Higher Education During the COVID-19 Pandemic: Responses and Challenges

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Abstract

The COVID-19 outbreak has had a significant influence on all aspects of society, and it is necessary to comprehend the responses of various stakeholders as well as the challenges that higher education has encountered in the aftermath of the outbreak. This study systematically analyses the measures taken by higher education stakeholders in response to the COVID-19 pandemic and the challenges faced by higher education in the post-COVID-19 era. To analyse the actions taken by higher education stakeholders and the challenges that remain, this study critically analyses government policy documents, reports from international organisations and perspectives of experts in the field of higher education, studies from Chinese journals, and international scientific literature. While stakeholders responded quickly during the outbreak, providing financial and material assistance, developing online learning, and facilitating international student mobility, the study finds that these measures are insufficient when compared to those in other sectors, and higher education stakeholders' responses to COVID-19 have been fragmented, uncoordinated, and fraught with conflict and ambivalence. The study finds that higher education during the COVID-19 pandemic faces multiple challenges, with COVID-19 exacerbating inequities in educational access and educational achievement due to uneven educational infrastructure and resource allocation. The availability of infrastructure and the lack of preparedness of faculty and students have dimmed large-scale experiments in online education. Future international student mobility patterns may need to be restructured.

Keywords: COVID-19; higher education; educational equity; online learning; internationalisation

Introduction

Since December 2019, Coronavirus Disease 2019 (COVID-19) has ravaged the globe, causing widespread devastation. The global COVID-19 pandemic has had extensive consequences far beyond public health, posing serious challenges to the modern social framework. The university atmosphere has changed dramatically as a result of COVID-19 (Rizvi 2020). Higher education institutions were obliged to implement online teaching and learning as a result of COVID-19's physical blockade, and educational institutions made a major change from traditional face-to-face learning to remote learning in a relatively short amount of time (Kandri 2020). However, distance learning has had a significant influence on higher education institutions, posing issues for a variety of stakeholders including students, teachers, administrators, and policymakers (Chen 2021). Mobility concerns, access to connectivity technology, digital learning, and inequality in educational opportunities are just a few of the challenges that higher education institutions confront as they shift to online instruction (Treve 2021). COVID-19 has had an influence on the psychological well-being of higher education students (Sarasjärvi et al. 2022). The virtual learning model used during the pandemic and its learning practices caused students increased worry and made them feel alienated in the process (Akramy 2022). In the post-COVID-19 period, several technical tools and new pedagogical methods, such as immersive learning technologies (Mandujano et al. 2021) and a caring pedagogy (Westendorff, Mutch, and Mutch 2021), were strengthened in higher education. Furthermore, travel restrictions and preventative actions jeopardise international mobility in higher education (Recio and Colella 2020). The influence of the pandemic on foreign students' study abroad programmes (Mok, Xiong, and Ke 2022) and the structure of international student mobility have all been the subject of related research (Filinova et al. 2020). Higher education is confronting unprecedented challenges during the epidemic, which is not only a threat but also a driving force and opportunity to advance higher education reform. The United Kingdom's Department of Education, for example, utilised COVID-19 to restructure higher education (Rikowski 2021).

COVID-19 has received a lot of attention among higher education researchers. However, the majority of relevant studies have focused on the challenges that higher education institutions face when transitioning to online education (Akramy 2022; Attallah 2020; Chen 2021; Treve 2021), with only a few studies focusing on internationalisation. This is insufficient, and there is a need for complete and systematic research on this topic. Following COVID-19, we must analyse the issues and obstacles that higher education institutions face throughout the world. The circumstances that resulted from COVID-19 will go down in history. It is an era of history that we must remember, and we may need to know what happened to higher education throughout the world at this time in the future. And it is vital to understand what has been done in higher education as well as the various perspectives of stakeholders (Sobral et al. 2021). To meet this gap, as well as serve as a resource for future research, this article aims to carefully sort out and record the history of higher education throughout the pandemic. To achieve this, the

researchers conducted a systematic review of the literature to find answers to the following questions: 1) How did higher education stakeholders respond to COVID-19? 2) What challenges did higher education confront during the epidemic?

