods had to be adapted in an emergency context —or an emergency e-learning model— (Habib *et al.*, 2020). The situation in Spain was similar. On March 14, 2020, the state of alarm was decreed, and with it, the beginning of lockdown of the population until June 2020. This is how about one million university students (EDUCAbase, 2020) had to maintain their training activities through the distance and online modalities (Royal Decree 463/2020 of 14 March 2020), in a context in which distance education was not the predominant: in 2019, 81.1% of the total enrolled did so in face-to-face or mixed modalities (Ministry of Universities, 2020).

The response provided did not have enough time to generate a comprehensive adaptation of the subjects (García-Peñalvo *et al.*, 2020). Responses were improvised as the difficulties came to light (Llorens-Largo and Fernández, 2020): from how to obtain digital resources for those who did not possess them, to how to teach the necessary digital skills or how to enhance a positive attitude to change. It has been found that the process has been difficult for teachers (Villén, 2020), students' families (Díez-Gutiérrez and Gajardo, 2020b; Moreno and Molins, 2020) and the students themselves (Ozamiz-Etxebarria *et al.*, 2020; Lozano-Díaz *et al.*, 2020).

According to the data estimated by the Conference of Rectors of the Spanish Universities (CRUE) (Silió, 2020), more than 36,000 students consulted indicated that they had technical problems that prevented them from continuing their university education online. In this way,

González-Calvo *et al.* (2020) analysed the impacts of the interruption of the professional practices of teachers' students. For its part, the Knowledge and Development Foundation (CYD, 2020) noted the educational and professional uncertainty that young university students have about their future.

Different authors (Díez-Gutiérrez and Gajardo, 2022 and Aretio, 2021) stressed that problems linked to emergency virtual education in Spain have been studied from a technical approach and a practical focus, leaving aside a more in-depth sociological analysis (Astur *et al.*, 2020). This lack of analysis has an impact on policies, methodological proposals, pedagogical or assessment strategies that reproduce educational injustices and inequities. This is more noticeable in those human groups with vulnerable personal, family and socio-economic characteristics.

Authors such as Blundell *et al.* (2022), Pal and Patra (2021) or Motz *et al.* (2021) noted that those students belonging to disadvantaged economic and territorial groups had low academic performance and motivation. Most of them related to the scarce access to favourable educational conditions at home or the scarce consideration of individualisation in the teaching–learning and assessment processes of the virtual modality. On the other hand, female undergraduate students showed higher levels of academic anxiety and poorer mental health (Blundell *et al.*, 2022; Castillo *et al.*, 2021); lower levels of satisfaction with work well done (Mercado and Otero, 2022); and, in the particular case of female STEM undergraduates, more negative perceptions of virtual learning environments than male students (Britton *et al.*, 2022).

In this difficult and unequal context for some of the university students (Sterzer, 2020; Burgess and Sievertsen, 2020), this study analyses in depth the experiences and perceptions of the implementation of alternative forms of teaching during lockdown of 30 undergraduate students in Spain. It identifies those factors that influenced their teaching processes, the strengths and weaknesses of the system they witnessed and their proposals for a post-pandemic educational future.

Methodology

Research in the field of social sciences, especially in education, has characteristics that make it different from research in other sciences (Rivas, 2020). Educational processes are complex and involve a multitude of interrelated factors, the isolation of which can lead to the distortion of the knowledge sought (San Fabián, 2020).

As a result of the above, we opted for a qualitative methodology. We seeking to understand the reality experienced by those who are educated in higher education. This perspective aims to investigate notions of understanding, meaning and transformation for the improvement of the educational reality (González-Calvo, 2020). The qualitative perspective penetrates the personal world of the subjects, identifying how they interpret situations and their meanings to them. Therefore, if quantitative research is intended to make its results generalisable by focussing its validity and reliability on large sample sizes (Denzin, 2013), the qualitative research carried out in this study seeks transferability (Korstjens and Moser, 2017). As a result of understanding complex processes and realities, findings obtained may be applied in different contexts (Flick, 2018).

