

The impact of COVID-19 on higher education: a review of emerging evidence

Executive Summary



Education and Training

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The European Commission's Directorate-General for Education and Culture initiated the establishment of the network as the successor to NESSE (2007-2010), NESET (2011-2014) and NESET II (2015-2018).

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Executive summary

The COVID-19 pandemic has resulted in temporary physical closures of schools and higher education institutions around the world. In higher education, approximately 220 million students globally have been affected due to the disruption caused by COVID-19, leaving policymakers and educational institutions with unprecedented challenges such as how to mitigate learning losses, how to deploy remote learning, how to safely reopen educational institutions and how to ensure that underrepresented, vulnerable and disadvantaged learners are not left behind.

The COVID-19 pandemic has already had an unprecedented impact on higher education worldwide in virtually all aspects of its functioning. In the academic year 2019/2020, the pandemic transformed the way teaching took place, accelerating transformation that was already taking place in the form of online learning and teaching. The pandemic has also had direct impact on how research is carried out, on university operations (in terms of campus closures and the shift to online learning) and on university governance, with management staff needing to take a range of emergency decisions and allow additional flexibility in many areas of activity. The pandemic has also highlighted the importance of universities' community engagement.

This analytical report provides a synthesis of the emerging evidence on what impact COVID-19 has had on higher education in Europe, with a special focus on three thematic areas: teaching and learning; the social dimension of higher education (i.e. the effect on underrepresented, vulnerable and disadvantaged learners); and student mobility. Drawing upon 14 rapid-response surveys carried out in 2020 by university networks, student organisations and researchers, as well as over 50 journal articles, reports and publications, the analytical report synthesises emerging evidence into three levels of impact of COVID-19:

- **immediate impact** (how the pandemic affected institutions and learners in the 2019/2020 academic year)
- **short-term impact** (how the pandemic is affecting or is likely to affect the current 2020/2021 academic year)
- **medium-term impact** (how the effects of the pandemic are likely to affect higher education systems, institutions and students by 2025).

At the end of each thematic section, **policy implications and policy recommendations** are included, listing actions to be taken at the level of higher education systems (by transnational, national or regional authorities) and actions to be taken at the level of higher education institutions (by university leaders, teaching staff and student support services).

1. Impact of COVID-19 on teaching and learning

The **immediate and short-term impact** of COVID-19 on teaching and learning can be assessed based on the survey findings from three distinct perspectives:

• From the higher education institution perspective, the survey findings indicate that the sudden move to 'emergency remote teaching' was made by virtually all surveyed higher education institutions, and that the transition online was considered successful by university leaders. Most higher education institutions provided some sort of support to the teaching and learning process in the form of training and technical support. However, some universities have faced problems with their capacity for delivering online classes in terms of technology and tools.



- From the teaching staff perspective, the survey findings indicate that teaching staff managed to successfully adapt their teaching material developed for on-site teaching to online formats. However, it is important to note the distinction between the resulting 'emergency remote teaching' and 'online learning' namely, emergency remote teaching involves transforming on-site classes to a virtual mode, without making changes to the curriculum or the methodology. The main form of teaching during the pandemic at European universities was via live-streamed lectures in real time (74.6 %), presentations sent to students (44.5 %) and asynchronous pre-recorded lectures available online via video (32.1 %) or audio (20.6 %). The survey findings also note that the switch to emergency remote teaching was more difficult in the fields which have a practical component (clinical medicine, veterinary studies, the arts etc.).
- From the student perspective, although the delivery of emergency remote teaching was evaluated positively by students overall, the survey results show that a significant proportion of students encountered serious challenges in their learning. Almost half of all students believed that their academic performance changed for the worse since on-site classes were cancelled and more than half of the students surveyed reported having a larger workload since the transition to online teaching. Access to online communication tools and the internet remains a challenge for some students, as does their level of digital skills. Finally, the experience of studying during the COVID-19 pandemic also resulted in new challenges to students psychological and emotional well-being, with students often faced with negative emotions such as boredom, anxiety, frustration and anger. Further analysis of this challenge is explored in the following section on the social dimension of higher education.

