Digital and Social Inequalities and the Post-Coronial University: A Greek Case[1]

Yiannis Zaimakis   Chara Kokkinou
(University of Crete Research Center, Greece)
zaimakis@uoc.gr   koxa17@gmail.com

Drawing on quantitative and qualitative data from research carried out at a large Greek University the article reflects on issues of digital and social inequalities reproduced in higher education during the pandemic emergency online learning. Findings show that both performance and choices of candidates seeking admission to Greek universities are influenced by their social and parental background. Disadvantaged students tend to access less prestigious departments with lower prospects for employment and career advancement after graduation. The study indicates how the online learning experience highlighted pre-existing digital inequalities among students in terms of access and use of new technology, available digital tools, skills and appropriate space. Findings show a correlation between digital resources and skills with students' social background (gender, father's education and occupation) suggesting that social class and family educational capital still affect students' educational progress, hindering equitable learning and participation among them. Students' reflections on the future education system reveal that they prefer in class-teaching to online education and point out the risks of pandemic pedagogies in disrupting embodied and communal aspects of academic life in the physical environment of the campus-based university. However, most students advocate for greater digitalization of higher education and seem more inclined to adopt a blended post-coronial educational approach as an effective response to the needs of underprivileged students facing particular financial barriers and/or educational challenges.
Keywords: Pandemic crisis, emergency online learning, digital inequality, social inequalities, higher education.

Introduction

During the pandemic crisis, the social distancing measures that aimed to prevent the spread of COVID-19 affected all areas of social life, including higher education. Universities all over the world were forced to adapt to pandemic policies and students were urged to adapt to an emergency remote education model, marked by the extensive use of technologies and edu-platforms. In higher education, as in other institutions, social relations among individuals are marked by imbalance of power, status hierarchies and 'distinctions (and specific inequalities in means)' (Pardo 1996, quoted in Pardo and Prato 2021:8), which results in 'restrictions (cultural, economic and political) on their actions and access to resources' (Pardo and Prato 2021: 8). Pandemic pedagogies have shed light on and exacerbated digital inequalities that were less visible before, revealing that their roots are deeply entrenched in the systems of power and that the digital divide often overlaps and interlinks with wider forms of social inequality and dominance (Zheng and Walsham 2021). The experience of emergency online learning in higher education was seen as an 'important moment to support, regulate and design an inclusive digital future for us all', as part 'of a society that is more socially just' (Williamson et al. 2020: 111).

In times of rapid change, the exercise of criticism is considered more than essential. Students' experience of online learning can be a catalyst for re-imagining the future of higher education and may give rise to novel imaginaries including utopian hopes and dystopian fears (Eringfeld 2021). That said, examining students' perceptions of emergency online learning experience is of high importance in the discussion on social and digital inequalities and the role of universities in social mobility.

Using both qualitative and quantitative data from research conducted during the spring of 2021 at the University of Crete (UoC), the article attempts to address issues of social and digital inequality and the role of higher education in social mobility in the context of the pandemic. The paper begins with an overview of the debate on social and digital inequalities focused on the experience of emergency online learning. The next section refers to the method of the research while the four following sections present the main findings: (1) social inequality and access to higher education, especially to the more prestigious university departments; (2) digital inequalities among students and their correlation with the parental educational and social background, as well as the department of study and students' gender; (3) students' evaluation of the two teaching systems; and (4) students' perspectives on a post-COVID University which include both their vision of a blended education system responsive to their changing needs and their dystopian fears for the disruption of the social and communal aspects of the 'real' university. The article ends with a reflexive discussion on the further digitalisation of education examining the significant role of the public post-coronial university either in enhancing inclusiveness and social mobility or in reproducing inequalities (Pardo and Prato 2021: 5).

On Pandemic Pedagogies and Social and Digital Inequality in Higher Education

In recent years a great deal of discussion has been held on digital equality in higher education and the complex relationship between technology and society. Furthermore, the implementation of emergency online learning during the pandemic has highlighted the issue of digital divide among students of public universities. Until the end of 20th century, the digital divide used to refer to a distinction between those who had access to digital technology (particularly the Internet) and those excluded from it. The inability of having access to information and knowledge and therefore to education through digital tools was perceived as a type of social exclusion, which accelerated or even reproduced pre-existing social inequalities. Those excluded from technology had lower access opportunities for education, work, welfare state services, political participation, social networking and other resources. This approach considered Information and Communication Technologies (ICT) neutral goods, which could be converted into other valuable goods, life outcomes and chances. Inclusionary educational systems could enhance access to communication technology and the Internet, which could lead to a greater sense of social inclusion, participation (Halford and Savage 2010).

However, over the last two decades, the discussion on the digital divide has shifted beyond the aforementioned framework. Recent studies focus on the lack of skills and competence in using digital tools and on the social and cultural advantages derived from access to ICTs systems (García-Martín and García-Sánchez 2022) revealing that digital exclusion is a dynamic phenomenon associated with the intersection and entanglement between digital technology, structural stratifications and the ingrained tendency of 'othering' in societies (Zheng and Walsham 2021). The acquisition of digital skills is not conceived in solely individual terms but is connected to wider social inequalities associated with education, class, gender and race and in terms of the context of use (whether educational, institutional or political) that may support or inhibit 'meaningful social use' (Halford and Savage 2010: 940). In this sense, factors such as the

cultural capital of the proper use of technology in educational settings, the ability to navigate quality communication networks, the quality of access space (for example, personalised access), the positive attitude towards technology and familiarity with Edu-platforms seem to have a significant impact on the quality of activities in digital learning.

