

Perceptions and expectations in the university students from adaptation to the virtual teaching triggered by the COVID-19 pandemic

Percepciones y expectativas en el alumnado universitario a partir de la adaptación a la enseñanza no presencial motivada por la pandemia de COVID-19

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ABSTRACT

Introduction: Confinement has fostered the debate on digitalization and virtual teaching. The objective is to expose the disadvantages of the telematic education system adopted during the quarantine on subjects like equal opportunities, well-being and satisfaction, and teaching quality; focusing on the university education level and taking into account the management of communications with the students. **Methodology:** Two surveys, both distributed by online means, were conducted on university students, one at the beginning of the confinement (n: 1612), and another in the examination period (n: 872). **Results:** 90% of students prefer face-to-face teaching and 80% consider that their university has not adapted adequately. Most believe that they will learn less, that their academic record will be affected, and that they will have more difficulties while finding a job. More than a half of the students have suffered close experiences related to coronavirus and they feel a lack of understanding on the university side. **Conclusions:** Universities have shown a poor institutional communication performance during the pandemic, both in communication with students and in listening to them.

KEYWORDS: COVID-19; university; virtual teaching; inclusive society; misinformation; confinement.

RESUMEN

Introducción: El confinamiento ha propiciado el debate sobre la digitalización y la enseñanza virtual. El objetivo es exponer las desventajas del sistema telemático adoptado durante la cuarentena en los apartados de igualdad de oportunidades, bienestar y satisfacción y calidad docente; centrado en el nivel de enseñanza universitario y considerando de forma especial los aspectos de la comunicación de la universidad con el alumnado. **Metodología:** Se han realizado dos cuestionarios sociológicos, ambos distribuidos por medios telemáticos, a estudiantes universitarios: una al inicio del confinamiento (n: 1612) y otra en el periodo de exámenes (n: 872). **Resultados:** Un 90% de estudiantes prefiere la enseñanza presencial y un 80% considera que su universidad no se ha adaptado adecuadamente. La mayoría considera que aprenderá menos, que su expediente quedará afectado y que tendrán más dificultades para encontrar trabajo. Más de la mitad de los estudiantes ha sufrido experiencias vitales cercanas relativas al coronavirus y sienten desinformación e incompreensión por parte de las universidades. **Discusión:** La educación virtual dificulta la igualdad de oportunidades, por tanto el logro de una sociedad inclusiva expuesta en los Objetivos de Desarrollo Sostenible. **Conclusiones:** Se ha detectado una mala comunicación institucional universitaria, tanto en la comunicación hacia al alumnado, como en la escucha al mismo.

PALABRAS CLAVE: COVID-19; universidad; docencia virtual; sociedad inclusiva, desinformación, confinamiento.

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Translation by **Carlos Javier Rivas Quintero** (University of the Andes, Mérida, Venezuela)

1. Introduction

The COVID-19 pandemic has forced a hiatus in which a significant portion of face-to-face life has been virtualized. During the process and after it, a subjective assessment of the experience begins, which in many cases leads to taking a simplistic stance in favor or against. Polarization of attitudes is often accentuated by the appearance of unforeseen events that generate deep tensions and intense debates in public opinion. Polarization plays a psychological relaxation role, since it serves to reduce the anxiety generated by the confusion under circumstances of uncertainty and the consequent lack of guidelines to direct social action. It is easier to choose between two options than between a myriad of possibilities that entail nuances, and, therefore, requires deeper reflection to discern between them

The debate on digitalization in society is not new. Its evolution partially depends on relevant social events. Due to the pandemic, public opinion seems to become aware that further digitalization could be a good preventive strategy in the face of any unexpected crisis. Thus, a rhetoric that drags informers is generated. For example, we hear that digitalization in general, and digitalization of education, in particular, had “come to stay”. However, the web and ICTs are common tools in education, especially in the university, with the implementation of the European Higher Education

Area (Gutiérrez *et al.*, 2010; Elche *et al.*, 2019). This rhetoric seems to bypass the fact that the degree of implementation of such technologies is a political choice, in the broadest sense of the word.

In this work, we will analyze the repercussions of virtual relations in the teaching ambit, one of the fields that best allow observing the impact of the quarantine. To this end, we will review the debates that have emerged in the field of sociology about the effects of the online teaching model on equal opportunities, school violence, welfare and satisfaction of school actors, and on the university system. A selection of recent investigations conducted at the different educational levels (from primary school to university) will be presented in order to propose a general framework for the social problem under analysis. We are aware that the different educational levels have their own particularities (for example, primary school students need adult monitoring, which does not occur with university students), but they also share common challenges (such as the digital divide or isolation due to the confinement).

After this substantiation, we will present the results obtained from two studies conducted on students from universities with a face-to-face teaching model who have been taught and examined through a distance-learning modality during the pandemic. This work is carried out solely from a sociological perspective, and aims to make contributions that must be included in a very necessary interdisciplinary dialogue in the teaching ambit and within a confinement context (especially with the educational, political, and technological fields).

1.1 Inequality and digital divide

The long confinement experienced in the first months of 2020 has entailed testing the minority homeschooling model on a massive scale. A general and provisional exposition of the expected results must take into account several levels. There are countries where not even half of the population has Internet access. The so-called digital divide prevents millions of people from taking part. In other countries, like most of the European ones, the percentage is almost close to 100%. But this material availability does not end inequality. Here, a second level comes in, which we can divide in two: the physical context and the cultural/academic context in the home, which, to varying degrees, can improve or worsen the virtual learning process compared to the face-to-face one implemented before the pandemic.

A recently published work on 20 preschool and primary educational centers in Logroño (La Rioja, Spain) showed educational inequalities generated by the use of ICTs depending on the sociocultural backgrounds of the centers (Chinchurreta, 2020). Cabrera collects stories during the pandemic acknowledging the lack of preparedness in some parents to help their children with telematic assignments, something already mentioned by international institutions such as OECD or UNESCO (2020, p.127). This would be a clear indication of an increase in inequality for educational opportunities. This situation can affect indirectly university students who have had to assume caregiving roles during confinement, for example with younger siblings.