In terms of form, in-depth interviews were chosen (Denzin and Lincoln, 2012), which were analysed through a thematic content analysis (Libarkin and Kurdziel, 2002).

Instrument and techniques for collecting information

A guide to interview guidelines was developed. Already validated instruments with similar themes (Team, RASE, 2020; Balluerka *et al.*, 2020) and proposals from the project researchers

were considered for its construction. The process of validating the content of this guideline was carried out in two phases using a Delphi Technique. First, with the evaluation, selection and adequacy of the questions and topics to be addressed by criteria of "relevance" and "clarity" through a consultation with nine experts in higher education. And second, with the application of a pilot test of three interviews, in which university students, selected for convenience, valued the application of the instrument under criteria of "understanding" and "duration".

The final instrument consisted of 23 issues that focus on identifying: (1) Socio-demographic data, (2) Material conditions of the household during lockdown, (3) Training process during lockdown and (4) Teaching experiences during and after lockdown.

The interview was conducted by three researchers, who contacted the participants by e-mail and phone calls. During the month of July 2020, interviews were arranged by means of videoconferencing through Skype platform and WhatsApp following the protocol outlined by Lo Iacono *et al.* (2016), for distance interviews.

Participants

In a previous phase of the research (Díez-Gutiérrez and Gajardo, 2020a) 1,008 students from 64 universities in Spain completed an electronic survey. The survey offered participants the possibility to collaborate in a second phase of the research. 320 people expressed their intentions to cooperate in this second phase, which is the result of this study. Of these 320 people, 30 participants were selected through a non-probabilistic random sampling (Robinson, 2014). The 30 participants (Table 1), that correspond to 19 women and 11 men, T1

Item	N	Item	N
Sex	Man (n = 11) Woman (n = 16)	Autonomous Community	Castile and León (n = 8) Andalusia (n = 6) Asturias (n = 4) Madrid (n = 4) Galicia (n = 3) Catalonia (n = 2) Basque Country (n = 1) Valencia (n = 1) Murcia (n = 1)
Age	19 (n = 1) 21 (n = 5) 22 (n = 7) 23 (n = 3) 24 (n = 1) 25 (n = 4) 26 or more (n = 9)	Socioeconomic status	Low (n = 3) Medium-Low (n = 12) Medium-High (n = 14) High (n = 1)
Location	Rural (n = 2) Urban (n = 28)	Parents' highest level of education	Elementary school (n = 1) Middle school (n = 3) Vocational education (n = 11) Higher education (n = 12) Postgraduate studies (n = 3)
Study Level	University degree (n = 24) University postgraduate degree (n = 6)	Current year	1st (n = 11) 2 d (n = 2) 3rd (n = 3) 4th or more (n = 14)

Source(s): Elaborated by the researchers

Table 1. Characteristics of the participants

are students from 17 Spanish universities located in nine autonomous communities. They were subjected to in-depth interviews lasting between 45 and 150 min.

As can be seen, there is a dissimilar distribution between men and women. The study was carried out with a random sample that responded to the criterion of voluntariness. However, more women were interested in participating. Based on this process, the researchers made the decision to include all female volunteers, as suggested by the above-mentioned theoretical references.

To provide a space for dialogue, interviewers adopted an informal attitude and guaranteed anonymity and data protection through informed consent. To increase the reliability of the study and facilitate information analysis, interviews were recorded in audio and video and transcribed verbatim into a text document (Rapley, 2014).

Data analysis

The data obtained were subjected to a thematic content analysis (Libarkin and Kurdziel, 2002). Thematic content analysis focuses on finding, identifying and describing patterns in the analysed texts. Open inductive descriptive coding was used (Abela, 2002) to analyse both patterns within each interview and between interviews. The entire process was carried out collaboratively by the research team, which was supported by the coding functions of the *Atlas Ti version 8* qualitative analysis software.