A discussion has been triggered by the rise of emergency online learning during the pandemic, which reveals the socio-digital inequalities of students in the context of the COVID-19 lockdown, the influences of socio-educational level of the family and the rural or urban context (Sosa Diaz 2021) and the deeply rooted inequalities that are preventing participation in digital learning at individual, institutional and system levels (Laufer et al. 2021). Taking into account that participatory citizenship in the digital era involves the right to equal access to higher education (Willems et al. 2019), scholars have highlighted the linkages between the digital divide and social inequality (Tewathia et al. 2020) and the multiple factors that influence the availability of digital technologies for sustainable and equitable education (Rodríguez-Abitia et al. 2020).

Recent studies on students' satisfaction during emergency online learning suggest strong correlations between participants' attitudes and their social backgrounds, with the most privileged expressing more satisfaction with the e-learning experience (Adnan and Anwar 2020, Fujita 2020). They also reveal digital inequality among students in terms of digital skills, available private space and access to technical equipment (Zaimakis and Papadaki 2022). In this vein, it has been argued that planning the transition to a distance learning environment should ensure the access of all students to a supportive learning environment without exclusions (Thompson and Copeland 2020).

In the pandemic era, the discussion of digital exclusion has brought to the fore the further digitalisation of higher education. Some scholars welcome this prospect as a means to improve the quality of education by incorporating innovative technological practices into learning activities and offering different forms of socialisation in post-COVID era pedagogies (Bao, 2020, Zawacki-Richter 2021, Rodríguez-Abitia et al. 2020). It has been argued that the 'forced' digital learning experience could gradually give way to a harmonious integration of both physical and digital tools and methods for the sake of a more active, flexible and inclusive post-COVID education (Rapanta et al. 2021).

Other scholars tend to be sceptical about the techno-euphoric claim that the development of a learning system based on education platforms and digital technologies can be viewed as a ready-made pill whose use is likely to become the norm in the future university system. Williamson et al. (2020: 108) support the need for serious caution regarding the expansion of educational technologies during the pandemic underlining that many Ed-tech businesses have in fact been seeking to finesse the model of distance education for years. In the same vein, the increasing 'platformisation' of the education system brings to the forefront new forms of marketisation and formalisation of the learning process, undermining the broader social mission of public education (Hillman et al. 2020). Other studies stress that digital education risks exacerbating digital, gender and race inequalities (Malisch et al. 2020, Murphy 2020) and underline the digital gap between developed and underdeveloped countries or between rich and

poor, with the latter suffering from a lack of educational opportunities (Bozkurt and Sharma 2020).

Beyond digital inequality, the role of higher education in facilitating social mobility and the inequalities of access to universities are also explored in this study. Despite the increase in higher education enrolment rates for all social groups across the developed West, socioeconomic differences are still an issue of contention in inclusive education policies, since the most prestigious higher education programmes continue to be dominated by students of privileged family backgrounds (Boliver 2017, Marginson 2016). According to Pardo and Prato (2021: 1), socioeconomic inequalities 'grow increasingly strong, complex and ramified, and in many cases' —including the field of education — 'implicit or disguised, it is topical to understand their impact on associated life'. This study aims to contribute to the aforementioned debates utilising the findings of research that will be presented in the following sections.

Methodology of Research

Taking into account that social and digital inequalities in times of crisis 'need to be understood on the ground and in depth' (Prato 2020: 4), this study addresses these issues through a survey that was conducted from 6 April to 4 June 2021 across the 16 departments (5 Schools) of the UoC. The university is situated in the cities of Rethymno, hosting the Schools of Philosophy, Education, and Social Sciences, and of Heraklion hosting the Schools of Sciences and Technology and of Medicine. In the research, 13.61% of the university's students (2,372 validly completed questionnaires, n=2,372), who had enrolled in at least one course over three academic semesters of distance education (17,430 students), participated. Based on such a participation rate, the validity of the sample results is determined at a confidence interval of 95% and an error level of 1.9%. The research draws upon an online (web-based) survey targeting both undergraduate and postgraduate students, who were invited to participate by completing a self-administered questionnaire.

The questionnaire consisted of three parts. The first part included eight close-ended items regarding the students' profile (gender, age, department and year of study) and their parents' educational level, working status and occupation. The second part consisted of three close-ended questions on the place of residence during online learning, the frequency of attendance and the reasons for not attending (if that was the case). The third part of the survey included: a) six close-ended questions on the evaluation of the online learning experience and technological equipment, frequency of access to suitable technological facilities, electronic media availability, time and place for attending online learning, and the students' digital skills; b) two closed questions regarding the comparison of traditional classroom-based education with the emergency online learning and on the preference of future educational modes in the post-era (in-classroom education, blended educational systems and distance online learning; c) two open-ended questions (following the last two closed questions) by which students were invited to freely express their views on the comparison of the two systems and their future model preference. The same part hosted a 16-point Likert scale with statements on the experience of online learning (levels of stress, interaction with their counterparts and teachers, sense of

isolation, level of performance, etc.). Collecting and intergrading complementary quantitative and qualitative data referring to the same topic (Mason 2002) offers a more profound insight into the students' teaching research. The quantitative data provides a statistical description of the phenomenon, whereas qualitative data (including 1,379 written comments) allow a better understanding of the students' perception on the emergency online learning. Through the aforementioned combination, qualitative research material may clarify, interpret and supplement the quantitative body of data (McGuirk and O'Neill 2016) offering a 'reflective understanding of social knowledge through the voice of actors as they experience the conditions of their existence' (Spyridakis 2022: 3).

Quantitative data from the close-ended questions were analysed with SPSS statistics (with both descriptive and inductive statistical analysis) while the answers to the open-ended questions were thematically analysed, offering insight into patterns of meaning (themes) across the data (Braun and Clarke 2012). In the quantitative part chi square tests were also performed, while cross-tables allowed us to observe the relations between the socio-demographic characteristics of the students and their answers. For the purpose of the present article, we have chosen to present only those findings focusing on socio-digital divides and inequalities.