Parents' educational support depends not only on their educational background, but also on their subjective consideration about how useful devoting a considerable amount of effort to it is. In some cases, this depends on the expectations they have about their children's education. In some ethnic environments or with vulnerability and social exclusion traits, a climate of pessimism and disillusionment can emerge, generating attitudes of helplessness. But in other cases, it is simply a rational action, which could include being picaresque. It is about investing the minimum amount of time –although during confinement it is not a scarce asset–, to achieve the maximum benefit in the final grades. The types of rules imposed contribute to this. Since the quarantine affected the last

quarter, most of the regional educational administrations in Spain opted for a lenient strategy for the final examination, generating unintended effects such as a downward trend in efforts and a decrease in the social capital committed to students. This measure manages to disguise or conceal the most serious inequality records in the less privileged environments, but with a price to pay: slowing down learning in a wide range of middle sectors, even undermining some of them.

Under equal conditions, that is, eliminating the objective and subjective digital divide, the clearest advantage of virtual learning is the instrumental convenience it provides when sharing information and knowledge, for example, in comparison with paper. Other adjacent positive aspects could be found in the implementation of low-cost literacy umbrellas for populations with little resources, or support from affinity networks. Fernández-Enguita observed that none of these advantages entails a guarantee for equality or the democratization of the learning pathways, since the more open a medium is, the more the orientation will depend on the very resources of the available cultural capital (2017, p.410).

Another aspect specific of the differences in family backgrounds in education during confinement is space, which does not only refer to the available square meters and the more or less adequate intellectual work environment; but rather to the demographic density and the consequences this confinement context may have for the relationships that are established between the household members. A study conducted on 1,143 Spanish and Italian parents who have lived together with children between ages 3 and 18 during confinement, showed that the homes in which parents perceived coexistence to be more difficult or problematic, the children exhibited greater nervousness, anxiety, frustration, difficulty concentrating, and a tendency to quarrel or show a bad mood (Orgilés *et al.*, 2020). In a context of fear and feeling threatened, aggression can arise unconsciously as a mechanism to feel alive (Mazza *et al.*, 2020). Another study with data on police calls from 15 large metropolitan areas in the United States found an increase in domestic violence by 10% during the social distancing period due to the pandemic, which would mean a much greater quantity given the high number of unreported cases on these types of complaints (Leslie & Wilson, 2020). It is important to bear in mind that children reside in 60% of households where domestic violence has been perpetrated (Campbell, 2020).

At this point, we must consider the comparison between the physical and virtual contexts, focused on the relationships in teaching. Apparently, the issue of bullying could be used as an argument to prefer a virtual education model. However, two considerations tinge it. On the one hand, the possibility that school bullying could continue as cyberbullying (Martínez Rodríguez, 2017). Some authors are certain about describing the current state of school bullying as alarming, largely due to the impact of ICTs (Pérez Vallejo & Pérez Ferrer, 2016, p.11). A phenomenon that not only occurs among adolescents but also among university students, in which some studies have found percentages of victims and attackers of almost a third (Redondo *et al.*, 2017), especially on the most used platforms –Facebook, WhatsApp, Instagram, and YouTube– and among women enrolled in the first semesters (Dorantes, 2016). On the other end of this system, a gender discrepancy with higher cyberbullying rates in girls has also been verified, although these are usually negligible gender differences; being subjected to lies and rumors disseminated through mobile phones is the most reported behavior by the victims (Muñoz Ruiz & Muñoz Ruiz, 2019). The impact of these events could even affect half of some research samples (Pérez & Vicario-Molina, 2016).

1.2. Welfare and satisfaction of educative actors

Confinement has entailed longer screen time, with its associated risks, especially for young people (Margaritis *et al.*, 2020). A study with two samples, one Italian and the one Spanish, found that if

before quarantine only 3.3% of adolescent students spent more than three hours on daily screen time, during this period, that percentage practically tripled: 89.7% in the Spanish sample and 81.6% in the Italian one (Orgilés, M. *et al.*, 2020).

Excessive screen time is usually related to a lack of physical activity. The aforementioned study found a decrease in physical activity in both groups, Spanish and Italian, without significant differences. Considering that, in general, caloric intake during lockdown does not decrease, but rather increases, and a lot less energy is burnt (between 35% and 40% less), some authors described situations such as the COVID-19 confinement during the first half of 2020 as the “perfect storm” for the development of metabolic diseases, by adding aspects like the wide variety of on-demand television channels, the increase in free time, boredom or surliness (Narici *et al.*, 2020; Andrade, 2020). Some studies found that an increase in healthy food intake during lockdown did not prevent a parallel increase in sugars (Ruiz Roso *et al.*, 2020).

On the one hand, from the professors’ perspective, an excess of workload and extra stress are noted, which have been influenced by the necessity of retraining at a hectic pace to manage virtual procedures concerning rapport with colleagues, planning, and lecturing students. We must add to this the avalanche of unexpected rules, being practically improvised on a daily basis, which makes understanding them difficult and increases the perception of excessive bureaucracy. On the other hand, regarding the perception of the new system’s advantages, the impossibility of implementing a fairly solid guarantee system for objective examinations stands out as an objection.