The speeches made by the interviewees were heard and read several times to identify the general and specific ideas of the content. Also identify units and patterns of meaning that would later materialise in categories and subcategories (Table 2), textual quotations and in establishing a theory for the conclusions and discussions of the study (Dale, 2000).

Finally, the report of results was written using an organisation by three key topics arising from the process described above (see results section).

Results

For the study it was fundamental to know the environments in which the 30 participants had developed their lockdown and the general conditions of each case. It could be noted that students spent their lockdown days mainly with their family (20 cases), with close friends or partners (seven cases) or in solitude (three cases).

Category 1	*Sub-category 1*
Training process during confinement	Development of the training process
	Sub-category 2
	Adaptation of the training process
Category 2	*Sub-category 3*
Learning experiences during confinement	Learning acquired
Category 3	*Sub-category 4*
Perceptions about the learning process during confinement	Valuation of e-learning
	Sub-category 5
	Difficulties experienced that have influenced learning
	Sub-category 6
	Training experience
	Sub-category 7
	Consequences of confinement
	Sub-category 8
	Perception of inequalities

Source(s): Elaborated by the researchers

Table 2. Categories and subcategories identified

We briefly show the characteristics of the learning environments of the study participants during lockdown.

(1) All participants enabled specific spaces for home study based on three elements: light, privacy and Internet access. Bedrooms (19 cases) and family rooms (eight cases) were the preferred places for the study. 13 cases reported difficulties in their study places due to "disturbing noises" (seven mentions), "lack of furniture" (two mentions) or "lack of space" (four mentions).

(2) All participants indicated that they had the necessary technological conditions to continue distance education: a computer, an Internet connection and a mobile phone with Internet access. In six cases they encountered difficulties because the Internet connection was not of good quality.

(3) Most of the participants (28 cases) stated that they were aware of the aids offered by their universities to help students without means to access e-learning tools at home. Only two participants requested them, but they did not have an immediate response, so they managed on their own.

Specifically, the students interviewed who reported difficulties at home (lack of space to study and lack of furniture) are mostly women with a low socio-economic level, whose parents have elementary or secondary education. On the other hand, those who reported belonging to rural regions most often mentioned the difficulty they had with Internet connection, but not the lack of space or adequate material to study.

Shockingly students with a higher socio-economic level and with parents with a higher level of education, were the ones who reported having asked for economic help from their respective universities. When this question was explored further with lower-income students, they reported that they were completely unaware of the grants offered by the universities, despite public campaigns via advertisements on websites, e-mails and even phone calls.

With regard to the experiences and perceptions of the students interviewed on the adaptations of teaching in the context of the emergency, the data analysis revealed three key topics: (1) The impacts of changes in training development with respect to methodologies and forms of assessment, (2) The facilities and difficulties offered by this new form of the teaching and (3) The educational consequences of the crisis in the medium and long term.

Impacts on training development

Study participants narrate their experiences mentioning the implementation of distance education as a turning point that marked a before and after in their student lives. Except for one case, all participating students were receiving a fully face-to-face education before the crisis, supported by complementary blended education tools such as virtual campus and email. These complementary tools were mainly for communication purposes and for the transfer of pedagogical materials but were not used as a teaching or assessment methodology.

> We came from a training that was more theoretical [. . .] with classes and exhibition (Woman, León).

> It used to be more theoretical. Arrive at the University, sit down and the teacher would start talking (Woman, Barcelona).

The halt of face-to-face classes, in some cases (2), began one week before the decree of 14 March. Before lockdown decree, some universities established a period of "recess" or shutting down to reorganise training plans, which has been positively valued by young university students. In other cases (13) the suspension of face-to-face classes was immediate to the declaration of the decree, which generated a period of generalised uncertainty, as described by the students:

> At the beginning of March, we did not take it seriously, but I started to hear that perhaps the university could close its doors, with the end of the face-to-face classes [. . .] when we were confined, everything changed, in fact, on the Monday of the second fortnight there was no class, and it was communicated through an email [. . .] what came was a few very hard weeks, without online classes (Man, León).

