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HOW COVID-19 HAS AN IMPACT ON FORMAL EDUCATION: A COLLECTIVE INTERNATIONAL EVALUATION OF OPEN EDUCATION IN DISTANCE LEARNING

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Abstract

While causing unprecedented disruption worldwide, COVID-19 has also stimulated the mainstreaming of digital technologies in the delivery of formal education. For most key stakeholders – organisations, educators, and students – this has been a new and challenging experience and has been described in policy terms as 'emergency remote education'. For many students, however, it has either exacerbated or marginalised their opportunity to access formal education. In probing this impact at a deeper level, an international collaboration involving the authors during 2020-2021 focused on reviewing contemporary practices and potentials of open education as a strategic and sustainable response. This paper highlights practices, case studies, and emerging issues from 13 diverse countries, to be globally representative, which include: Australia, Brazil, France, India, Mexico, the Netherlands, Nigeria, Spain, Sweden, South Korea, Taiwan, Turkey, and the United Kingdom. This collection of countries was selected based on researcher contexts and contributions. To date, findings indicate open education has demonstrable benefits for distance learning. More broadly, open educational practices are positioned to shape a 'new normal' that embraces 'global citizenship' while also being equitable and inclusive. Our aspirations are that such practices will lead to better formal education promoting and ensuring human rights, democracy, lifelong learning, safety, social justice, diversity, cultural sensitivity and inclusivity through strategic and long-term support by all stakeholders in both modes of educational delivery and access: face-to-face and distance learning.

Keywords: School education, Higher Education, Lifelong learning, Formal education, Distance learning, Education at distance, Open Education, Impact, Global citizenship, COVID-19.

1 INTRODUCTION

The education system globally has been severely disrupted and experienced varied changes in governance, management, operations for teaching, learning and assessment (United Nations, 2020; the Organisation for Economic Co-operation and Development (OECD), 2020, 2021a, 2021b; the United Nations Educational, Scientific and Cultural Organization (UNESCO), 2020 & 2021; and the United Nations Children's Fund, the World Bank and OECD (UNESCO et al.), 2020, 2021). These detailed

reports highlight the challenges and measures taken by educational institutions in the form of novel practices, re-engineered distance education modalities and approaches - although sometimes sacrificing quality assurance mechanisms. While several independent studies (di Pietro et al., 2020; Popa, 2020) have analysed educational practices and case studies, a platform by UNESCO (2021) has been beneficial for providing global perspectives of such educational challenges, responses to them and resources adapted to meet the challenges of COVID-19. In this regard, the work by Bozkurt et al. (2020) appears to be pioneering in examining open education with a specific outlook to distance learning at educational institutions.

This present study investigated how the operations for open education and support mechanisms for distance learning were established on a global scale during the initial COVID-19 period -- with a focus on examining the affordances of open education and learnings therefrom (Stracke et al., 2020). Our intentions were to identify whether the sudden surge in distance education modalities also increased open approaches and if these changes might become embedded as operational once the pandemic is over. By examining case studies from different countries as a regional representation for the first year of the pandemic (the beginning of 2020 until the 11th of March 2021), we deliberated upon strategies and practices followed by institutions (Stracke et al., 2021).

2 METHODOLOGY

A qualitative comparative case study approach (Stake, 1995) was adopted while acknowledging that 'open' has different connotations and interpretations in different regions. Case studies describing the impact of the COVID-19 outbreak on formal education and how distance education was adopted, were collected from 13 countries: Australia, Brazil, France, India, Mexico, the Netherlands, Nigeria, Spain, Sweden, South Korea, Taiwan, Turkey, and the United Kingdom. Our primary research question was:

> *In what ways has open education been proposed and addressed using distance and online learning during the COVID 19 pandemic and lockdowns?*

The case study contributors are all experts in open and distance learning and experienced researchers and educationists, thus facilitating the collection of real context data and learning about open educational practices (Yin, 2011). This collective approach further allowed for triangulation of findings (Denzin, 1978) to focus the research questions and thereby enhanced the reliability and validity of our work (Oppermann, 2000).

3 RESULTS

The findings on the practices and case studies from the 13 countries related to how formal education systems were affected by the COVID-19 outbreak are presented hereunder. Figure 1 shows the impact of the COVID-19 pandemic on formal education in various countries we examined on a scale of none to very high impacted.

					Australia Brazil Mexico Nigeria
				France	Spain
			South Korea	The Netherlands	Turkey
Countries			Taiwan	Sweden	UK
Impact	1	2	3	4	5
	None	*Slight*	*Moderate*	*High*	*Very high*

Figure 1. Impact of COVID-19 on formal education in selected 13 countries.