A paradox takes place here: the system is forced to trust students’ honesty, a value that results from a certain type of education. In the current model, based on individual competence and success, the absence of pedagogical experiences cultivating ethics in a cross-disciplinary way prevents this value from developing easily. The evidence lies in the strong presence of corrupt practices in the public and private spheres, which are grounded in attitudes that seem to be more tolerated by the younger generations: thus, on the one hand, the *15th Global Fraud Survey*, published in 2018, including interviews with 2,550 executives from 55 countries, found that fraud and corruption in businesses have not declined globally in recent years; and, on the other hand, another study showed that one in five respondents aged under 35 believe that cash payments (undeclared earnings) are justified to survive, compared to one in eight respondents aged 35 and over.¹

1.3. University system

For some years, the debate on university has been polarized between following a humanistic model or a techno-bureaucratic one: to promote criticism and social movements or to provide patents and action protocols to solve social problems; personalization or anonymity; ritualism and community ties or credentialism and sole job interest. The only consensus about the future, raised upon these bases, is the enormous uncertainty in which we are (Izak *et al.*, 2017, p.9).

The Spanish universities recognized for having better performance and therefore success (Technical University of Valencia, Pompeu Fabra University, Autonomous University of Madrid, and Autonomous University of Barcelona), are characterized by a change in their organizational culture in the face of new objectives. Among these, the following stand out: capturing of external financial sources, either through research, transfer or fundraising policies, or the aspiration to distinguish themselves by filtering the degrees offered according to the new demands emerging in the labor

¹ [https://www.ey.com/Publication/vwLUAssets/EY-encuesta-global-integridad-negocios-2018/\\$FILE/EY-encuesta-global-integridad-negocios-2018.pdf](https://www.ey.com/Publication/vwLUAssets/EY-encuesta-global-integridad-negocios-2018/$FILE/EY-encuesta-global-integridad-negocios-2018.pdf)

marked and reflected in potential students (Escribá *et al.*, 2019). In this context, largely promoted by the European Higher Education Area, the supply of private universities increases even in countries with little tradition in this regard, such as Spain. Critical situations like the COVID-19 pandemic stimulate the advertising of online universities that feed off the aforementioned liberalizing climate. Therefore, the debate on virtual teaching overlaps, since many of the students who have opted for these new private universities do it because they provide online teaching, and those that offer face-to-face classes guarantee, in most cases, online teaching during lockdown, with professors giving real-time online classes, and at the same schedules as in the face-to-face modality; in addition, they usually offer the possibility of watching the classes outside those hours since they have been recorded and are available on educational platforms.

Virtual teaching does not seem to have helped slow down the pace of most people's lives, which is synchronized with the hectic pace of social change. A CSIF [Central Independent and Public Employees' Trade Union] survey administered to 10,000 professors in May of this year, found that 93% of them claimed to have felt stressed during confinement due to the workload generated by distance education, in addition to the usual bureaucratic one.² As for students, the *Frente de Estudiantes* in its report *El sistema educativo en la crisis del COVID-19* [The educational system in the COVID-19 crisis], noted that virtual teaching has led to academic overload, which, among other things, increases the levels of stress and anxiety.³

In the opinion of some authors, if the course is not changed, higher education institutions might be doomed to collapse in a similar way as the banking or housing sector in the near future, at least in certain areas. Virtual teaching would reinforce this trend (Alvesson, Gabriel, & Paulsen, 2017: 143). A trend characterized by the increase in the lack of meaning in scientific research, explained in turn by several factors, among which there are the structuring of the academic career focused on standardized publications rather than on the teaching labor or by the lack of belief in the objectives declared by science to solve social problems.

2. Objectives

To know, from students' subjective perspective, how the face-to-face university teaching model has been adapted to distance education; specifically, their subjective representations, opinions, and expectations regarding aspects such as the management of communications of universities (rectorate, professors) with students, teaching in virtual environments, examination methods, academic performance, future job expectations, as well as to know what other difficulties they have had in this telematic teaching environment. The ultimate objective is to make the challenges this situation entails known.

3. Methodology

This research study was conducted using a quantitative methodology, by which data collection was carried out with two sociological surveys: one at the beginning of the confinement (Study 1) and another at the end of the course (Study 2). The surveys, which included several identification questions (age, gender, university, academic year, degree, and the population size where they resided

² <https://www.csif.es/contenido/nacional/general/297367>

³ https://www.frentedeestudiantes.es/wp-content/uploads/2020/04/Informe_COVID19.pdf (pages 8 and 9).

during the confinement), were previously reviewed by three experts, and a pilot test was conducted on 10 university students.

The population under analysis is comprised of students from Spanish universities with a face-to-face teaching modality.

The surveys were disseminated on social networks, where contact with students was achieved through students' unions, faculties, and student delegations from different Spanish universities; as well as through the Ibero-American Youth Organization (OIJ), the Coordinator of Student Representatives of Public Universities (CREUP), and other youth groups with a high proportion of university students. In parallel, a snowball sampling was also implemented, since participants were asked to share the surveys with other university students. The use of social networks as instrument to collect the sample is justified by their broad outreach to young people, among which the individuals considered for this study can be found. The surveys are anonymous, participation was voluntary, and no compensation was given for responding them. It should be clarified that although the sampling was conducted using the same procedure in both studies, the samples are independent; hence there will be cases of students that participated in both studies and others in only one. Both studies are independent, which is why they have their own objectives and questionnaires.

3.1. Sample and resources of Study 1

The sample is made up of 1,612 university students from 59 on-site Spanish universities. 33.5% are male and 66.5% female. Regarding their academic records, the majority (48.8%) stated to have an average grade as passed (C), 48.1% notable (B), and 3.1% outstanding (A) (the overall mean grade is 7.1 points). The sample was collected during the confinement, from April 20 (five weeks after universities closed on March 13) to May 1, 2020, a few weeks before the examination period (this varies according to the university and faculties, but generally, in Spain, it starts in mid-May).