The potential **medium-term** risks to teaching and learning (until 2025) are both numerous and significant. If one of the impacts of the pandemic is a permanent movement of more study programmes to online/remote platforms, then the areas that will need to be urgently addressed will include:

- supporting teaching staff in adapting their curriculum and methods to online teaching;
- ensuring the well-being of teaching staff and administrative staff in such turbulent changes;
- supporting students in being better prepared for online learning;
- avoiding the risk of disengagement and drop-out of students who face difficulties in the online environment;
- adapting assessment processes to safeguard quality standards and academic integrity in the context of online learning;
- adapting quality assurance regulations for a more flexible approach to address the online and blended delivery of study programmes;
- addressing potential negative consequences on the recognition of qualifications on the labour market due to the lack of confidence in online learning.

Despite the many risks facing higher education in the medium and long term due to COVID-19, many reports and expert opinions focus on how this also represents an opportunity to rethink and reconceptualise the nature and methods of teaching and learning in higher education.

Based on the reviewed literature, a table of **policy recommendations** for teaching and learning was developed, a summary of which is presented below:



Level of intervention	Policy recommendation	Source
SYSTEM LEVE	-	
Strategy	Apply the lessons learnt during the pandemic to reimagining post-COVID higher education.	UNESCO IESALC (2020)
	Include higher education in the stimulus plans for economic and social recovery.	
	Forge national consensus for a strategy for fostering recovery and innovation in higher education.	
Funding	Support and provide the means for higher education institutions to enhance their online teaching potential.	Doolan et al., 2020
	Invest in online infrastructure (broadband, system-level support services for higher education, funding schemes etc.).	Authors
Coordination	Define new regulations on quality assurance and qualification recognition in the context of remote learning, including provisions for safeguarding academic integrity.	Authors (based on QAA, 2020)
	Provide guidance for online platforms, online proctoring, data protection and teaching.	
Research	Conduct research on the consequences of disruption in teaching and learning caused by the COVID-19 pandemic.	Authors
	Share information gathered through research and make recommendations for institutions and public policy.	Authors
HIGHER EDUC	ATION INSTITUTION LEVEL	
University management	Apply the lessons learnt during the pandemic to the development of new teaching and learning models (face-to-face vs online and/or hybrid, rethinking physical spaces).	Authors
	Make long-term online learning strategies.	Authors
	Rethink the one-person teaching model and design a transition towards a teamwork teaching model (teaching staff supported by multidisciplinary teams).	Authors
	Create protocols for protecting academic integrity, i.e. for combating fraud and online cheating.	Authors (based on QAA, 2020)
	Address data protection concerns (e.g. by creating security protocols).	Authors
	Invest in university's online infrastructure.	Authors
	Invest in effective online learning tools and platforms.	Gatti et al. (2020), World Bank (2020a)



	Provide extensive structured professional training for academic and administrative staff in online and hybrid teaching.	ESU (Doolan et al., 2020)
	Adapt quality assurance mechanisms.	Gatti et al. (2020), World Bank (2020a)
	Identify at-risk students to minimise inequalities.	World Bank (2020a); UNESCO IESALC (2020)
Support services	Train the teaching staff for online teaching.	Gatti et al., 2020; World Bank (2020a)
	Organise multidisciplinary teams comprised of pedagogical and technological experts to provide support to the teaching staff for preparing and implementing online teaching.	Authors
	Develop students' digital competencies for online learning.	Gatti et al. (2020); World Bank (2020a)
	Provide accessible and user-friendly counselling and guidance for students so as to find suitable solutions for academic, health, and career challenges.	Doolan et al. (2020)
	Provide interactive support to teachers and students.	Gatti et al., 2020); World Bank (2020a)
Teaching	Create easily accessible online teaching and study materials.	Authors
and learning	Adapt assessment and grading to online teaching and learning.	Gatti et al., 2020; World Bank,2020a
	Use one platform to access all resources.	Gatti et al., 2020; World Bank (2020a)
	Document the changes in teaching and learning models and their impact.	Gatti et al., 2020
	Evaluate and redesign teaching methods to respond to the requirements of the online teaching and learning environment.	World Bank (2020a)

2. Impact of COVID-19 on the social dimension of higher education

According to the ministerial communiqués of the European Higher Education Areas (EHEA), the 'social dimension' encompasses the creation of an inclusive environment in higher education that fosters equity and diversity and is responsive to the needs of local communities. Therefore, the social dimension refers to ensuring equity of access,



participation and completion of higher education, with a special focus on students from underrepresented, disadvantaged and vulnerable groups.