Background

COVID-19 has wreaked more havoc on educational systems worldwide than any other pandemic or disaster in history. According to UNESCO data, as of 1 April 2020, 185 countries' schools and higher education institutions were shut, affecting more than 1.5 billion students globally or 89.4% of all students (Marinoni and De Wit 2020). A considerable number of students dropped out of higher education institutions as a result of the school closures. According to the World Bank, more than 220 million post-secondary students have been forced to discontinue studying or have their studies seriously disrupted. These children accounted for 13% of all the students worldwide, see Table 1.

Table 1: A comparison of the number of students in higher education in COVID-19-affected regions

Region	Total number of dropout students	Total number of students	(%)
The Asia-Pacific region	72,391,442	73,538,139	98%
Europe and Central Asia	36,948,926	38,030,033	97%
Latin America and the Caribbean	27,007,997	27,111,868	100%
The Middle East and North Africa region	14,282,666	14,282,666	100%
North America	20,640,820	20,640,820	100%
South Asia	40,468,782	40,468,782	100%
Sub-Saharan Africa	8,399,127	8,533,188	98%
Total	220,139,760	222,605,496	99%

Source: World Bank (2020a)

COVID-19 has a considerably greater impact on higher education in developing countries such as Africa than it does in other parts of the world. According to a study by the International Association of Universities (IAU), of 424 higher education institutions in 109 countries, Africa is the region least affected by COVID-19 in terms of geography, but its university closure rate is higher than the rest of the world. This is due to a lack of basic communication infrastructure (Marinoni, Van't Land, and Jensen 2020).

Furthermore, school closures have an impact on scientific research at universities. Some scientific research efforts have been hampered by the cancellation and postponement of foreign travel and conferences. The closing of physical places has an impact on several

study subjects that rely on experimental equipment, such as clinical medicine, chemistry, music, and artistic production (Marinoni, Van't Land, and Jensen 2020).

During the COVID-19 period, most nations implemented tight closed-door policies to discourage cross-border population movement, affecting the international development of higher education. A large number of short-term mobility programmes were cancelled because international students were considered a potential threat to campus security. According to an IAU study, almost two thirds of the students' mobility at the evaluated institutions were disrupted, with half of the freshmen's mobility also being impacted (IAU 2020). International student mobility is hampered by bursary suspensions, as well as the expiration of visas and residency permits. COVID-19 has temporarily halted some foreign students' study abroad plans and has affected their choice of study abroad locations to some extent. Furthermore, since the commencement of COVID-19, the worldwide political atmosphere has harmed higher education exchanges and collaboration. As a result of populism, nationalism, and a strong public anti-immigration discourse, the higher education industry is experiencing increased mobility challenges (Gu and Teng 2020).

Methods

This research is a narrative review of the literature that focuses on the challenges students and teachers in higher education face during the COVID-19 pandemic. This study draws on a variety of sources, including academic databases, press reports, governmental and non-governmental organisations, and other trustworthy sources. A literature review adds to a field's knowledge, communicates key ideas, and provides readers with new perspectives that can be applied in the real world (Treve 2021).

Search Strategy

Three different search strategies are used in this study. The first strategy was to conduct a Google search using the terms "COVID-19" and "higher education" with the goal of obtaining information on stakeholder initiatives and media perspectives. Second, this study used the keywords above to find relevant research by Chinese researchers in China's premier publications through databases such as the Chinese Social Science Citation Index. Third, we searched the Web of Science database for relevant research by worldwide research experts using the terms "COVID-19" or "COVID" and "higher education" or "university". Although the epidemic only started three years ago, there are many research findings. We hand-selected the most relevant literature for this study and critically reviewed the findings.

Data Analysis

The acquired data was analysed using content analysis. Content analysis is a research method that objectively, systematically, and quantitatively describes the apparent content of communication (Berelson 1952). In this study, the content analysis method

is used in a qualitative manner. The qualitative content analysis approach, in contrast to the quantitative content analysis method, which focuses solely on intuitive datafication, stresses expressing the substance of a text through thorough and profound comprehension as well as rigorous logical reasoning. Hermeneutic content analysis, which was applied in this study, is a way of expressing the author's goal through attentive reading, understanding, and interpretation of textual material. The definition of "hermeneutic" goes beyond mere factual interpretation to encompass the complex backdrop and ideological structure of the text's content on a holistic and higher level in order to uncover the true meaning of the text. Individual things can only be understood in the context of the whole, and the whole is the outcome of the synthesis of individual item comprehension (Qiu and Zou 2004). Furthermore, this study uses a combination of analytical methods from grounded theory to code and analyse the same themes across texts, identify core categories (Corbin and Strauss 1996), and develop a focused trend of the implications and challenges COVID-19 presents for higher education based on close readings of individual texts.