The survey used is made up of the following questions:

1. Do you think your University has adapted adequately to virtual teaching and that classes maintain the same quality level of face-to-face teaching? (Yes/No).
 2. How do you assess the measures taken by your University to administer examinations? (Very poor; poor; fair; good; very good).
 3. How do you consider your academic performance (dedication to assignments and study) is in comparison with the period before the confinement? (Worse; same; better).
 4. Regarding your education and learning process, do you think it will be affected and it will have deficiencies compared to previous years? (Yes/No).
 5. Do you think all these circumstances could affect your average grade? (Negatively; no; positively).
 6. Do you think the COVID-19 pandemic will have a negative impact on your employability? (Yes/No).
 7. Have you considered the possibility of looking for a job outside Spain more due to the current situation? (Yes/No).
 8. What is your projection of your working future? (Very bad; bad; fair; good; very good).
- Write here any comment, complaint, or reflection on the situation and the measures taken by the university community regarding the COVID-19 pandemic.

3.2. Sample and resources of Study 2

The sample is made up of 872 undergraduate university students from 43 on-site Spanish universities and from 47 different Degrees. The mean age of the respondents is 21.85 years (SD: 4.86; median: 21 years old; range: 18-68 years old; 94.2% from 18 to 27 years), with 77.5% women and 22.5% men. Regarding the course, 30% were in their first year, 23.1% in their second, 22.1% in their third, and 24.8% in the last year of their degree. According to the population size, 18.8% lived in rural areas (less than 5,000 inhabitants), 28.9% in small cities (between 5,000 and 50,000 inhabitants), 23.3% in medium-size cities (50,001-200,000 inhabitants), and 29.0% in large cities (more than 200,000 inhabitants). The data were collected from May 31 to June 27, 2020; dates when classes had already ended, as well as the examination period in many cases.

The questionnaire used consisted of three questions related to the subject of study (education), two questions about social involvement, and four questions about relevant personal experiences during the confinement:

1. In general, how do you assess the virtual education you have received? (Unsatisfactory; little satisfactory; quite satisfactory; very satisfactory).
2. In general, how do you assess examinations? (Unsatisfactory; little satisfactory; quite satisfactory; very satisfactory).
3. If you had to choose, which do you prefer? (Face-to-face education / Virtual education).
4. Have you worked as a volunteer in any NGO, Foundation, Organization, etc. during the confinement? (Yes/No).
5. Do you think all these circumstances could affect your average grade? (Negatively; no; positively).
6. Do you think that after the confinement the number of volunteers will increase? (Yes/No).
7. Has a relative or friend of yours died during the confinement? (Yes/No).
8. Have you considered the possibility of looking for a job outside Spain more due to the current situation? (Yes/No).
9. Has a relative or friend of yours become ill with COVID-19? (Yes/No).
10. How many people have you lived with during the confinement? (Alone; with another person; more than two people).

4. Results and discussions

4.1. Results of Study 1: Expectations and perception prior to university adaptation

4.1.1. Opinion on university's teaching and examination adaptation

84.0% considered that their university has not adapted adequately to virtual teaching and that classes maintained the face-to-face teaching level; and 64.5% indicated that the measures taken by their university for examinations have been very poor (35.2%) or poor (29.3%) (Only 8.2% considered them to be good and 1.4% to be very good).

Table 1. Answers regarding university's teaching and examination adaptation process

	Grade				C
	Passing	Notable	Outstanding	Total	
Has your University adapted adequately?					
- No	87,3%	81,1%	78,0%	84,0%	.088**
- Yes	12,7%	18,9%	22,0%	16,0%	
Assessment of examination adaptation					
- Very poor	37,3%	33,8%	24,0%	35,2%	.148***
- Poor	31,0%	27,7%	26,0%	29,3%	
- Fair	25,7%	26,0%	30,0%	26,0%	
- Good	5,7%	10,3%	14,0%	8,2%	
- Very good	0,3%	2,2%	6,0%	1,4%	

*** $p < .001$; C: Contingency Coefficient

Source: authors' own creation

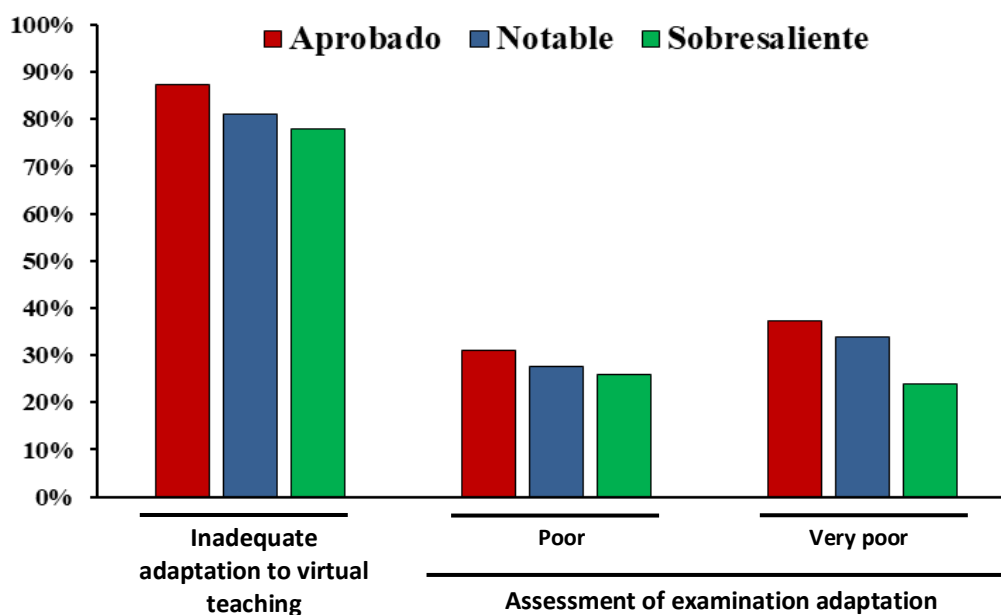


Chart 1. Negative answers regarding virtual adaptation according to academic performance

Source: authors' own creation

The academic record shows a significant association with the perception of universities' adaptation process to virtual teaching maintaining the face-to-face teaching level ($C = .088$; $\chi^2 = 12.62$; $p = .002$), as well as with examination ($C = .148$; $\chi^2 = 36.21$; $p < .001$). It can be seen that the gap widens according to the academic performance, and in both variables the negative assessment increases among the students with a passing grade record, thus only 12.7% of those with an passing grade record considered that their university has adapted adequately compared to 22.0% of the students with an outstanding academic record. As for the assessment of examinations, it is also more negative.