This uncertainty provoked widespread fear in both female and male participants. However, the female group presented a more sympathetic and less fatalistic discourse:

> The truth is that we had to adapt. We were all in the same situation, in our jobs and in our studies (Woman, Asturias).

With the implementation of the first methodological adaptations, students began to perceive the first problems. One of them was the transfer to a virtual format of what was being done in face-to-face class. Schemes were replicated without adapting them to a new medium that was radically different: online training. One such practice has been to replace the accompanying explanation or presentations by sending them via email, or distributing them as documents on the Moodle platforms enabled by the universities:

> Some teachers have chosen to follow the model of a face-to-face class, but in an online format. So that we all would join *Zoom* and saw it at the same time. Others have preferred to leave recordings on interactive *YouTube* videos that after watching brought a practical activity on the platform to evaluate the content (Woman, Tomares).

However, face-to-face teaching dynamics, such as the development of group work, have been maintained. They were adapted in format, but not in objectives:

> We had to do a project and we kept same objectives all the time. The teacher helped us a lot (Woman, Madrid).

The change in these collaboration dynamics took place mainly through the creation of groups in social networks. They replaced face-to-face meetings and provided an essential distance communication tool to continue their group works. In most cases their creation and organisation depended more on the initiative of the students themselves, than on the planning of teachers or institutions

> Before, every two weeks we had a meeting all of us. There we exposed what had been happening to us and we had the corrections of the works we had to learn. This continued during lockdown, but online (Woman, Sevilla).

In some cases (8), when groups had not cohesive prior to the lockdown period and communicated exclusively by written message (*WhatsApp*, *Messenger* or Chat), students often felt that group work was not going well because of the difficulty of transferring complex conversations or discussions about group work to telematics media. Explanations arose about the misinterpretation of short messages, the overlap between messages, and the poor understanding of the context or intent of the messages:

> It is not the same to gather in group and say, "come on, let us get the job done", as having to be with *WhatsApp*. Like communication is not so fluid, and things were misunderstood a lot by *WhatsApp* (Woman, Sevilla).

> She sent a document once, more summarized, and put a message "I send this to the pusillanimous" [. . .] they took it as a negative insult which generated a huge scandal (Man, Oviedo).

The methodology that has been maintained and enhanced during the emergency period has been the master classes delivered by teachers. They changed to remote format with the support of various tools, such as *Zoom Video*, *Google Meet*, *Blackboard Collaborate* and *Skype*. However, they became static models with little interaction. It is therefore understandable that

many of the students interviewed stated they preferred synchronous teaching experiences to asynchronous ones (i.e. master classes recorded). They argued that participants in an asynchronous model did not feel immersed or involved in the teaching process. The direct interaction in face-to-face encouraged them to ask questions and offered them direct, more personalised and immediate feedback from teachers:

> There were some subjects that went well, because they gave us videoconference from the beginning (Man, Oviedo).

> I had very competent teachers and others very incompetent. The difference is that some of them cared, gave online classes, all kinds of tutorials and instant feedback, and then others, who posted a PDF and you got to manage on your own (Woman, León).

However, although direct interactions were more beneficial for most participants, those students with problems of quality Internet connection, people living in rural environments and women who reported having care obligations at home (for their siblings or their own children) preferred the recorded lessons posted on the virtual platforms because of the ease of organising their own study time:

> The classes that were uploaded to YouTube or the Virtual Campus were easier to follow. You could organize yourself and so on (Woman, Leon).

One of the most methodological changes mentioned by students that represented a major problem was the reduction or elimination of activities that required face-to-face attendance, such as professionalising practices or internship laboratories. In this respect, all interviewees pointed out that the tasks that replaced the practices and/or laboratories were not sufficient:

> Half class could have internships and the other half could not. The subject was divided between those who could and could not (Woman, León).

> Everyone had to cut off the internships. People who had reached 75% of the hours they did not have to do anything, and the people who did not make it, had to choose between three tasks: a job training course, an essay on the COVID, and watching a film (Woman, Cistierna).