Findings

Responses of Stakeholders

Financial Assistance

Some wealthy countries, including the United Kingdom, the United States, Denmark, France, Finland, Germany, Singapore, and Australia, immediately adopted economic relief measures to provide funding for institutions or students to tide them over the crisis, as seen in Table 2. In addition to direct financial aid, a variety of measures were used to relieve financial stress for students during the COVID-19 pandemic, including loan forgiveness in the United States (Murakami 2020), refunds of accommodation and tuition fees in China and the United Kingdom, tuition reimbursement, and discount programmes at universities in Vietnam and Indonesia (Smalley 2021).

Table 2: National higher education assistance schedules

State	Name	Content
Australia	Higher Education Relief Package (Tehan and Cash 2020)	It provides funds to universities, maintains universities' financial stability, lowers the cost of short-term online courses, and lowers or waives higher education and supervision costs for foreign education institutions.
United States	CARE Act: The Higher Education Relief Programme (U.S. Department of Education 2020)	The US Congress passed the Coronavirus Aid, Relief, and Economic Security Act on 21 December 2020, creating a Higher Education Financial Assistance Fund that offers 23 billion dollars in emergency financial aid to college students affected by the pandemic.
Canada	The Canadian Student Emergency Benefits Programme (Trudeau 2020)	A financial aid programme for students who are unable to find work after graduation in 2020, as well as financial assistance for students participating in national and community service during the pandemic.
New Zealand	Tertiary student support package (Hipkins 2020)	It increases student loan amounts, provides financial assistance to students, pays course costs, and assists students in surviving the academic crisis.
United Kingdom	School financial support funding (Department for Education 2020)	It increases the amount of money available to schools to help them cover the costs of COVID-19.

However, except for a few nations, a small number of governments in developing countries can give large-scale stimulus packages to promote higher education development during the pandemic (Salmi 2020). In comparison with affluent countries, the focus of aid in underdeveloped countries was on improving the availability of technology and providing better infrastructure. First, in response to a scarcity of equipment and resources for students, some universities supply laptops and Wi-Fi devices to students. For example, the Malaysian government offers adequate learning equipment for pupils in need through loan funding to address the problem of a lack of learning equipment for students (World Bank 2020b). Laptops are provided to students in need by the University of South Africa (UNISA 2020). Diponegoro University in Indonesia and Vietnam National University in Vietnam provide data packages and Wi-Fi equipment to students in need (Fariz 2020). Furthermore, in several countries, higher education departments have created platforms to incorporate educational resources. The Ethiopian Ministry of Science and Higher Education, for example, encourages the creation of new online platforms and technologies to provide technical support for visually impaired students and lecturers in universities (UNESCO 2020b). The Argentine National Intercollegiate Commission established a University Information System, which is a virtual classroom resource cooperation system made up of multiple universities that can provide teachers and students in remote areas with not only teaching resources and tools but also technical assistance and guidance on how to

use network technology tools (Consejo Interuniversitario Nacional 2020). Furthermore, students continue to experience technical challenges as they attempt to make the move to effective distance learning. To solve this issue, Malawi's University of Lilongwe Agriculture and Natural Resources has partnered with other African higher education institutions through the Alliance for African Partnership to create technical interventions and strengthen technological infrastructure (Dell 2020). Internet service providers in Sri Lanka provide free internet access to the University of Sri Lanka thanks to the efforts of the institution's funding committee (Hayashi et al. 2020). To ensure that students with financial challenges have access to higher education, the South African Ministry of Higher Education, Science, and Technology negotiated special prices with mobile network operators (Mzekandaba 2020).