4.1.2. Expectations of the influence of the measures taken on academic performance

A vast majority (74.4%) considered that their academic performance is worse compared to the period before the confinement (only 9.9% considered it better); 87.5% that their education will have deficiencies compared to previous years; 88.5% said that their average grade could be negatively affected (only 2.8% positively).

Table 2. Answers regarding the influence of the measures taken on academic performance

	Grade				C
	Passing	Notable	Outstanding	Total	
Academic performance during the confinement					
– Worse	75,4%	73,1%	78,0%	74,4%	,090*
– Same	13,0%	18,7%	14,0%	15,8%	
– Better	11,6%	8,2%	8,0%	9,9%	
Has your education process been negatively affected compared to previous years?					
– No	10,7%	13,5%	24,0%	12,5%	,075*
– Yes	89,3%	86,5%	76,0%	87,5%	
Will it affect your average grade?					
– Yes, negatively	90,7%	86,3%	86,0%	88,5%	,079*
– No	6,5%	11,0%	10,0%	8,7%	
– Yes, positively	2,8%	2,7%	4,0%	2,8%	

* $p < .05$; C: Contingency Coefficient

Source: authors' own creation

It was noted that academic grade is related, weakly but significantly, with the perception of a change for the worse in academic performance ($\chi^2 = 13.14$; $p = .011$), with the belief that their education process is inferior compared to previous years ($\chi^2 = 9.18$, $p = .010$), and with the belief that their grade will get worse ($\chi^2 = 10.15$; $p = .038$). There are some differences depending on the academic grade. Thus, students with an outstanding academic record consider that their performance has been worse in comparison with the one of students with a passing grade record (outstanding: 78%; passing: 75.4%). On another note, they believe that their education process will not be so affected (outstanding: 24%; passing: 10.7%) and that their average grade will be negatively affected (outstanding: 86%; passing: 90.7%).

4.1.3. Expectations of the pandemic's influence on working future

Regarding their employability, 82.9% believe that the COVID-19 pandemic will have a negative impact; therefore, there are more negative or non-positive perspectives in their working future projection (8% very bad; 17.8% bad; 42.2% fair) than positive ones (26.1% good; 5.9% very good) despite the fact that, by being university students, they are in the group with the highest employability rates; so it is not surprising that more than half (52.7%) is considering the possibility of seeking jobs outside Spain.

Table 3. Answers regarding the pandemic's influence on the working future

	Grade				C
	Passing	Notable	Outstanding	Total	
Negative effect on your employability					
– No	14,9%	18,7%	28,0%	17,1%	0,071*
– Yes	85,1%	81,3%	72,0%	82,9%	
Working future (projection):					
– Very bad	9,7%	6,8%	0%	8,0%	,119**
– Bad	19,7%	16,0%	16,0%	17,8%	
– Fair	42,4%	42,1%	42,0%	42,2%	
– Good	22,9%	29,1%	28,0%	26,1%	
– Very good	5,3%	5,9%	14,0%	5,9%	
Have you considered seeking jobs outside Spain?					
– No	43,8%	50,0%	60,0%	47,3%	,076**
– Yes	56,2%	50,0%	40,0%	52,7%	

* $p < .05$ ** $p < .01$; C: Contingency Coefficient.

Source: authors' own creation

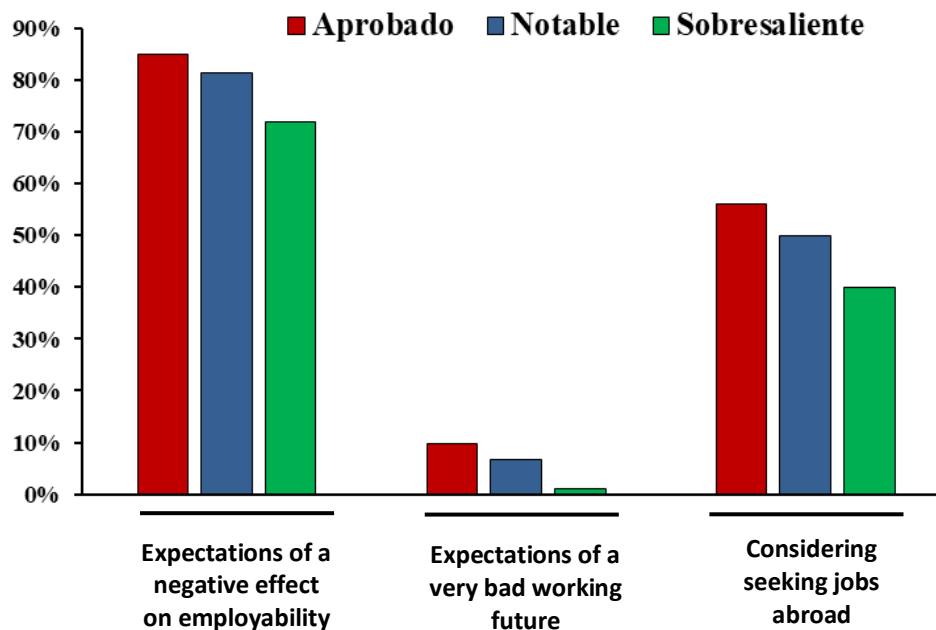


Chart 2. Negative answers regarding working projection according to academic performance

Source: authors' own creation

It was found that students' perspectives on their working future are associated with the academic grade, either the negative effect of the pandemic on employability ($\chi^2 = 8.28$; $p = .016$), the low expectations for their working future ($\chi^2 = 23.1$; $p = .003$), as well as the possibility of seeking a job outside Spain ($\chi^2 = 9.44$; $p = .009$). Students with a passing grade, compared to outstanding grade students, consider that this pandemic situation will affect their employability more negatively (passing: 85.1%; outstanding: 72%), have a worse projection of their working future (Very bad-passing: 9.7%; outstanding: 0%), and have considered more the possibility of seeking a job outside Spain (passing: 56.2%; outstanding: 40%).