In six of the cases students continued their distance education practices, when these were compatible with teleworking. However, they point out that this was not so much due to the planning of the university institutions, but to the personal interest and effort of the tutors of those practices.

Adapting students' forms of assessment and qualifications have also been widely questioned. Students have been highly critical when teachers maintained the same assessment and qualification activities that were applied during face-to-face training. They argued that in many cases the personal, emotional, family and economic situation of each case had been influenced by the disease and its consequences:

> It is unfair, because at some point because of the crisis I did not have a computer and I had to take exams on my mobile phone and the Internet was not working properly (Woman, Madrid).

> The form of the examinations I think was not worth any. Well, in some it was going to be descriptive exam and evidently it was test type (Man, Lugo).

However, in many cases (21) research participants valued positively those experiences of formative and comprehensive assessment. They made an adaptation of the examinations and tasks, when these were focused on assessing more quality rather than quantity:

> For me, that teacher has been the one who has empathized the most with us because exams were divided into four. So, the first exam was held in the first week of lockdown. So what he did was to do it (. . .), he gave all the time in the second one, and in the third one, instead of an exam, he did a final

> work (. . .) that final work weighed more in the grade and we had a longer deadline, so that made us organize well (Woman, Sevilla).

Some students presented the perception that the online format raises a certain suspicion of dishonesty towards students, because of due to the compulsory use of anti-plagiarism or facial recognition programs. This was more pronounced in male participants, who were more distrustful than their female colleagues:

> Exams were shorter but more difficult, with no multiple-choices, or just one part and more of a case study. This way students could not cheat and the SMOWL system that analysed your gestures and movements was added (Man, Segovia).

To conclude this section, it should be noted that participants of both sexes commented that they noticed worrying differences in academic performance outcomes. It was generally mentioned that grades had dropped both in their own case and in the case of their classmates, suggesting, from their speech, that the adequacy of the tasks or exams involved in grading did not give the expected result:

> In the lists of grades, you see changes. Before people who were at 10 are now at 7'2 and people who were low are now at 8'3. I see the marks much more uniform and that is because I think the part of the day-to-day work is missing and not reflected in those marks (Man, Lugo).

Facilities and difficulties experienced

One of the most commented topics in the interviews referred to the conditions experienced in the development of academic tasks.

Students positively highlighted the flexibility of some teachers when it comes to assessment activities. Especially the creation of various alternatives for same pedagogical objective, so that students could choose the one that best suited their situation:

> So, it is true that in many subjects not only have reduced the agenda, but they have also put different ways of dealing with the agenda. It is true that continuous assessment was prioritised, but there was also the possibility of taking a final exam (Man, Lugo).

> The facilities given to us during this process by the teachers were positive and they were understanding of the situation we were in (Man, Segovia).

Another positive aspect that facilitated the teaching process was the reduction of the workload. Not only because of the suppression of some topics established in the teaching guides provided for face-to-face teaching, but also because they often developed or deepened topics not initially foreseen, but which were related to the pandemic situation.

Finally, in terms of facilities, they also refer to the generation of alternative and quality materials and resources by teachers, in order to continue online teaching. When they did not produce the material themselves, provided them with various materials (auditory, visual and/or audio-visual):

> I was uploaded files and notes, software that I had to download with the appropriate licenses so that I could use them legally (Woman, Gijón).

> In some cases, they tried to find an explanatory video [. . .] they tried to put some challenge that has to do with the subject. As they were related to the subject, they would help you later (Woman, Gijón).

As for the difficulties mentioned, the most recurrent and constant theme throughout the interviews was the overload of work:

> There has been an increase in work. We have even had double the number of tasks, not only in one subject but in all (Woman, Sevilla).