The Shift from Traditional Learning to Blended Learning

Since the emergence of COVID-19, the physical flow of students has been disrupted. Universities all around the world are actively carrying out online teaching in response to the global education crisis. COVID-19 has boosted virtual mobility and collaborative online teaching. According to a survey conducted by the IAU, two thirds of the 424 universities polled globally reported that distance learning has displaced classroom instruction (Marinoni, Van't Land, and Jensen 2020). As of 1 June 2020, 90.3% of Japanese colleges provide distance education and more than 90% of Sri Lanka's higher education institutions provide distance education (Hayashi et al. 2020). In Germany, 47% of universities moved completely to virtual teaching in the summer semester of 2020, while 45% used a combination of face-to-face teaching and virtual teaching (Kercher and Plasa 2020). In the spring semester of 2020, 1,300 colleges and universities across the United States discontinued face-to-face instruction in favour of online instruction. In the United States, 44% of colleges and universities have implemented online education; 21% have implemented a hybrid teaching model, and 27% have implemented a face-to-face teaching approach (Smalley2021).

Blended learning, or the combination of online and face-to-face instruction, has become the new norm in education (Teter and Wang 2020). The use of blended learning has strengthened the relationship between institutions and companies. Universities get the resources and solutions to handle online learning problems from businesses and industries. Global massive open online course (MOOC) platforms such as Coursera and edX, for example, provide institutions with comprehensive learning management systems. Google Education offers free classroom management tools to track student attendance. Google Classroom allows teachers to upload learning resources and homework, and students to submit coursework for teacher evaluation and feedback. For remote online teaching, teachers can use a combination of synchronous and asynchronous communication and collaboration technologies. Synchronous communication tools and standalone programmes such as Skype, Google Hangouts, and Zoom were used when real-time communication was necessary. Asynchronous communication is more flexible than real-time communication and has the added benefit of stimulating critical thinking in the classroom. Forums, blogs, and emails are examples

of asynchronous communication tools. Teachers may build teaching resources for numerous disciplines using a mobile application such as Book Creator to integrate text, graphics, audio, and video. Teachers and students can use the application to express their ideas and collaborate, which helps to keep the virtual classroom connected. Socrative, Schoology, Kahoot! and Recap are free mobile applications that allow teachers to construct online examinations. Teachers in remote classrooms may utilise digital assessment tools to offer rapid feedback, track student progress, and develop survey-based examinations, allowing them to deliver a better learning experience for their students (Obana 2020).

Innovative technologies and methods were created to deliver online education with hands-on laboratory courses during the epidemic. Simulation laboratory technology, for example, has been widely employed. During the outbreak, Labster, a Danish virtual laboratory simulation service provider, had a 20-fold rise in the number of students compared to 2019. More than 1,000 colleges have benefited from its virtual reality-based laboratory services (Labster 2020). A Virginia Tech assistant professor of geobiology offers online STEM courses and teaches experimental vertebrate morphology courses by posting photos of bones on a website (Flaherty 2020).

Improving the Ability of Teachers to Teach Online

Some universities or countries host training and lectures to help teachers improve their online teaching skills. Many institutions in South Korea, for example, offer week-long training for faculty members on how to effectively handle live teaching, lecture recording, and online teaching. The Association of Indian Universities also carries out a variety of training activities, such as online teacher development plans and national and international web seminars, to equip teachers with online teaching skills (IAU 2020). Cheikh Anta Diop University of Dakar (UCAD) in Senegal gives additional equipment to teachers and established an online training and teaching platform. Teachers can get online teaching guides from Ashesi University (Smalley 2021). Argentina uses the National Teacher Training Institute to provide technical assistance to teachers to improve their virtual education and teaching abilities. The Spanish Ministry of Universities has built a resource platform to provide non-classroom learning tools and instructions, as well as to facilitate the shift from face-to-face teaching to online teaching.