The free response question *“Write here any comment, complaint, or reflection on the situation and the measures taken by the university community regarding the COVID-19 pandemic”* was answered by 699 students, meaning 43.4% of the total. These answers were analyzed based on the presence or absence of three subjects: complaints regarding the examination system, the stance that universities/professors have not adequately adapted to virtual teaching, and comments concerning students’ unfavorable personal circumstances that should be taken into account.

46.7% of the comments were complaints about the examination system, most of them stating that in many cases, with few weeks left (two in most cases), the examination criteria had not been clarified by some professors (*“Less than a month away from examinations starting, we do not know how we are going to be examined”*, *“They give us very little time to finish the tests, they do not let us see the full exam, and they send us assignments very hastily”*). They also highlight that in many cases they are saturated with assignments that were not initially in the course syllabus, but that were added as part of a continuous examination system (*“There are a lot of assignments, twice the number when we attended face-to-face classes”*). They underline the trouble undertaking the internships or finishing their experimental end-of-degree project, so their academic records could be negatively affected.

Most of the comments (70.9%) regarding how universities were adapting are negative, being mainly complaints about the lack of information (*“We do not know how examinations are going to be”*, *“They do not answer our emails”*), especially that some professors have not given virtual classes, that they just simply uploaded notes; that every professor does it differently and there are no clear instructions given by most of the Universities; or that they leave the responsibility for how to teach to professors, hence some of them get more involved and actually give virtual classes (*“Many professors just upload PDFs and assignments, and do not even give online classes, and if you send them an email with questions, they get angry because they cannot help everyone, but of course, how can we not have doubts if they do not teach”*). In many cases students understand that on-site universities were not prepared for virtual teaching, but complain that they should be more understanding given the circumstances (*“When there are online classes, there are times when the platform does not work for 70% of the students, and the teacher does not even care and continues with the class”*). They state that there are professors who have made an effort, but others have not (*“Some professors have shown us that it is possible to maintain the same level, while others seem to have not even tried to adapt to this situation”*), and there others who do not handle new technologies, and there are also students who cannot keep up with this type of teaching (*“At my university, people are trying to adapt as much as possible, but they have to take into account that not everyone has the same means in their home as in their university”*, *“Many topics are left unexplained, many lessons are not given nor clarified, and subjects that depend on practical tasks are impossible to perform via online”*, *“We know that this situation affects everyone but they should change how online teaching is being provided and many teachers have to start giving it at this point”*, *“The measures taken by the universities are not adequate and do not ensure equal opportunities for all students. Not all of us have good Internet access; some do not even have Internet in their home to keep up with the classes and corresponding assignments”*. *“There are professors who do not know how to use technologies”*). One of the main complaints is the poor communication of academic authorities (Rectorate, deans, departments, and professors) with the students, being one of the main challenges in this context of teaching changes (*“One of the things that I have longed for the most is that they would have contacted the students, so that together we could find which might the best form of adaptation be and what options can be offered to students”*). There were also 17 positive comments about the adaptation process of their university (*“My University has adapted”*).

Finally, it should be noted that 6.4% of the comments referred to the complicated personal situations that have been arising during this period, especially highlighting the increase in stress, overwhelming

feelings, uncertainty, complex family situations (deaths and ill people), or having trouble with Internet access. In addition to the request for a more humane treatment since they are not being listened to (“*The level of distress and anxiety caused by our studies is higher*”, “*In my opinion, not only the academic conditions of students have to be taken into account, but also the physical and mental ones*”, “*In the midst of an international crisis, you cannot ask for an equal or better performance on the pretext that we have nothing to do when the domestic situation can be complicated, and they keep assigning more work*”, “*We are asked to understand that it is a novel situation for universities and we do it in the hopes of someone understanding our side, and the anxiety that this unfair situation or the fact of not receiving answers is causing in us*”). Not only do these comments clearly show technological and professional challenges, but also personal treatment ones.

4.2. Results of Study 2: Assessment on the experience of the university adaptation

4.2.1. Personal experiences during the pandemic

82.7% of the respondents were in lockdown with more than two people, 15.1% with another person, and 2.2% alone. This last datum is important since social support is considered to be very helpful (strength) when overcoming difficulties and prolonged loneliness weakens people psychologically.

8.1% have lived with people who have had the virus, 17.4% have a relative or friend who died in this period, 51.7% have had a relative or friend who became ill with COVID-19, and 56.3% have experienced at least one of the three previous situations. Therefore, the majority of students (more than half) have experienced a crucial circumstance related to the COVID-19 (a close person dying or becoming ill).

4.2.2. Social change

9.9% claim to have worked as volunteer in an NGO, Foundation, Association, etc. during lockdown, and 53.1% believe that after lockdown the number of volunteers will increase. This stance is independent of whether they have been volunteers or not (Chi-squared, with continuity correction= .110; $p= .656$), or whether or not they have lived a personal situation related to the COVID-19 (a close person dying or become ill) (Chi-squared, with continuity correction= .202; $p= .653$).

Table 4. Answers regarding social change.

Are you a volunteer?	Do you think volunteerism is going to increase?		
	No	Yes	Total
No	41,7%	48,4%	90,1%
Yes	4,8%	5,0%	9,9%
Total	46,6%	53,4%	100,0%

Source: authors' own creation

4.2.3. Assessment on education and examination quality

The results show that only 1.9% considered virtual education to be very satisfactory, whereas 21.6% considered it unsatisfactory and 53.3% little satisfactory. This is a general trend in all courses, although it is a little bit more negative in the initial ones (Unsatisfactory: 59.5% in the first year; 55.2% in the second year; 56.5% in the third year; and 41.2% in the last year).