The **immediate-** and **short-term impact** of COVID-19 on the social dimension of higher education (in the academic years 2019/2020 and 2020/2021) has been the emergence of new challenges that risk negatively affecting students' access, study progress and retention. A survey of students in the EHEA organised by the European Students' Union identified the challenges faced by students:

- challenges related to studying conditions (access to a quiet place to study, access to equipment and to a reliable internet connection, access to course study materials and confidence in using online platforms);
- challenges related to funding (loss of employment/income, difficulties in meeting living costs, issues with receiving scholarships);
- and challenges related to well-being (lack of supportive social networks; prominent feelings of frustration, anxiety and boredom with academic activities).

The survey's analysis confirmed that students faced with many of these challenges consistently encountered more problems in accessing higher education during the COVID-19 pandemic, adjusting to studying, and reported a greater perceived drop in academic performance.

National-level surveys and data back up these trends. Data from the United Kingdom indicated that students who felt more lonely/isolated and who were less satisfied with the academic environment and with their social life were at a much greater risk of dropping-out of higher education. Data from surveys in the USA indicated that lower-income students, racial minorities and first-generation students experienced larger negative impacts on academic outcomes compared to their peers and that groups more likely to be affected by mental health problems were low-income and working-class students, LGBT students and students who are caregivers (to children or other adults).

In the **medium term** (up to 2025), there is cause for great concern on inequalities in access and participation in higher education. Namely, existing data and projections anticipate that the COVID-19 pandemic will result in a significant deterioration in educational inequality in pre-tertiary education. Namely, the switch to online learning is likely to exacerbate existing educational inequalities due to lack of access to learning resources, lack of a suitable home learning environment and insufficient support from parents – resulting both in learning losses and in disengagement from education. This in turn will result in lowering access and participation of underrepresented, disadvantaged and vulnerable groups in higher education.

Despite the serious risks facing the social dimension of higher education, COVID-19 provides an opportunity to directly address this challenge and place the inclusion of underrepresented, vulnerable and disadvantage groups as a top priority in the efforts to address the disruption caused by COVID-19. This would therefore contribute to the new goal of creating socially inclusive higher education in Europe in the upcoming decade as defined in the European Commission's communication *Achieving the European Education Area by 2025* and in the 2020 Rome Ministerial Communique. A summary of the **policy recommendations** to achieve this objective is presented below:

Level of intervention	Policy recommendation	Source	
SYSTEM LEVEL			
	Create strategies and action plans to mitigate negative consequences caused by the COVID-19 pandemic in higher	World Bank, 2020	



Strategy and planning	education (HE), with special focus on strengthening the social dimension of HE.	
	Legal regulations and administrative rules should allow sufficient flexibility for higher education institutions (HEI) to create appropriate solutions to cope with COVID-19 circumstances.	Rome Communiq ue, 2020
	Collect, process, and use data that will help understand the impact of the COVID-19 pandemic on the social dimension of HE.	Authors (see the chapter on long-term impact above)
Supporting measures	Address structural issues of the digital divide between countries and within countries (bandwidth, server hosting/data storage).	World Bank, 2020
	Secure access to reliable, adequate and affordable internet connection for all students.	Authors
	Support professional training for academic and administrative staff at HEIs on how to replace on-site teaching with online delivery: Create cooperative national structures, facilitate peerlearning and inter-institutional staff development.	Doolan et al., 2020; Authors
	Provide additional financial support for HEIs and students to mitigate negative consequences caused by the COVID-19 pandemic.	Doolan et al., 2020; Montacute and Holt- White, 2020
HIGHER EDUCAT	TION INSTITUTION LEVEL	
University management	Create institutional strategies and action plans to mitigate negative consequences of the COVID-19 pandemic, with special focus on strengthening the social dimension of HE.	Authors
	Increase flexibility of university policies in the design, organisation and delivery of study programmes (e.g. allowing students to easily adjust their course load, timing of assignments), in alternative access routes, etc.	Aucejo et al., 2020
	Increase flexibility of HEI's financial policies, e.g. allowing students to defer tuition payments if they are unable to pay due to the COVID-19 pandemic, or cancelling tuition fees for students who can demonstrate to be negatively affected by the pandemic.	Aucejo et al., 2020; Authors
	Allocate more resources, reduce barriers, and increase communications for a potential increase in students' requests for mental health services, including counselling or therapeutic services, in the 2020/2021 academic year.	Chirikov et al., (2020)
	Provide additional university-level financial support for at-risk students to access equipment, Internet services, and to improve	Doolan et al., 2020
	their digital skills.	Montacute and Holt- White, 2020