Students generated several hypotheses to explain this "overload" of tasks, activities, work during confinement and distance education: (1) Teachers were not trained in distance teaching, which led them to perform poorly planned tasks; (2) Universities did not facilitate communication and coordination processes among teachers teaching the same group, so each acted independently; (3) Teachers were not in adequate psychological, family, economic or health conditions due to the pandemic context, so they could not devote their time to generate quality tasks for their students.

Another difficulty they noted is related to access to resources and materials needed for academic works. They argue that universities encouraged the use of software and digital resources that both teachers and students were not familiar with, which led to long delays before the start of distance education activities:

> One teacher, by the time he found out how the platforms were used, the class hour was over (Man, San Sebastián).

But the general perception was that teachers had a duty to learn new ways of teaching that went beyond the use of typical resources, such as reading PDF documents or PPT presentations, which were widely criticised by participants:

> They basically sent you PDFs and you read them. Everyone tells you that if you have doubts, send an email, but if you have trouble solving your doubts in person, you will not put them in an email (Woman, Cistierna).

> Teachers are old-fashioned people: write and read [. . .] they put in readings, they put in summaries, it is not reading for the sake of reading, it is to show later that you have read that, but there is no innovation (Woman, Córdoba).

Finally, the impossibility of establishing fluid and synchronous communication with the different actors of the educational process was identified as a difficulty. University students pointed out that the response times of the teachers sometimes discouraged them from making new consultations:

> First, the lack of direct contact with people and the teacher. I feel that there is a kind of barrier between you and your classmates, and therefore, I think it is harder to keep the attention in the class (Man, Segovia).

This last point was mostly emphasised by the younger and higher socio-economic group of respondents. According to the information obtained from the interviews, they had better access to means of direct consultation with teachers.

Medium- and long-term educational consequences

The change in the educational routines of the university students participating in this study has produced in them a series of sensations and feelings that they have had to face during their formative stage. In this sense, it was noticed that both male and female respondents expressed a perception where they recognised consequences in their lives in the medium and long term.

Regarding the global consequences of the pandemic on their own personal well-being, there are discourses closely related to the psychological and affective instability caused by the long period of confinement. The interviewees, women to a greater extent, described that the pandemic had brought as a consequence a great stress and anxiety in their lives, producing a constant sensation of not being able to give the maximum in the academic tasks entrusted to them:

> During the confinement I felt useless and hopeless (Woman, A Coruña).

> I think it has caused us a lot of stress and anxiety. If I am preparing myself like never and even, I am not getting these bad results [. . .] there are a couple of subjects in which I had to take three times to pass them (Woman, Huelva).

Many of these consequences led in some cases (4) students had to apply for outside help at key educational times, such as the university testing period:

> I have had some problems with anxiety and when I was finishing the course, I had a hard time doing the exams and I had to spend a whole day in the hospital (Woman, Barcelona).

> There was a moment when I had a headache. I went to the emergency room and was admitted to the COVID floor and the results were negative. The headache was just tension and anxiety (Woman, Siero).

The emotional consequences followed the psychological ones. Some of the interviewees had a person with COVID in their personal circle; a loved one who was a health worker; they were far from their partners and close relatives; they had been left alone in the cities where they were studying due to the uncertainty of the resumption of school activities; or they could not cope with the tasks received, which generated relational mishaps with their partners:

> There have been many stressful situations, such as arguments, as well as stress because my parents' company remained closed and they barely made any income. In addition, there were some health problems in relatives that ended up worrying and distracting you (Woman, Oviedo).

Regarding the positive consequences of the emergency distance teaching situation, the speeches were oriented to the improvement of the self-perception of efficiency and autonomy, which was often previously underestimated by the interviewees themselves:

> The capacity that each one of us has developed in adapting to the circumstances and going forward. I believe that this is also something positive from what we have learned, because after all you can move forward (Woman, Sevilla).

In general and with respect to the same virtual education processes, those students who were studying a postgraduate course reached a fairly common conclusion: online teaching also brought positive consequences in their respective professional lives, since the asynchrony of the activities allowed them to better reconcile work and personal activities with educational ones:

> It is true that the courses have been easier to carry out, because I work, and it is convenient that everything is done online (Woman, Madrid).