Realigning Higher Education Learning Assessment

As a result of the epidemic, some countries and regions have adjusted their higher education teaching and learning assessment systems, introduced digital tests, and developed digital teaching and learning assessment assurance standards. A UNESCO survey showed that 58 of the 84 countries surveyed had postponed or rescheduled examinations; 23 had used alternative methods such as online or home examinations; 22 had retained examinations, and 11 had eliminated them (UNESCO 2020a). A study revealed that test-based questionnaires, forums, and videoconferencing are the main tools for online assessment in higher education, and the Moodle platform used by

different university institutions stands out as a means of conducting assessments (Amzalag, Shapira, and Dolev 2022). In addition, some qualitative online assessment methods such as submission of academic assignments, use of email, and online tutorials were also mentioned (Montenegro-Rueda et al. 2021). A number of digital teaching quality assurance standards have also been developed to guarantee the quality of online learning. The Council for Higher Education Accreditation (CHEA), for example, released a quality framework that identifies four key areas related to institutional quality and accreditation status: online teaching and learning, student support, finance, and administration, urging institutions and accredited programmes to check their accreditation status (CHEA 2020). In the United Kingdom, the Quality Assurance Agency for Higher Education (QAA) has developed a set of guidelines for ensuring the quality of digital learning (Quality and Qualification Ireland [QQI] 2020).

Increasing Mobility in Higher Education

On 29 June 2020, 33 university presidents from more than 20 countries issued a declaration calling for increased mobility in higher education after COVID-19 to reach a vision that entails the following: a focus on sustainable development; ensuring cross-border collaboration to foster the development of diverse and global talent; promoting cross-border knowledge sharing to sustain the collective well-being of society; using higher education technology to maximise interconnectivity and to explore how to strengthen collaboration within the higher education ecosystem to streamline the flow of talent and knowledge across borders; collaborating globally to identify effective health and safety protocols on university campuses to promote international mobility; implementing policies, actions, and activities that uphold diversity and inclusion in educational institutions, and fostering tolerance, respect, and equality in the higher education community (O'Malley and Rigg 2020).

Numerous tools are used to ensure the continuation of internationalisation, and several destination nations have enacted policies to protect the rights of international students. For example, the Canadian government has implemented policies to support international students' online learning, including (1) giving priority to international students applying for online learning; (2) allowing students to calculate the time they spend studying online overseas to obtain a post-graduation work permit if they submit a study permit application and complete at least 50% of the courses in Canada; and (3) implementing a temporary two-stage vetting process (Immigration, Refugees and Citizenship Canada 2020). Ireland includes international students in social payments and tenant protection measures; it provides social subsidies for students who lose part-time jobs, and automatically renews visas for international students (Kennedy 2020). Australia has launched various measures to deal with the impact of the epidemic on international students, including (1) intensive online teaching courses, (2) refund and extension services, (3) support for Chinese students, and (4) visa, accommodation and employment support (Ziguras and Tran 2020). The notion of internationalisation at home is viewed as a constructive way to respond to the process of higher education internationalisation (Li and Eryong 2022). Virtual exchange programmes, such as the

University of Texas Global Virtual Exchange programme, are employed by colleges to improve international learning opportunities for students (Texas Global 2020).

Remaining Challenges

Increasing Inequality in Higher Education

Even though many nations have undertaken assistance measures, inequality in higher education has still increased due to the unevenness of areas receiving aid and the types of aid provided. COVID-19 has increased the inequalities that characterise higher education (Westendorff, Mutch, and Mutch 2021).

First, uneven access to education is a significant issue, which is mostly represented by inequity in enrolment, retention, and graduation. The return rate of college students is low, owing to issues such as family duties and diminished or fragmented networks as a result of campus closures (World Bank 2020a). In Indonesia, for example, rural male students frequently drop out of school to support their families financially (World Bank 2020b). Furthermore, the research found that in high-income regions of the United States, the number of online education resources was double that in low-income areas (Bacher-Hicks, Goodman, and Hulhern 2020). This shows that the epidemic increased the socioeconomic gap between households even further.

Second is the issue of connectivity disparity. Governments across the world are implementing distance education programmes using radio, television, and online courses to mitigate the impact of school closures. However, because of the disparity in internet access between different socioeconomic strata and geographic locations, the digital gap has resulted in unequal access to education. Globally, only 55% of households have an internet connection. In developed countries, 87% of households have internet access, compared to 47% in developing countries, and 19% in the least developed countries. In total, 3.7 billion people do not have internet access (We World 2020). The economic divide expands the achievement difference between students from various socioeconomic backgrounds and influences their future employment. According to a survey, nearly one tenth of students expect to delay graduation as a result of the pandemic. Low-income students are 50% more likely than their rich friends to postpone graduation. Extending graduation time places an additional financial burden on students, increasing the overall cost of their education and the time it takes to begin full-time employment (Aucejo et al. 2020).