r		
	Assess adequacy of provision of financial and material support for at-risk students and institutions.	World Bank, 2020
	Survey students on their capacity to engage in remote learning (equipment, family responsibilities, home environment, etc.) and on student welfare, and make adaptations to address emerging needs.	World Bank, 2020
Support services	Ensure accessible and user-friendly counselling and guidance for students and staff to find appropriate solutions for academic, health, and career challenges caused by the COVID-19 pandemic.	Authors, based on Doolan et al., 2020 and Wonkhe, 2020
	Develop and implement programmes to keep at-risk students engaged, including dedicated tutors, point persons, and customised work programmes or schedules.	World Bank, 2020
	Facilitate the development of peer-based social support networks among students and staff, particularly helping the underrepresented, disadvantaged, and vulnerable.	Authors, based on Doolan et al., 2020 and Wonkhe, 2020
	Provide appropriate training to all students and to teaching and administrative staff to build digital competencies which allow them to study and work in an online environment and to better understand social dimension principles.	World Bank, 2020; Authors
	Work alongside student organisations to develop interventions, create proactive programmes, and expand existing services for student welfare.	Chirikov et al., 2020
Teaching and learning	Provide students with a more flexible assignment schedule to allow them to adapt to changes in their work schedule or family commitments due to the COVID-19 pandemic.	Aucejo et al., 2020
	Recognise the risks of lower engagement or achievement among students with mental health challenges.	Chirikov et al., 2020
	Allow underrepresented, disadvantaged, and vulnerable students to switch between online and in-person classes to adapt to their specific housing, work, and health situation.	Aucejo et al., 2020

3. Impact of COVID-19 on international student mobility

The **immediate impact** of COVID-19 on international student mobility in the 2019/2020 academic year has been immense since the pandemic effectively brought international travel to a stop. COVID-19 has resulted in cancellations and delays to numerous mobility schemes, although most universities (85 %) offered alternative arrangements in the form of `virtual mobility' via emergency remote teaching.

Internationally mobile students were faced with a range of challenges in the 2019/2020 academic year: students who were unable to return to their home countries often had to find alternative accommodation arrangements (due to campus closures) and are likely to have been at a higher risk of isolation during the periods of lockdown; students who



succeeded in returning to their home countries may have experienced challenges due to large time zone differences, inadequate internet access and due to the overall disadvantages of studying with much lower interaction with peers, thus removing a key element of learning mobility. Mobile students from third countries (countries that are not members of the EU or other countries/territories whose citizens enjoy the right to free movement) faced particular challenges. These challenges included delays in their applications for visas or residence permits due to the risk of existing permits not being granted or being withdrawn and due to obstacles to working part-time while studying (in turn presenting financial difficulties). While international students in Europe (including both EU nationals and non-EU-nationals) were broadly satisfied with the support they received from their institutions during the COVID-19 pandemic, certain gaps were identified: between and third and a quarter of international students were not satisfied with the quality of communication from their institutions during the pandemic.

The **short-term impact** of COVID-19 on student mobility (in the 2020/2021 academic year) has been that universities have faced great uncertainty about their international student enrolment policies, and most have forecasted a major decrease of international student enrolment. As can be expected, most universities also anticipated that any student mobility would need to be in the form of either fully online learning or hybrid/blended approaches combining online and on-site classes. The latest emerging data at the time of writing this report suggested that the anticipated decreases in international student enrolments were confirmed in practice in many countries worldwide at the start of the 2020/2021 academic year. The number of international students dropped by 20 % in Germany and by 16 % in the USA (with the drop in new student enrolments at 43 %), while in Australia applications for student visas dropped by 80–90 %.