Social Inequality, Access and Internal Stratification of the University
In Greece, the access to higher education depends on the university entrance examinations organised by the Ministry of National Education and Religious Affairs. Access to more prestigious university departments offering programmes with strong potential career prospects presupposes high scores in the entrance exams, whereas other institutions, often in regional and island areas, accept students with lower performances. Although the UoC ranking is high compared to other universities nationally,[2] its geographical location, on an island far from the mainland, makes it less attractive than those located in the big cities of Athens and Thessaloniki. Low attractiveness of distantly located universities was even worse during the economic crisis due to the reduced household income which affected not only the candidates' preferences but also their study conditions. As a result, many of the students had to combine working with studying or had to leave their rented apartments and return to their parental home. During the pandemic, dystopic conditions intensified, as 67.8% of the UoC students surveyed reported that they returned to their place of origin to attend online courses.

Aside from the university's location, studies have shown that middle-class students tend to enter more prestigious university departments and fields of study than working-class students (Sianou-Kyrgiou 2008, Sianou-Kyrgiou and Tsiplakides 2011). Despite the significant increase of higher education participation, all social classes do not seem to participate equally. Access to higher education remains highly selective since families turn to educational markets for supportive preparatory lessons, which benefits candidates from privileged social groups. In this sense we need to investigate the relation between the expansion of tertiary education chances and the internal stratification of higher education in Greece. To that end, our research attempts to examine the possible interrelations between students' social background (parents' educational

---

[2] See https://en.uoc.gr/research-at-uni/rankings.html

level, profession and working status) and their department and city of study. Cross-examining the city of study with students' socio-demographic data is considered of high importance, given that Heraklion hosts the most prestigious departments (i.e., Medicine and Biology) and students with superior exam admission scores than Rethymno.

UoC/Departments	Admission Scores		
	2022	**2021**	**2020**
Medicine/Heraklion	18.150	18.231	17.525
Biology/Herakliom	16.768	17.124	15.900
Phycology/Rethymno	15.905	17.135	17.075
Chemistry/Heraklion	15.874	16.106	14.625
Computer Science/Heraklion	15.617	15. 603	15.075
Primary Education/Rethymno	12.675	13,402	12.850
Physics/Heraklion	12.160	14.397	11.075
Preschool Education/Rethymno	11.360	10.803	10.600
Economics/Rethymno	11.040	10.384	10.150
Mathematics/Heraklion	10.860	10.829	8.975
Applied Mathematics/Heraklion*	10.580	10.102	6.250
Sociology/Rethymno	10.110	11.093	12.375
Materials Science and Technology/Heraklion	9.645	4.175	9.391
Philosophy and Social Studies/Rethymno	9.135	8.168	8.400
History and Archaeology/Rethymno	9.125	10.528	8.750
Philology/Rethymno	9.118	8.696	8.525
Political Science/Rethymno	9.075	9.546	10.375

*Mathematics and Applied Mathematics belong to the same University department. However, they have different admission scores and curriculums.
Table 1. Tertiary admission scores in the Departments of the UoC (2020-2021).

Findings from cross-examining students' social background and both the department and city of study are of high interest, since the parental social profile for the students studying in Heraklion (where the highest in demand departments are located) was higher compared to the departments of Rethymno. In more detail, 66.8% of the fathers and 62.3% of the mothers of those attending university in Rethymno did not have access to higher education, while the corresponding percentages in Heraklion were lower (50.5% and 43.5%). Particularly evident, for example, is the higher parental educational level for the students of the department of Medicine (Heraklion) compared to those of other departments: 63.9% of the fathers and 68.6% of the mothers of those studying medicine hold a university degree or even a master/PhD. Correspondingly high percentages (over 50%) are observed in the departments of Biology, Computer Science and Chemistry, all of which are housed in Heraklion. On the contrary, in Rethymno, the more characteristic example comes from the department of Preschool Education. Here, only 23.5% of the students' fathers and the 23.9% of the students' mothers seem to have had access to higher education or hold a master/PHD degree. The departments of Economics and Sociology are also in relatively low positions in terms of parental educational level. Similar discrepancies can be noticed in both the parental profession and employment status. For example, only the 25.5% of the fathers and the 8.8% of the mothers of those studying in

Heraklion belong to the low (working class) social-professional category, while the corresponding percentages in Rethymno are much higher. The opposite can be observed among the parents who belong to the highest socio-professional categories.

Parents' Professional Status	Father			Mother		
	City of Study			City of Study		
	Heraklion	Rethymno	Total	Heraklion	Rethymno	Total
High Socio-professional Categories	25.3	13.6	19.1	35.0	24.0	29.5
Middle Socio-professional Categories	49.2	45.4	47.2	56.1	61.5	58.9
Low (working class) Socio-professional Categories	25.5	41.0	33.8	8.8	14.2	11.6

Table 2. Parents Professional Status and the Students' City of Study (%).

Similarly, in Heraklion, 67% of the students' fathers and 54.1% of the students' mothers are permanently employed, while the corresponding percentages in Rethymno are from 7 to 10 percent lower (60.8% and 44.4%). There are also differences between the departments of the same city. In Heraklion, the single-department School of Medicine stands out in most categories of parental social background, followed by other high in demand departments, such as Biology and Chemistry. In Rethymno, the students with the highest educational and socio-professional parental status study in Psychology, the department with the highest admission scores which, to a certain extent, are linked to its strong scientific profile and to the graduates' high expectations of carrier opportunities and employability. In summary, findings show that the access of students from disadvantaged families with limited educational capital and lower professional and employment status is directed towards departments of lower demand. In contrast, students from privileged families participate to a greater extent in the most prestigious departments. Thus, Greek education system appears to reproduce the existing social and economic inequalities, limiting the students' social mobility.