Difficulties Still Exist in Online Education

The scale-up of online learning during the COVID-19 era differs from earlier online learning in many ways, including the learning environment, learning tasks, learning peers, thinking style, and evaluation style (Wan, Zheng, and Ren 2020). As evidenced by various studies, infrastructure availability, internet capacity, faculty teaching capacity, and student distance learning capability continue to be major obstacles for the delivery of distance education.

First and foremost, acquiring technology is a significant barrier. Research shows that technical resources and unequal access to education are the main barriers to a move to distance learning during COVID-19 (Treve 2021). Another study confirmed that a lack of electricity led to students' dissatisfaction with virtual learning conducted by universities and their desire not to continue online learning thereafter (Egielewa et al. 2022). Distance learning, unlike face-to-face classes, takes place in a technologically enhanced setting. It necessitates students and teachers to be equipped with remote application capabilities, such as learning equipment, internet connectivity, and learning platforms (Wang et al. 2020). Higher education institutions, particularly those in low- and middle-income nations, are unable to rely completely on the internet due to a lack of technical infrastructure (IAU 2020).

Second, the effectiveness and quality of online teaching and learning are concerns. A study conducted by Shen and Wu (2020) showed a significant positive relationship between knowledge construction, teacher-student interaction, information processing, and the effectiveness and satisfaction of online learning among college students. Teachers' flexibility in using various platforms and proficiency in teaching tools when teaching online become important factors affecting college students' online learning experience (Chen and Jia 2020). However, some teachers lack the necessary teaching skills and experience to transition from traditional to online classrooms. College students' lack of preparation for online learning, as well as their generally poor commitment to online learning, have become major obstacles to the growth of online education (Rao and Wan 2020).

Third, the quality of online education assessment poses a dilemma. Formative and summative examinations are used to evaluate students' academic success. Summative evaluations are often in the form of examinations, course papers, and research reports, except for research and experimental studies, which cannot be assessed using online examinations. Classroom observations by the teacher and continual feedback on student work are common forms of formative evaluation. The substance of the instructor's formative evaluations differs from face-to-face instruction in the typical physics classroom, and online instruction changes the student learning space. Formative assessments such as classroom observations were limited during the pandemic. Student learning can only be assessed through more qualitative assessments of learning, for example through the submission of academic assignments (Montenegro-Rueda et al. 2021). Replacing face-to-face examinations with virtual assessments does not imply duplicating these resources; rather, it necessitates rethinking the entire teaching and learning process, which is the most tough issue in online education (Choe and Choi 2020). There are also concerns about the integrity of examinations due to the lack of necessary and complete monitoring tools, with students resorting to unethical practices such as cheating, plagiarism, and falsification of data in order to pass assessment tests (Montenegro-Rueda et al. 2021).

Fourth, the physiological and spatial adaptation problems of teachers and students in online education also hinder the adoption of online education. Online education results in blurred professional and personal boundaries for teachers, which is especially detrimental for female teachers who conduct online education. In the absence of campus life, personal isolation anxiety, cross-media discomfort anxiety, and mood swings owing to epidemics may all be issues related to distance education (Li and Zhu 2020).

International Cooperation and Exchange in a Polarised Environment

As a global "grey rhinoceros" and "black swan" event, COVID-19 has not only affected human health but has also had an impact on the world's economy and politics (Quan 2020). Global higher education collaboration and exchange have become increasingly politicised. For example, ties between the United States and China worsened during the COVID-19 pandemic, and the United States increased professional restrictions against Chinese students. Only eight Chinese students were awarded student visas and eight were granted visiting scholar visas to the United States in June 2020, compared to 34,001 and 5,736, respectively, in 2019 (Zhong and Nan 2021). The emergence of nation states, the progressive subjection of academic higher education to political authority, and the globalisation of education as an integral aspect of foreign policy have all contributed to this predicament (Zhang and Jiang 2020). In the context of rising globalisation, an increasing number of nations are regarding higher education as an export commodity, and higher education mobility has been seen as playing a key role in determining national economic competitiveness and interests (King 2008).