In the **medium term** (until 2025), there is even greater uncertainty and concern about the range of possible impacts of COVID-19 on international student mobility. If universities are forced to limit international student mobility and offer virtual (or at least blended) alternatives, the key question will be how can universities ensure added-value for international students and compensate for the loss of physical interaction in the host country. From the student perspective, it is uncertain whether such forms of study programmes and degrees will be perceived as having the same market value and whether students will be ready to pay the same level of tuition fees for such a degree. If international student mobility does not return to pre-COVID levels, the financial impact on universities and higher education systems in countries with the most international students at the global level and that also charge significant tuition fees (e.g. the US, the UK, Australia, New Zealand among others) could be severe. Finally, there is a broader risk that the COVID-19 pandemic will have detrimental effects on other aspects of internationalisation, such as cross-border research and cross-border collaborations between universities, as well as on 'campus internationalisation', that is, ensuring a culturally diverse environment at the university.

Without addressing the immense challenges COVID-19 will have on international student mobility in the long term, the identified challenges in the short term and medium term raise a number of policy implications. Responses to many of those challenges can be provided both at the higher education system level and at the level of individual higher education institutions. Based on the reviewed evidence, the policy recommendations are summarised in the table below:



Level of intervention	Policy recommendation	Source	
SYSTEM LEVI	SYSTEM LEVEL		
Strategy and planning	Redefine goals for a paradigm shift: use technology to blend physical and virtual learning mobility, focusing more on idea exchange and learning objectives.	Hudzik, 2020	
	Re-assess whether more flexibility can be provided for visa and residence permit regulations for third country students enrolling in virtual mobility.	Authors, based on EMN- OECD,	
Funding	Stimulate transnational and cross-sectoral collaboration between universities, national authorities and student and youth organisations in order to overcome the impacts of the crisis.	2020 Gabriels and Benke- Aberg, 2020	
	Funds originally intended for physical mobility could be redirected to other uses, such as the development of 'internationalisation at home' strategies and initiatives within and across institutions and cooperation projects of all kinds to help quality implementation of online teaching & learning, assessment and their quality assurance.	Gatti et al., 2020	
	Funding could be made available for the technological equipment needed to maintain strong reliable platforms for online teaching and learning.		
	Assess the financial losses of higher education institutions due to loss of tuition fee income from international students (both from within the EU and from third countries) and consider the impact this may have on the financial stability of higher education institutions.	Authors	
HIGHER EDUC	ATION INSTITUTION LEVEL		
University manageme nt	Put in place support structures to allow for impact assessment and to support the recovery of international student mobility.	Gabriels and Benke- Aberg, 2020	
	Ensure each measure taken by the institution is looked at through the lens of equity and diversity, to ensure solutions for students from less advantaged backgrounds in the emergency response offered.	Gabriels and Benke- Aberg, 2020	
	Adopt alternatives strategies for "internationalisation at home" (enriching on-campus learning by blending in cross-cultural elements in the home institution).	World Bank 2020, Gatti et al., 2020; Hudzik, 2020	



	Rethink traditional programme models in international mobility, such as learning in semester-length segments and consider developing modular learning building blocks.	Hudzik, 2020
Support services	Ensure reliable and specific information that targets international student populations, in English or a language accessible to the international student population.	Gabriels and Benke- Aberg, 2020, ACHA, 2020
	Ensure that the student support available for domestic students (psychological support, logistical support, medical support, etc.) is also available for international students.	Gabriels and Benke- Aberg, 2020
	Provide counselling and support for mental health and emotional support services that are available both on-campus and online.	ACHA, 2020
	Ensure that specific information about accommodation is available, including about students' rights when a mobility period is interrupted.	Gabriels and Benke- Aberg, 2020
	Identify individuals on-campus who can serve as a resource for international students and assist with financial aid, health insurance, visas, student services, and tech support.	ACHA, 2020
	Reduce stigma of seeking mental health care by sharing resources via the campus website and at orientation and through student groups.	ACHA, 2020
	Provide opportunities for international students to meet counselling and health service staff and health coaching staff.	ACHA, 2020
	Offer peer or professional counselling support groups for international students.	
	Ensure counselling and medical staff are trained to provide culturally competent care and services.	ACHA, 2020
Teaching and learning	Ensure equal access to online learning tools for students, be mindful of the diversity in student populations.	Gabriels and Benke- Aberg, 2020
	Develop asynchronous lectures to provide maximum time zone flexibility.	ACHA, 2020
	Consider incorporating internationalisation into the curriculum as a part of 'internationalisation at home'.	Hudzik, 2020

4. Peer learning: the potential of transnational deeper cooperation

In addition to identifying the above trends, the report also presented 10 different examples of good practices in addressing different aspects of the COVID-19 pandemic.