Digital Inequalities Among Students During Emergency Online Learning
While the previous section addressed the issues of inequality in educational stratification and the effects of parental social and cultural capital on students' educational attainment, this section focuses on digital inequalities among the students who participated in the pandemic emergency online learning, examining the availability and quality of digital resources along with the learning environment. In evaluating the available technological resources three out of ten students (30.2%) characterised their equipment as average or below average, while the answers to the open-ended questions highlighted examples of disadvantaged distance learning participation due to insufficient equipment: 'I was excluded from the learning process for

almost a year since I didn't have neither a camera nor a microphone, while the shared computer broke down as well' (Computer Science student).

Examining the available participation tools used by the students to attend tele-courses (n=2,100) it appears that a significant percentage (13%) used inappropriate technological means (mobile phone, tablet, family/shared computer, borrowed computer from friends/acquaintances), which hindered their participation in the learning process. Access to the appropriate equipment and software along with a stable internet connection are considered necessary conditions for distance education attendance, as their lack leads to digital gap expansion (Hayes and Jamrozik, 2001). Our research findings show that many students do not always have the required technological equipment (15.1%) or the appropriate software (28.5%) and 64.1% do not always have a stable internet connection. Students' comments in the open-ended questions also highlighted issues of digital exclusion, connectivity problems and techno-stress:

> 'My permanent residence is on an island, where the internet connection is not the best. This, along with the other three family members taking online courses at home makes attendance very difficult' (Economics student).

> 'There are many connectivity problems which result in my inability to attend lessons and sometimes exams. This, in turn, causes increased stress' (Psychology student).

Another prerequisite for efficient online learning is the suitability of the space available for lessons' attendance (Aristovnik et al. 2020, Aguilera-Hermida 2020). However, in our survey only one out of four students reported attending courses from their own space/room — 13.7% of the students shared a room with other family members; 10.5% used a common space within the house; 1.1% attended lessons from outside home, conditions all considered unsuitable for a qualitative education. Study findings suggest that emergency online learning revealed digital inequalities among students, hindering learning opportunities for some of them.

For a more profound examination of digital inequalities among students and the factors they are linked to, we cross-analysed the students' socio-demographics with their answers concerning their distance learning experience. The cross-tabulation revealed a statistically significant relation between the fathers' profession (x^2=23.773, df=2, p-value=0), their employment status (x^2=14.964, df=3, p-value=0.002) and the students' answers for the available digital equipment. This relation entails that students whose fathers were of a higher professional status were more likely to have their own private equipment, necessary for online attendance, compared to the rest of the students. Regarding the father's employment status, cross tabulations showed that the lowest percentages of students who used private equipment were found among those whose father during the survey was unemployed or worked occasionally/was suspended from work. In both cross-tabulation cases, we were able to observe an inverse relation: As the socio-professional status of the students' father declined, the deficit in appropriate digital resources increased. Accordingly, as his job stability increased, the deficit decreased.

Father's Profession=1,252		Private Equipment (desktop, laptop)	Shared Equipment (desktop, laptop), mobile phone, tablet
	High Socio-professional Categories	96.3	3.7
	Medium Socio-professional Categories	92.2	7.8
	Low (working class) Socio-professional Categories	85.5	14.5
Father's Status of Employment n=1,984	Permanent Employment	90.6	9.4
	Contingent Employment/Work Suspension	84.2	15.8
	Unemployment	83.0	17.0

Table 3. Father's profession and employment status and availability of the appropriate equipment for digital attendance (%).

Apart from digital resources, available digital skills are considered of high importance for the reduction of digital inequalities (Dodel and Mesch 2018, Hargittai et al. 2019). Research findings showed that distance learning contributed positively to the further cultivation of students' digital skills, as the 38.9% of the students in a Likert scale question strongly agreed with the proposition. The vast majority of students in a self-assessment question (n=2,092) thought positively of their digital skills (58.7% sufficient/29.4% probably sufficient) while 12% stated that their digital skills were of average or even below average level.

The level of digital skills, as seen by their cross tabulation with students' socio-demographic data, appears again to be statistically significantly related to the father's profession ($x2=6.977$, $df=2$, p-value=0.031) and his level of education ($x2=11.768$, $df=4$, p-value=0.019). Students whose father belonged to a higher socio-professional category or was of a higher educational level seemed to assess their digital skills more positively.

Father's Profession n=1,249		Sufficient Skills	Insufficient/ Moderate Skills
	High Socio-professional Categories	94.2	5.8
	Medium Socio-professional Categories	89.3	10.7
	Low (working class) Socio-professional Categories	87.8	12.2
Father's Level of Education n=2,033	Illiterate /not completed compulsory education	82.1	17.9
	Compulsory-education	86.2	13.8
	Secondary-school	88.5	11.5
	Tertiary-education	88.8	11.2
	Master's Degree/Phd	95.0	5.0

Table 4. Father's profession and educational status and students' digital skills (%).

From our research, students' gender appeared to show a strong correlation with the following variables: quality/appropriateness of distance education attendance equipment, availability of stable internet connection, digital skills necessary for attending distance learning and space availability for students to attend their lessons. Female students in all the aforementioned variables scored less than the male participants, while the differences between the scores were statistically significant.

	Without Stable Internet Connection N=1989	Without Private Space N=2044	Without Sufficient Digital Skills N=2041	Without Private Computer N=2048
Male	10,2	17,8	6,5	7,6
Female	17,0	28,2	13,9	12,3

Table 5. Correlation between Digital Resources and Students' Genter (%).

Our research findings confirm earlier studies on digital inequalities within Greek society (Bhandari 2019, Georgopoulou 2011) and the reproduction of various gendered discriminations evident in family habitus.