Although the continuation of COVID-19 has had a temporary impact on the worldwide flow of higher education, it is certain that the pace of future internationalisation of higher education is irreversible and will continue to be an essential trend for higher education in the long term. However, the mobility of international students may be restructured in the post-COVID-19 era (Filinova 2020). The current study abroad destinations have already started to shift from Europe, North America, and Australia to Asia and the Middle East. The overall number of students studying abroad will not significantly expand in the future, and it is likely to decrease, but the preferred destination may change. The United States' attractiveness as a study abroad destination may be declining (Altbach and De Wit 2020). When the economy recovers, international education will transition from a "seller's market" to a "buyer's market", with strong rivalry for overseas students. The reputation of countries' healthcare and emergency help services will have a significant impact on foreign student flow. English-speaking countries will continue to be highly attractive in global higher education for the foreseeable future. However, the status and attractiveness of East Asia as a destination region will be further enhanced (Marginson 2020).

Discussion

COVID-19 has presented unique challenges. Different governments in different countries have devised and executed various changes concerning resource allocation

and delivery methods in response to COVID-19. Some nations have used different stimulus programmes to help the economy and other sectors, but not much has been done in the higher education sector (Moonga, Mabundza, and Hlatshwayo 2022). The response of higher education stakeholders to COVID-19 has been fragmented, uncoordinated, and fraught with conflict and ambivalence.

Compared to developed countries, developing countries are unable to provide large-scale financial aid, and the institutions receiving aid are usually single universities. Aid from developed countries has been mainly financial, whereas aid from developing countries primarily focused on delivering resources and upgrading infrastructure. However, these responses are clearly inadequate compared to the challenges facing higher education. The inequitable character of higher education is exacerbated in the face of uneven allocation of resources and infrastructure. The availability of infrastructure and resources is the most significant impediment to the transition to online learning. Infrastructure construction is not something that can be done immediately, and a region's unequal political and economic progress must result in uneven infrastructure distribution and resource access. If there is a lack of coordinated infrastructure construction, irregular compensatory aid will not make a significant difference in improving remote education access equality.

Even though online instruction played a huge role during the COVID-19 pandemic, virtual higher education cannot be compared with on-campus higher education. Virtual classrooms and online courses can only be used as a supplement to face-to-face teaching and cannot completely replace it (Gurukkal 2020). This is because, on the one hand, the paradigm shift is not always simple, and teachers and students are better equipped to adjust to traditional teaching techniques; on the other hand, teachers and students are not yet fully prepared psychologically and in terms of competence to embrace a complete shift to online education. There is still work to be done to determine how to better integrate online education into higher education. However, it is undeniable that COVID-19 offers an opportunity for experimentation and reform in online education.

Multiple limits on international higher education collaboration have come from the travel bans, university closures, national lockdowns, and international political dynamics. It is clear that a lack of coherent national policies on the internationalisation of higher education is a major cause of this (Chasi and Quinlan 2021).

Conclusion

This study aimed to present as comprehensive a picture as possible of what higher education stakeholders did during the COVID-19 pandemic and to reveal what issues higher education now faces. Nonetheless, it would be foolish to equate higher education's responses to the challenges experienced since the onset of COVID-19. Although there may be a causal relationship between responses and challenges, it is vital to stress that this relationship is ambiguous and cannot be confirmed through a literature review. In the post-COVID-19 era, the impact of the pandemic will continue, and

fighting the pandemic may become the new normal in people's lives. Even if the pandemic can be ended in the future, its impact on people's lifestyles, education, and teaching will remain (Zhong and Nan 2021). To be sure, there is only a limited amount of research on the pandemic's influence on higher education. The majority of existing research focuses on issues such as the effectiveness and quality of online learning, with a few studies focusing on the international mobility of higher education. However, the impact of COVID-19 on higher education entails much more than these aspects, such as the issue of equity in higher education and the impact of the political situation on higher education, both of which are worth studying and exploring.

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