> I have been able to follow the training quite well, I have enjoyed it and it even takes away the factor of going to the university [. . .] you gain in quality of life (Woman, Tomares).

Interviewees who were undergraduate students made critical statements regarding the disqualification of distance and virtual teaching. However, if they had to choose between face-to-face and virtual teaching modes, they would always keep the face-to-face:

> We have realized that online education exists and is as real as any other. Seems that if you do things online, they are of worse quality, I do not agree. The quality depends on the subject matter, not on the teaching type (Woman, Córdoba).

One of the major concerns was that students may had not acquired sufficient knowledge and skills for future career progression. This perception is due to changes in curricula on a pandemic context:

> This last semester has not been particularly fruitful in terms of knowledge acquired, to be honest. I think that several teachers did not know how to make the online classes efficient and useful when acquiring knowledge (Man, Segovia).

> This last semester has been practically lost for me. After this year I cannot imagine myself working with this lack of learning (Woman, Alcalá la Real).

In this aspect, the case of those who were studying last year of studies, period in which practices are developed in working environments, the speeches were more pessimistic. Also, in relation to the self-perception of their own capacities of development in the working environment:

> The practices, the impossibility of attending to carry them out [. . .] there was no solution: the practices were suspended, and the students did not receive that formation nor will they ever receive it (Man, Salamanca).

Moreover, the pessimistic concern about the perceptions of others, who would see the generation "educated in the COVID era" as less prepared:

> It is going to be a generation that our career is not going to be so important, you have got two years of career in the middle of the epidemic, I think that will hurt us (Woman, León).

Finally, all those interviewed tend to show great concern about the future of the country's economy and how it will impact access to scholarships and grants. Without them they could not finish their education or begin new studies, particularly those with unfavourable socio-economic conditions:

> I see it more darkly than before [. . .] my mother stopped working, my father . . . I cannot commit to a master's degree when there has been less income at home, so I will not be able to study a specialization (Woman, Madrid).

Discussion

The results of this study reveal a turning point between the training received before and during confinement. Continuous methodological and assessment adaptations in this emergency context, by developing an eminently face-to-face education in an online format, have highlighted several existing problems, such as the lack of technological resources, with a considerable impact on the training development. These findings corroborate what Llorens-Largo and Fernandez (2020) have shown and makes even more evident that not all members of the university educational community have sufficient and adequate technological means to adequately follow the development of training. Universities have not managed to offer sufficient tools and resources to students to provide a general solution to this situation.

In many cases, the adaptation process of higher education during confinement has consisted of the mimetic transfer from a face-to-face training format to an online one. Maintaining in many cases the initial approach of the subjects (especially in the case of master classes). On the other hand, one of the greatest concerns and problems expressed by university students is the reduction or suppression of practical training and/or professional practices in the final years, which they consider may have an impact on their professional future (González-Calvo *et al.*, 2020). Briefly, the adaptations and impact of the methodological decisions that were being adopted have not been an easy process for the main actors in the development of training, mainly teachers and students (Lozano-Díaz *et al.*, 2020; Villén, 2020).

Among the positive aspects of online training, students highlighted the alternative resources and materials that some teachers offered, as well as the reduction of academic workload. They recognised the effort and work of those teachers involved in creating or facilitating the material to offer the most complete training. However, in all situations there was no reduction in academic tasks, but rather an increase in them, with overloading being the difficulty most identified by participants.

Likewise, the digital devices and platforms offered and promoted from the universities for virtual teaching have been a conflict. There was software that both teachers and students were unaware of. This highlights the findings of Harrison *et al.* (2017) who emphasise that those teachers who know about technologies and feel safe using them, offer their students a relevant experience and teaching adapted to their needs.

Also, the difficulties in establishing contact and communication with teachers have been an added difficulty in the training process of students. These results could be explained by Dumford and Miller (2018) who stated that, in online training, interactions are usually more superficial and requires more time from teachers to respond to electronic communication with students and give them personal feedback.