Evaluating Online Learning Experience Versus In-class Education

In recent studies of students' experiences and evaluations of emergency online learning, a general satisfaction has been noted, while at the same time, some weaknesses and concerns have been highlighted. A number of studies have shown the effectiveness of online education at saving resources, time and travel costs (Fidalgo et al. 2020, Hussein et al. 2020). At the same time, researchers have highlighted socio-psychological barriers, such as the risk of distraction and the difficulties of maintaining attention during the online courses (Adnan and Anwar 2020, Hussein et al. 2020), feelings of isolation, frustration and technostress and the lack of socialisation, embodied communication and interaction in the virtual courses (Adnan and Anwar 2020).

In our research, in the evaluating question of the online-learning experience (n=2,091) from a five-point scale (very bad/bad/moderate/good/very good), the positive evaluations (good/very good) of the learning experience were more than twice as negative (44.7% versus 19%), despite the emergent nature of the application of online learning and the deficit of the required preparation of the system. In spite of this positive evaluation, when students were asked to compare the experience of the online learning with the traditional face-to-face education, they favoured the latter; 63,3% stated that traditional education was better or much better than distance education compared to 15.6% of those who stated the same for distant education (better or much better than traditional education), while 9% (mainly first-year students who had no further experience) stated that they had not formed an opinion. The cross tabulation of the comparison between traditional and distance education with the students' year

of study showed that the preference for distance education was much higher in higher years compared to the first years of study.

Examining these findings in combination with the students' comments in the open-ended questions we found that although students considered the traditional mode of education significant and to some extent irreplaceable, they at the same time asked for the integration of more digital learning practices. After the two systems were compared, the open-ended question revealed a wide range of attitudes towards online learning: from scepticism and a focus on the advantages of traditional education to moderate attitudes that praised traditional education's superiority while stressing the importance of flexibility to attend lessons online during emergencies, and finally to more technophilic approaches that delineated digital education as an inclusive method of learning that responds to their educational and financial requirements.

Students often defend traditional education by problematising online learning and the politics of social distancing that can undermine the quality of education as well as the communal and embodied aspects of campus-based education including social 'sparks' and 'stimuli' from informal social interaction (Prato 2020: 8).

> 'Education cannot be limited to an auditorium, or now even worse, a computer screen. Education is the university itself with all its qualities and spaces: discussions with fellow students in the library or in the university canteen, contact with the teachers in their offices or after class, the stimuli from others' discussions' (Philology student).

On the other hand, positive evaluations came mainly from older students who considered online learning practices an effective 'medicine' to deal with the main problems arising during both the economic and the pandemic crisis. On this basis, the emphasis was placed on the benefits for families with financial difficulties, on saving high rental costs, travel costs and time, and on inclusiveness for students with disabilities, and so on.

> Online learning opened new horizons in education since we can study without any accommodation and travel expenses. We also don't spend unnecessary time on travel (nor money on food while on campus) so we have more time to organise our studies and reading and also save money. Online learning offers studying opportunities for those who cannot afford moving away from home (Physics student).

Students' Considerations Towards Post-Coronial Higher Education

While many of the students expressed their preference towards a fully in-class learning mode, the majority did not seem to want a complete return to pre-pandemic educational practises. More specifically, research findings regarding the preferred post-coronial education model revealed that many students indicated a fully in-class education mode (34.4%), while the majority of participants (61.12%) regarded the blended educational approach combining both in-class and online learning as the most desirable mode (48.3% preferred a blended approach

focusing on in-class education while 12.9% preferred a blended approach on-online education). Yet, only 4,4% of students preferred a fully distance education.

A critical factor influencing students' preferences was the year of study. Thus, the average year of study of the participants who reported their preference for traditional education was 2.4, those who supported a blended system with a priority on classroom education 3.3 and those who preferred the same system but with a focus on distance learning 4.2. The qualitative data shed light on these divergent considerations. Students, mainly in the early years of their studies, tended to regard education as a communal experience of embodied learning and interaction within the campus physical environments, which facilitate the building of students' identity and their sense of community, solidarity and belonging. In this vein, some students viewed distance education as a dystopic condition that disrupts the traditional values and qualities of higher in-class education:

> 'Our physical space is in classrooms and laboratories, and not sitting in front of a screen for hours' (Chemistry student).

> 'Online education treats learning in terms of production and thus fails to cultivate the sense of solidarity and comradeship that should characterise a scientific community' (Physics student).

From the supporters of the blended approaches, the vast majority recognised the positive role of the physical in-class learning environment but at the same time emphasised the enhanced flexibility offered by technological tools available in virtual classes and the role they could play in a more equal and inclusive education. They preferred a blended system, prioritising convenience over quality, and sought further integration of digital education in standard teaching practices in terms of enhancing and facilitating education access.

Analysis of the rich comments of students who preferred the blended system indicates that they elaborated multiple scenarios for the implementation of innovative educational practices in the post-COVID university. Some of them reflected on a better future university based on a blended approach that would incorporate digital technology and innovation, increasing flexibility and openness in the learning process. The following imaginary is exemplary of this discourse:

> 'A more open university, a space that harmoniously combine tradition with technology. A space that for the purpose of learning and research will use all the modern resources offered by technology and the internet, but also a university where the course in the auditoriums will stop being the traditional lecture and finally, it will be constantly active, a living organisation not limited to 2,4,6 hours a week but accessible to everyone every day, every hour' (Physic student).