The good practices, which featured examples from 11 different countries as well as transnational responses, included the following types of interventions

- System-level responses by governments to provide guidance for universities, additional financial support to students, flexibility in visa/residency procedures and targeted funding to support innovation in teaching methods.
- Institutional-level responses by higher education institutions to support underrepresented, disadvantaged and vulnerable students (in terms of equipment, financial support and psychological support) and to support international students.
- Network-level responses to share online platforms and learning resources and to brainstorm solutions to joint challenges.

The featured good practices demonstrate that the COVID-19 crisis has resulted in a range of rapid, proactive and creative interventions to address pressing needs. The featured practices also aim to underline the fact that institutions can learn from the experience of others' in addressing crises such as COVID-19, underlining the importance of a network-approach to sharing good practices and peer learning as a highly efficient way of sharing resources and technological platforms and generating new ideas. In particular, being part of a deep academic collaboration alliance, such as the European Universities Initiative, can help institutions to better cope with the challenges of the crisis and to implement post-COVID higher education. It could even help accelerate transformational processes such as deepening institutional cooperation, establishing European inter-university campuses and intensify physical and virtual mobility by setting up blended mobility for students and staff.

5. Concluding reflections

Based on the review of the emerging evidence, even the assessment of the short- and medium-term impact of COVID-19 on higher education remains incomplete. More research will be required to assess the impact of learning losses, the financial impact and the impact on educational inequalities. The long-term impact is therefore even more difficult to predict, especially since it still unknown how long the COVID-19 pandemic will continue to affect our societies in the way it has during 2020.

A concern expressed in many of the surveys and opinions reviewed in this report is that there is a risk that COVID-19 could result in devastating consequences for higher education worldwide, including: major financial cuts from the public sector, major tuition fee losses, potential closures of certain higher education institutions, and negative outcomes for underrepresented, vulnerable and disadvantaged groups (decreased access and increased drop-out). At the same time, the COVID-19 pandemic has provided an opportunity to reflect critically on how higher education is organised and delivered, and to prepare creative solutions and alternative possibilities for future directions in higher education. Among the prominent perspectives presented in this report are: the opportunity to accelerate higher education transformation and improve the learning process by adopting innovative approaches to organising online learning; the opportunity to adopt creative approaches to internationalisation (virtual mobility and 'internationalisation at home') and the opportunity to genuinely place the social dimension of higher education as a high-level priority in European higher education systems.

It may still take months or even years to determine the full impact of the COVID-19 pandemic on our societies as a whole, and on higher education in particular. There are also numerous other aspects of higher education that need to be considered in such a process that were not covered in this report. For example: what the impact of COVID-19 will be on university research (in terms of accessibility of research infrastructures,



sustainability of international research collaborations and ability to carry out fieldwork); what the impact will be on university engagement with external partners (businesses, public authorities and civil society) and on universities' broader societal impact; and what the impact will be the levels of public funding of higher education in Europe. It is therefore crucial to continue to analyse these developments in the coming academic year through further surveys and research.

Higher education will not be able to address the range of challenges highlighted in this report, nor will it be able to become a driver of the solutions and innovations in the post-COVID recovery period, without substantial support from public authorities. As emphasised by UNESCO IEASLC (2020), the post-crisis context will require governments to take measures to revive the economy, and higher education 'must be seen as a tool in a context of economic recovery and, as such, must be an integral part of the stimulus programmes that are designed' (p. 38). We hope that the present report will provide an initial input to inform this process, by aiding policymakers, as well as higher education institutions, students and other stakeholders at the European, national and local levels to better understand the emerging trends and challenges, and to identify policy responses to address those challenges.

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