In this line, the study by Eom and Arbaugh (2011) suggests that, through the form of online teaching, participants often receive a poor experience in their training, and therefore for the teaching to be really meaningful it is necessary that the course design, the teacher and communication with students are in harmony (Eom and Ashill, 2016).

Although some recent studies such as that of Gonzalez *et al.* (2020), observed an increase in academic performance of a sample of students during mandatory confinement, only in a few very specific cases in our study was this confirmed. In any case, this may be due to what some interviewees pointed out: some teachers were very flexible with the tasks requested and reduced the academic load, an aspect that favoured better performance and academic results. However, it is also identified that not all teachers were able to understand the circumstances and, on the contrary, generated situations in which students perceived that the academic load increased.

Regarding the educational consequences of the crisis in the medium and long term, the participants pointed out psychological aspects such as stress and emotional anxiety derived from a long confinement as an aspect that can have later repercussions. As well as not having acquired enough knowledge and skill in a future job, or not having had sufficient practical training as practices were reduced or directly suppressed.

Finally, we would like to dedicate a special section to the debate on the educational inequalities that students, especially the most vulnerable groups, experienced. Our research, like the research of Doyle (202), Wells (2022), Blundell *et al.* (2022), Pal and Patra (2021), Mercado and Otero (2022) and Motz *et al.* (2021), reiterates that people with less economic means or greater social responsibilities – such as women – had greater problems with the implementation of emergency virtual education, especially women, who were more affected psychologically and emotionally.

The pandemic represented a maximisation of the educational injustice factors that already existed in society (Díez-Gutiérrez and Gajardo (2020a). This is a problem that we must work on in the long term in universities, but also in early and compulsory education.

Conclusions

This study set out with the aim of analysing the experiences and perceptions of a group of higher education undergraduates about the implementation of alternative forms of teaching during lockdown. Through this, the study points out some of the deficiencies that universities have in adapting to the virtual environment.

This study has revealed that some of the alternatives for distance teaching that have been promoted by higher education institutions in Spain (Díez-Gutiérrez and Gajardo, 2020a) and the world (Mutton, 2020) have resulted in problems. They have affected students positive perception of their own teaching processes in a context of emergency confinement, to name a few: the use of a wide variety (sometimes disproportionately) of technology tools unknown to teachers and students; the promotion of a formative assessment that is not managed properly, resulting in an overload of work for students and/or a drop in academic performance; the omission of psychological and affective treatment of students during teaching processes that

affects their academic performance; few alternatives for the development or replacement of labour practices with activities unrelated to the objective of these.

Based on these findings, we invite higher education institutions, their cloisters and researchers who are part of their education communities to think about and apply new alternatives that can solve these problems, listening to the voice of students who have a lot to say about it.

We must consider that the study presents some weaknesses, such as the fact that the results obtained cannot be generalised. Nevertheless, the social value of this research lies in providing specific data to guide action plans and decision-making aimed at continuous improvement in higher education in times of pandemic.

According to the topics developed by the students, we propose a series of alternatives to address new forms of education in times of crisis such as these.

(1) Strengthening the spaces and times of dialogue between the various actors involved in the learning process of university students. Faculty meetings and collaboration between teachers who teach the same group are essential to coordinate an education in times of pandemic.

(2) Limit the number of academic tasks requested based on a formative and comprehensive assessment. Test assessment instruments to know the real time students need to create or respond to them, and provide this information well in advance, so that students can organise their assignments in advance.

(3) Make flexible and diversify the ways of educating and assessing, offering different alternatives to acquire the expected formative competences, so that the students can choose those tasks that are more adapted to their personal conditions and their different learning styles.

(4) Promote dialogical communication, by auditory or audio-visual means (videoconferences, telephone calls and audio recordings) during the process of teaching and learning, which helps in the tutoring, accompaniment, motivation and support of students and teachers.

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AQ: 7

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AQ: 8 **Further reading**

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