However, the vast majority of blended learning supporters focused more on practical arrangements that meet the divergent needs of students in the context of the financial and pandemic crises. For them the incorporation of the online education format could increase flexibility and improve access for many students who have trouble completing their studies for various reasons (for example, because they are working or have left their residence in the

university city to reduce rent and commuting costs). The blended education system was considered flexible and, potentially, an effective way to address educational inequalities. In this vein, students elaborated various scenarios for the implementation of blended systems in the post-coronial University. For example, they proposed traditional face-to-face classes in parallel with virtual teaching to better meet the expectations of students who may have geographical or economic constraints; partial use of online learning in some categories of courses (for example, theoretical); further incorporation of digital learning in everyday teaching practices (for example, more open sources, lectures from other universities through Edu-platforms, more online meetings); and specific online courses for students experiencing economic hardships:

> 'Since I work, I would prefer online learning in theoretical courses and face-to-face learning in seminars, practical training and tutorials' (Chemistry student).

> 'Distance education could play a catalytic role in teaching in theoretical schools. Its implementation would provide the possibility for students who are facing financial problems, due to the long-term economic crisis and now the devastating economic effects of the pandemic, to continue or start their academic journey, seamlessly from their place of residence, without burdening their family budget. However, distance education cannot replace live learning completely: these two methods combined have proven to be beneficial for thousands of students' (History and Archaeology student).

Further Discussion

Critical times offer opportunities for reflection and re-evaluation. Online digital education was implemented as a temporary educational solution for the university community which tried to respond to the risks of the virus spreading. The experience of emergency online learning has, however, given rise to reflections on new horizons of the possible for the post-COVID University and brought to the fore the critical issue of social and digital inequality in higher education in western countries (Boliver 2017, Stich and Freie 2015).

According to our research findings, the increasing access to Greek Universities by working-class students is geared towards lower status and less-resourced institutions, which leads to the increase of class stratification and social hierarchy in higher education. It has been found that both performance and choice of candidates seeking admission to Greek universities are influenced by their social and parental background, and those from less privileged backgrounds are less likely to be admitted to the most prestigious departments. They have to deal with the increased costs of exam-preparation private tutoring, unaffordable for low-income families, especially in times of successive crises (financial crisis, pandemic, war in Ukraine). The financial and cultural capital of students' parents plays an influential role in candidates' studying choices. This is because private supplementary tutoring is crucial in achieving entry to prestigious educational programmes in higher education. These programmes offer better academic and career prospects for their graduates. The inability of the Greek education system to implement an effective supporting teaching mechanism for the students who need it — which would act compensatively in the market rational of private tutoring schools — reveals the

perennial problems of secondary education. Moreover, the problems of the non-privileged families are exacerbated by the difficulty of getting education school graduates employed by the public primary and secondary schools due to the cuts in public expenditures and thus the low number of teacher appointments. Similar problems face graduates of social sciences who struggle to join the labour market, usually in working environments beyond the subject of their studies in low-paid and precarious employment positions in times of crises (Zaimakis and Papadaki 2022).

Moreover, the online learning experience revealed existing digital inequalities among students. Our research findings are in line with Prato's view (2020: 5) that 'the stay-at-home policy is not the same for everybody; its effects on people's mental and physical wellbeing vary greatly' depending on a variety of factors including, in our case, their availability of access to a PC and unlimited internet, the appropriate space to attend e-courses, and the necessary digital tools and skills. The results of the study reveal a significant correlation between digital resources and skills and the students' socioeconomic background (gender, father's education, occupation), indicating that social class and privilege affect the educational progression of students, hindering equal participation in the educational process. Research findings highlight the reproduction of pre-existing educational inequalities, as disadvantaged and digitally excluded populations face significantly more difficulties during the learning process than those with better economic conditions and broadband internet access (Prata-Linhares et al. 2020).

Digital inequality has its roots in structural inequality and the deep-seated power relations in society. Education policy makers should address the unequal access of candidates from different socioeconomic strata to prestigious university programmes and the difficulties that families with a low social background face in supporting their children with out-of-school tutoring. Further studies need to focus on structural constraints and how they affect students' opportunities while social and educational policies need to minimise social and digital exclusion within a complex and intersectional system of power (Zheng and Walsham, 2021), and fight inequalities not only within the education system but across society as a whole.

Specifically with respect to the Greek educational system, policymakers need to focus on combating social and digital inequalities by developing a remedial learning system within public secondary schooling for most underprivileged students; developing wellness housing and food programmes for students from lower social strata; and developing a national strategy to ensure all students at public universities have access to digital technology.

Taking into consideration the voices of the students — sparking hope and fear for the post-COVID University — we observed a twofold concern. Many asserted a greater digitalisation of higher education, including a blended learning system that could adapt to their changing needs. At the same time, others underlined the risks of pandemic pedagogies and the further digitalisation of higher education (disembodiment, social isolation, loss of community and belonging, etc.). Qualitative findings revealed the concerns of those who feel that they struggle from a disadvantaged position in the traditional education system. This should be examined within the wider context of a society that has experienced successive crises (economic, austerity, pandemic). Many working-class students have been struggling to

complete their studies in an environment of economic hardship because consecutive crises have exacerbated the problems of small and medium social strata, including student housing costs and living away from home.

Education policies for the future university should take into account the hopes and fears of students. Increasing digital technology in higher education may provide new opportunities for inclusive education policies and innovative forms of learning. Nonetheless, we may promote critical engagement with questions regarding the commercial and instrumentalist use of technology that transforms universities into interactive digital platforms, promoting the process of 'learnification' away from on-campus culture and experience. Prato reminds us that 'humans are social beings and their sociality includes in-person physical encounters; it is made of symbolic interactions and sensory experiences, which extend to the natural world' (Prato 2020: 9). The university is a cornerstone institution for facilitating social values, mobility and justice and, thus, we need to go beyond the fashionable but nonetheless problematic idea that education is about learning and that teaching should be redefined so as to facilitate and create learning opportunities and 'deliver learning experiences' in the political economy of market-based educational policies (Biesta 2015).