Table 5. *Answers regarding the quality of the education received*

Course	In general, how do you assess the virtual education you have received?			
	Very Satisfactory	Quite satisfactory	Little satisfactory	Unsatisfactory
1st Year	1,1%	17,6%	59,5%	21,8%
2nd Year	2,0%	21,4%	55,2%	21,4%
3rd Year	2,1%	22,8%	56,5%	18,7%
Last Year	2,8%	31,9%	41,2%	24,1%
Total	1,9%	23,2%	53,3%	21,6%

Source: authors' own creation

There is a small relationship (Contingency Coefficient= -.158; Chi-squared= 22.4) but significant ($p=.008$) between these variables. It should be noted that in the last year there is a change in the trend compared to the previous three years, since the assessment for unsatisfactory clearly increases, hence they become polarized (the course with the highest percentages in both ends: very satisfactory (2.8%) and unsatisfactory (24.1%).

Table 6. *Answers regarding examination quality*

Course	In general, how do you assess examinations?			
	Very satisfactory	Quite satisfactory	Little satisfactory	Unsatisfactory
1st Year	1,5%	26,0%	52,3%	20,2%
2nd Year	0,5%	29,4%	49,3%	20,9%
3rd Year	3,1%	30,1%	48,2%	18,7%
Last Year	5,6%	31,9%	46,3%	16,2%
Total	2,6%	29,1%	49,2%	19,0%

Source: authors' own creation

Regarding the subjects' examination process that has been implemented during this virtual teaching process, only 2.6% considered it very satisfactory, whereas 19.0% considered it unsatisfactory and 49.2% little satisfactory. This is a general trend in all courses, with no significant differences found (Chi-squared= 15.8; $p=.071$).

90.3% prefer face-to-face education, compared to 9.7% who would prefer virtual education if they had to choose. No significant differences were shown between the courses (Chi-squared= 2.02; $p=.567$).

4.3. Discussion

The results show that a challenge lies in the existence of a minority group of students who claim to have great difficulties in being able to keep up with learning in a virtual environment. We infer that it is important to bear in mind that availability of multiple means (for example, computers with Internet access, equipped with a microphone and webcam) depends largely on family financial resources. Therefore, there are households in which these resources are not sufficient for all its members in a lockdown situation, especially if there are several family members teleworking simultaneously or have to attend virtual classes. This is further aggravated if parents have to assist children who are

studying primary education (Chinchurreta, 2020). Thus, it can be hypothesized that there is a digital divide for a minority group to a certain extent.

Just as digitalization leads to the gap that accounts for the inequalities it generates, education virtualization poses the same risk but accentuated by the trend towards privatization (private universities offering virtual education). Two more impacts should be added to this, one on the very pedagogical system and another on university life in general. Regarding the former, basic aspects such as resolution of doubts and academic debates are clearly affected. If a professor notes gestures of misunderstanding in the physical classroom, he can go over the idea again in different way. Similarly, an individual question asked in public can help other students understand the purpose of the explanation. On a virtual classroom these pedagogical “complements” are absent. As for debates, the physical presence provides extra emotions that are transmitted in the classroom, tension and relaxation moments, enriched with shared anecdotes that cannot adorn the virtual classroom. Regarding what we can graphically call stamps of university life, online teaching eradicates the entire classical universe comprised of tangible and intangible elements enriching it, from external economies –we must remember that, for centuries, some university cities have mainly thrived on students arriving–, moving through the ties that are created in coexistence and that afterwards generate all kinds of relationships enriching the social, cultural, and political life. These implications are clear when the results obtained show that students clearly prefer face-to-face teaching.

On another note, taking into account students’ opinions, on-site universities, in general, and specifically large public universities, seem not to be prepared for such a rapid change towards a virtual environment. There are widespread complaints from students stating that many university centers have not been able to communicate the when and how of very important matters such as the examination process, or that they did not respond in a timely manner the questions asked by the students. It is important to bear in mind that these are complaints, opinions from the perspective of students who have their own timing and interests. Poor institutional communication has been demonstrated from the student’s perspective. Thus, informational uncertainty has emerged in this context of little information, which has clearly influenced on the discontent exacerbated by the stress derived, first, from the fact of being the end of term (learning context); and secondly, from the personal context, since in almost half of the homes there has been a close person affected by the COVID-19 (including many deaths). Lots of students complain that many of these personal situations have not been listened to and addressed; it is as if universities had relegated humane treatment in many cases, focusing only on technical matters. This approach clashes with the perspective of the Higher Education Area, which contemplates students in their dimensions of doing, knowing, and being. However, it is a situation that is in line with universities’ trend towards prioritizing the mercantilism behind education services and that is detrimental to the idea about these entities as protective figures of culture (Readings, 1997).

Furthermore, Study 1 has shown that this situation does not affect everyone in the same way, but mainly and negatively the students with lower academic performance. It is an important datum, since academic performance does not depend solely on personal effort, but on other factors as well, such as having a disability (and its degree), mental and physical health, psychosomatic welfare, intelligence, economic situation in the home or family climate. For this reason, there are clear indications of greater inequality in academic performance in this context; at least the data on their beliefs and expectations demonstrate this.

The data collected allow us to hypothesize that in some cases the rapid transition from face-to-face to virtual education (due to the lockdown) hinders equal opportunities and social commitment, and by extension, the achievement of an inclusive society established in the Sustainable Development Goals.

5. Conclusions and proposals

5.1. Conclusions of Study 1

University students consider that universities have not adapted adequately to virtual teaching or examinations. They believe that the measures taken have not been sufficient and the classes have not maintained the level of face-to-face teaching.