The critical point here is how to enhance the further incorporation of digital technology into everyday educational practices without disrupting the social and communal aspects of campus-based education, including embodied communication, research and learning in physical environments. This fear is evident in a time when liberal reforms in public education have been reinforced by Ed-Tech industry policies of education that try to turn the educational space into a market (Ball and Grimaldi 2022). The pandemic has generalised the previously exceptional use of cutting-edge technologies in education and 'virtual classrooms are now considered as viable alternatives to face education' engendering the collapse of the boundaries between the public and the private (Türe and Diken 2020: 96). In a context of widespread social inequality and insecurity, the 'state of emergency' promoted teleworking and virtual interactions as a 'new normal' (Spyridakis 2020, Pardo 2020). Future studies may investigate the increasing significance of digital equity in education and examine to what extent a possible further digitalisation of the university would widen access, promote inclusiveness and enhance the university's role in promoting social mobility, or on the contrary, would exacerbate already existing social and digital inequality and hierarchy.

References

Adnan, M. and Anwar, K. 2020. Online learning amid the COVID-19 pandemic: students' perspectives. *Journal of Pedagogical Sociology and Psychology,* 2 (1): 45-51.

Aguilera-Hermida, P. 2020. College students' use and acceptance of emergency online learning due to COVID-19. *International Journal of Educational Research,* Open, *1*.

Aristovnik, A., Keržič, D., Ravšelj, D., Tomaževič, N. and Umek, L. 2020. Impacts of the COVID-19 Pandemic on life of higher education students: A global perspective. *Sustainability,* 12 [8438], 1-34.

Ball, S. and Grimaldi, E. 2022. Neoliberal education and the neoliberal digital classroom. *Learning, Media and Technology*, 47 (2): 288-302.

Bao, W. 2020. COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies,* 2 (2): 113-115.

Bhandari, A. 2019. Gender inequality in mobile technology access: The role of economic and social development. *Information, Communication & Society*, 22 (5): 678-694.

Biesta, G. 2015. What is education for? On good education, teacher judgement, and educational professionalism. *European Journal of Education*, 50 (1): 75-87.

Boliver, V. 2017. Misplaced optimism: How higher education reproduces rather than reduces social inequality. *British Journal of Sociology of Education*, 38 (3): 423-432.

Bozkurt, A. and Sharma, R. C. 2020. Emergency remote teaching in a time of global crisis due to CoronaVirus Pandemic. *Asian Journal of Distance Education,* 15 (1): i-vi.

Braun, V. and Clarke, V. 2012. Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf and K. J. Sher (eds), *APA Handbook of Research Methods in Psychology, Vol. 2. Research designs: Quantitative, Qualitative, Neuropsychological, and Biological.* American Psychological Association.

Di Maggio, P. and Hargittai, E. 2001. *From the Digital Divide to 'Digital Inequality': Studying Internet Use as Penetration Increases* (Working Paper Series 15). Center for Arts and Cultural Policy Studies. Princeton: Princeton University.

Dodel, M. and Mesch, G. 2018. Inequality in digital skills and the adoption of online safety behaviors. *Information, Communication & Society*, 21 (5): 712-728.

Eringfeld, S. 2021. Higher education and its Post-Coronial future: Utopian hopes and dystopian fears at Cambridge University during Covid-19. *Studies in Higher Education,* 46 (1): 146-157.

Fidalgo, P., Thormann, J., Kulyk, O. and Lencastre, J. A. 2020. Students' Perceptions on Distance Education: A Multinational Study. *International Journal of Educational Technology* in *Higher Education*, 17 (1); https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-020-00194-2.

Fujita, N. 2020. Transforming online teaching and learning: Towards learning design informed by information science and Learning Sciences. *Information and Learning Sciences,* 121 (7-8): 503-511.

García-Martín, J. and García-Sánchez, J.N. 2022. The digital divide of know-how and use of digital technologies in higher education: The case of a college in Latin America in the COVID-19 Era. *International Journal of Environmental Research and Public Health,* 19 (6) [3358]; https://www.mdpi.com/1660-4601/19/6/3358.

Georgopoulou, P. 2011. The digital divide profile of Greece: One step further. *Επιθεώρηση Κοινωνικών Ερευνών* (*Social Research Review*), 136: 97-110.

Halford, S. and Savage, M. 2010. Reconceptualizing digital social inequality. *Information, Communication & Society*, 13 (7): 937-955.

Hargittai E., Piper, A.M., and Morris, M. R. 2019. From internet access to internet skills: Digital inequality among older adults. *Universal Access in the Information Society* 18: 881-890.

Hayes, M. H. and Jamrozik, M.L (2001). Internet distance learning: The problems, the pitfalls, and the future. *The Journal of VLSI Signal Processing-Systems for Signal, Image, and Video Technology,* 29: 63-69.

Hillman, T., Bergviken-Rensfeldt, A. and Ivarson, J. 2020. Brave new platforms: a possible platform future for highly decentralised schooling, *Learning, Media and Technology*, 45(1): 7-16.

Hussein, E., Daoud, S, Alrabaiah, H. and Badawi, R. 2020. Exploring undergraduate students' attitudes towards emergency online learning during COVID-19: A case from the UAE. *Children and Youth Services Review,* 119. doi: 10.1016/j.childyouth.2020.105699.

Laufer, M., Leasers, A., Deacon, B., de Brichambaut, P.P, Fecher, B., Kobsda, C. and Hesse F. 2021. Digital higher education: A divider or bridge builder? Leadership perspectives on edtech in a COVID-19 reality. *International Journal of Educational Technology in Higher Education,* 18, 51; https://doi.org/10.1186/s41239-021-00287-6.