A vast majority considers that their academic performance is worse compared to the period before the confinement; that their education will have deficiencies compared to previous years; and 88.5% that their average grade could be negatively affected.

Regarding their working future, they believe that the COVID-19 pandemic will have a negative impact on their employability; hence their working future projection is more negative than positive. Consequently, more than half of the students have considered the possibility of seeking a job outside Spain.

The complaints against and challenges for universities, according to the students' requests, are to know the personal circumstances of every student, to commit to listening to them more: not all students have the same access to new technologies; there are complicated family situations due to the COVID-19 (deaths and ill people); as well as an increase in anxiety, distress, and uncertainty.

In general, universities are requested to communicate more and better with the students.

5.2. Conclusions of Study 2

8.1% have lived with people who have had the virus, 17.4% have a relative or friend who died in this period, 51.7% have had a relative or friend ill with COVID-19, and 56.3% have experienced at least one of the three previous circumstances.

The majority of students (more than half) have experienced a crucial circumstance related to the COVID-19 (a close person dying or becoming ill).

In general, students are not at all satisfied with the virtual education given to them, and especially with how they have been examined on the subjects. They clearly prefer face-to-face teaching to the virtual one.

In the opinion of university students, this health crisis will increase the number of volunteers.

5.3. Proposals

Based on the conclusions of both studies, the discussion on the results, as well as our personal experience as university professors, we made some general and specific action proposals:

Institutional communication with students has to be improved, providing answers as fast and specific as possible since it reduces uncertainty. We are aware that at least one university in Spain called every student to ask them about their academic and personal status, and answered the questions they asked (UPSA). Subsequently, this university sent internal communications to the teaching staff about

the students' suggestions (for example, that there was an excessive load of extra assignments not planned at the beginning of the course). This university is among the best rated ones for academic performance and labor insertion according to the ranking prepared by the CYD Foundation in 2020.

It should be taken into account that there is a minority group of students who do not have adequate technological equipment at home to receive a proper online education. This entails a great disadvantage compared to the rest of their classmates, and to the context of face-to-face teaching. A good alternative is lending equipment as offered by some universities.

Another complaint is the diversity that has occurred in some centers in how virtual teaching has been performed, since in some cases it seemed to ultimately depend on the teaching staff, and thus there were some professors highly assessed for having given classes in real time through an online platform, while in some other extreme cases they had simply offered readings to prepare for the final exam. We propose that online teaching be conducted just as some universities have successfully implemented it for their students, in which the teaching staff provided classes on specialized platforms with the same schedule of face-to-face classes (for example: UPSA and UCAV), as well as partial experiences in many universities (among the centers mentioned by the students there are USAL, UCM, UAM, UN, UPC, UAB, among others). To do this, professors must be trained and given the adequate support. A well implemented online education is a good alternative to face-to-face education during a lockdown period. On another note, if this change is not led by the institution (we propose that it be led from the different rectorates), unifying criteria, providing information, training, and resources to the teaching staff, and the decision of how to conduct virtual teaching is delegated to other levels (to departments, deans, or professors), there is a high probability that it will not be implemented properly, since professors are not prepared. Therefore, we believe that such hyper-flexibility has negative effects and should be minimized. It is important to point out that there are universities in Spain that provide online teaching (UNED, UNIR, UDIMA) as well as multiple research and training groups in e-learning and educational innovation that should receive more support and that ought to be mandatory reference groups for any university institution in the event of a new confinement. From these positive experiences we can highlight a reference study conducted at the University of La Rioja (Vergara, 2007), at Universities of Córdoba and Granada (Aznar et al., 2009) or the adaptation process at the UPC during the COVID-19 pandemic (García & Taberna, 2021), as well as the reviews and proposals made by various Spanish research groups (Juarros *et al.* 2018; Naujokaitien *et al.* 2020).

On another note, and from a broader perspective, beyond the lockdown context, some of the flaws noted in the on-site higher education system could be alleviated with some measures inspired by the ideas below, following the proposals made by Alvesson, Gabriel, and Paulsen (2017: 112), and considering the Sustainable Development Goals as reference:

To place greater importance on the assessment of the teaching work in the professional career, to reformulate the academic career to limit the homogeneity based on standardized publications, and to place greater importance on non-standardized individual publications, since Spanish professors are overwhelmed by this publication race, and therefore, have less time to prepare classes, which should be the priority and best assessed aspect in any teaching career.

To place greater importance on humanistic education, and on ethics in the curriculums of non-humanistic education.

To place greater importance, clearly noticeable, on teaching the cross-disciplinary connections of the contents in undergraduate and postgraduate levels.

Greater openness of university centers to society, conducting activities that involve the most vulnerable groups –the elderly, women, children, immigrants.

To increase research with city councils and associations in rural areas, as well as the number of social education activities promoted in them.

To increase the number of academic and extra-curricular activities carried out outdoors and in rural environments.

To promote volunteerism in university students at institutions and support groups committed to social problems.

Most of these measures, and other similar ones, will help enhance motivation among professors and students, and, therefore, increase the sense of belonging to a community; hence a form of association that favors face-to-face relationships –as a form of socializing grounded in solidarity– as well as the responsible insertion in the environment.

Finally, as research proposals, derived from the limitations of the two studies here presented, we believe it would be very convenient to know the perspective of professors, who, from our experience, have been under a lot of pressure in this context, even suffering anxiety states. We believe that students are unaware of the great effort professors have made to adapt their classes to distance teaching.

Another investigation that seems important to us is to know whether students' fear regarding the lowering in their academic records, lower knowledge levels and lower job expectations are confirmed, since based on our experience as professors, the results of exams, maintaining the same examination criteria, have not changed significantly compared to other courses. It would also be interesting to study if the confinement has had positive effects in some students, such as the improvement in any psychological strength (for example, greater resilience).

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