Malisch, J. L., Harrisb, B.N., Sherrerc, S.M., Lewisd, K.A., Shepherde, S.L., McCarthy, P.C., Spottg, J.L., Karamh, E.P., Moustaid-Moussai, N. McCrory-Calarcok, J., Ramalingami, L., Talleyl, A.E., Ca~nas-Carrellm, J.E., Ardon-Dryero, K., Weiserp, D.A., Bernalq, X.E. and Deitlof, J. 2020. In the wake of COVID-19, academia needs new solutions to ensure gender equity, PNAS 117(27), [15378-15381].

Marginson, S. 2016. The worldwide trend to high participation higher education: Dynamics of social stratification in inclusive systems. *Higher Education*, 72: 413-434.

Mason, J. 2002. Linking qualitative and quantitative data analysis. In A. Bryman and R. Burgess (eds), *Analyzing Qualitative Data*. London: Routledge.

McGuirk, P. and O'Neill, P. 2016. Using questionnaires in qualitative human geography. In I. Hay (ed.), *Qualitative Research Methods in Human Geography*. Oxford: Oxford University Press.

Murphy, M. P. A. 2020. COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy*, 41 (3): 492-505.

Pardo, I and Prato G. B. 2021. Querying Urban Inequalities. In I. Pardo, and G. B. Prato (eds), *Urban Inequalities. Ethnographically Informed Reflections*. Cham: Palgrave Macmillan.

Prata-Linhares, M., Gusmão-Cardoso, T. D. S., Lopes-Jr, D. S. and Zukowsky-Tavares, C. 2020. Social distancing effects on the teaching systems and teacher education programmes in Brazil: Reinventing without distorting teaching. *Journal of Education for Teaching*, 46 (4): 554-564.

Prato G. B. 2020. Introduction: Pandemic emergency solidarity and Brutus tactics. In G. B. Prato (ed.), *City Life and Beyond in Times of Pandemic.* Special Issue of *Urbanities-Journal of Urban Ethnography*, 10 (Suppl. 4): 3-13.

Rapanta, C., Botturi, L., Goodyear, P. Guàrdia, L. and Koole, M. 2021. Balancing technology, pedagogy and the new normal, *Post-pandemic Challenges for Higher Education Postdigital Science and Education,* 3: 715-742.

Rodríguez-Abitia, G., Martínez-Pérez, S., Ramirez-Montoya, M. S. and Lopez-Caudana, E. 2020. Digital gap in universities and challenges for quality education: A diagnostic study in Mexico and Spain. *Sustainability,* 12 (21), [9069]; https://www.mdpi.com/2071-1050/12/21/9069.

Sianou-Kyrgiou, E. 2008. Social class and access to higher education in Greece: Supportive preparation lessons and success in national exams. *International Studies in Sociology of Education*, 18 (3/4): 173-183.

Sianou-Kyrgiou, E. and Tsiplakides, I. 2011. Similar performance, but different choices: social class and higher education choice in Greece. *Studies in Higher Education*, 36 (1): 89-102.

Sosa-Díaz, M. J. 2021. Emergency remote education, family support and the digital divide in the context of the C-19 lockdown. *International Journal of Environmental Research and Public Health,* 18, [7956]; https://www.mdpi.com/1660-4601/18/15/7956.

Spyridakis, M. 2020. Covid-19: Full teleworking in Greece. In G. B. Prato (ed.), *City Life and Beyond in Times of Pandemic.* Special Issue of *Urbanities-Journal of Urban Ethnography*, 10 (Suppl. 4): 56-60.

Spyridakis, M. 2022. Introduction- Greek crisis and inequalities: anthropological views. In M. Spyridakis (ed.), *Greek Crisis and Inequalities: Anthropological Views.* Special Issue of *Urbanities-Journal of Urban Ethnography*, 13 (Suppl. 5): 2-8

Stich, A. E. and Freie, C. (eds) 2015. *The Working Classes and Higher Education: Inequality of Access, Opportunity and Outcome*. London: Routledge.

Tate, T., McPartlan, P., Baker, R., Aubele, J. and Warschauer, M. 2022. "I Just didn't feel like a student anymore": Student responses to emergency distance learning. *Peabody Journal of Education*, 97 (3): 369-389.

Tewathia, N., Kamath, A. and Ilavarasan, P. 2020. Social inequalities, fundamental inequities, and recurring of the digital divide: Insights from India. *Technology in Society*, *61*, [101251]. doi: 10.1016/j.techsoc.2020.101251.

Türe, C. and Diken, E. C. T. 2020. Cinema and Digital Platforms: Pandemic Configurations of Text, Context and Technology. In G. B. Prato (ed.), *City Life and Beyond in Times of Pandemic.* Special Issue of *Urbanities-Journal of Urban Ethnography* 10 (Suppl. 4): 96-100.

Thompson, T. and Copeland, C. 2020. Inclusive considerations for optimal online learning in times of disasters and crises. *Information and Learning Science*s, 121 (7/8): 481-486.

Willems, J., Farley, H. and Campbell, C. 2019. The increasing significance of digital equity in higher education: An introduction to the digital equity special issue. *Australasian Journal of Educational Technology*, 35 (6): 1-8.

Williamson, B., Eynon, R. and Potter, J. 2020. Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology,* 45 (2): 107-114.

Zaimakis, Y. and Papadaki, M. 2022. On the digitalisation of higher education in times of the pandemic crisis: Techno-philic and Techno-sceptic attitudes of social science students in Crete (Greece). *SN Social Sciences* 2 (77); https://doi.org/10.1007/s43545-022-00380-1.

Zawacki-Richter, O. 2021. The current state and impact of COVID-19 on digital higher education in Germany. *Human Behaviour and Emerging Technology,* 3: 218-226.

Zheng, Y. and Walsham, G. 2021. Inequality of what? An intersectional approach to digital inequality under Covid-19. *Information and Organization,* 31 (1) [100341]; https://www.sciencedirect.com/science/article/pii/S1471772721000075.