3.1 Marginalised or excluded student groups

It was found that disadvantaged and marginalised social groups from lower socio-economic backgrounds have been the most severely affected due to COVID-19 pandemic. In several countries,

there were early responses to try and minimise this impact and to provide support such as Australia, France and Sweden. In contrast, other countries reported a prominent digital divide such as Turkey.

3.2 Impact on infrastructure

An early finding of our investigation was the lack of resources, infrastructure, equipment, special needs, etc. We found that most of the countries investigated implemented open educational practices for continuity of education. This was mainly delivered as distance education, although the policy guidelines for these were often unrealistic or too restrictive.

3.3 Effective communication

Effective communication between teachers and students is a crucial foundation of education (Tiffin & Rajasingham, 1995). During emergencies, this foundation requires additional support for social and emotional wellbeing (Chatzidamianos & Nerantzi, 2020). For those with access to adequate infrastructure, such communication was maintained globally by using social media, virtual learning environments (VLE) and online platforms such as Zoom, Microsoft Teams, or Google Meet suddenly with no time or preparations for training.

3.4 Learning Experiences

A Digital Education Action Plan (European Commission, 2020) was launched in Europe in mid-2020. A guide for 'remote learning' was developed by the Australian Council for Educational Research (ACER), which incidentally overlooked deliberations on OER (Cowden et al., 2020). Social media and virtual reality technology were used for social, technical and pedagogical purposes in Sweden, Taiwan, Turkey and the UK. National associations (ICOLC followed by ADBU, Couperin and EPRIST) in France promoted open access and open science.

3.5 Digitally-supported open learning

Online platforms generally provided increased support for openness, with many companies offering services and resources for free that normally attracted a premium. South Korea adopted open education which soon is going to be legislated (Kalezi et al., 2020). Taiwan Open Course and Education Consortium (TOCEC) provided more than 1400 MOOCs that were aligned to the national quality standards. In India, students continued their studies through digital initiatives of the Govt of India, like SWAYAM (Study Webs of Active–Learning for Young Aspiring Minds) as MOOC platform and SWAYAM-PRABHA (bouquet of 34 DTH channels operating 24x7 for broadcasting high-quality educational programmes). Free webinars and training courses, the use of open platforms and repositories were reported in the Netherlands, Spain and Mexico (Rodríguez-Abitia et al., 2020; Santos-Hermosa et al., 2020).

3.6 Open Educational Resources (OER)

The UNESCO Recommendation on OER (2019) has gained significant adoption in most of the countries (Stracke et al., 2019). In Turkey, substantial use of OER is clear although open licenses, pedagogical frameworks and models were not promoted. Several initiatives in Spain like Conectad@s, UNED Abierta, Emergency remote teaching programme and UNIRTv are notable examples for use of OER. In India, DIKSHA (Digital Infrastructure for Knowledge Sharing) platform and the National Repository of OER (NROER) offered many OER including e-content, quizzes and QR-coded Energized Textbooks (Phygital Textbooks). MEC-RED, the Brazilian portal for OER, offered open-licensed basic education content to around 32 million students.

4 DISCUSSIONS AND LIMITATIONS

In analysing the various responses to the pandemic by education systems we identified three levels as macro, meso, and micro and analysed the related impact (Stracke, 2013, 2019).

4.1 Macro level: Missing infrastructure as a challenge to formal education

Missing infrastructure is a macro level factor as the formal education sector was generally not ready to switch to open education by adopting distance education practices. Turkey, France, Mexico and the UK reported providing free access to online resources using television and the Internet. In India, satellite-

based SWAYAM PRABHA (bundle of 34 DTH channels) was reported. OER usage was reported through projects like BELUGA in Africa, DIKSHA platform of the Ministry of Education in India. France, Nigeria, South Korea, and Sweden reported strategies for reaching out to disadvantaged geographical areas or vulnerable populations.

4.2 Meso level: Access to Open Educational Resources

In the Netherlands, Sweden and Taiwan development of open policies and strategies took place while in India, Mexico, Nigeria, South Korea, and Spain there are efforts in working towards them. During this period publishing communities too came forward in making open access and open content available to teachers and students.

4.3 Micro level: Capacity building and competence development

Formal education systems were clearly derailed by the sudden closures of schools and universities, and despite the widespread loss of jobs have also shown resilience in various attempts at the continuity of delivery. Teachers and students were required to shift to online mode (emergency remote teaching) and this required developing certain technological, pedagogical and digital competences. Designing online instructions, using online teaching-learning tools and providing online support to students were new tasks for most teachers.

4.4 Limitations

We acknowledge several limitations of this study. The contributors were selected based on their availability, there has been subjectivity in reporting as the experiences are based on individual knowledge, and the limited dataset for making inferences and comparing diverse cultures and contexts. The reported case studies also have not addressed an existing problem of 'out of school' children made many times worse by the pandemic.

5 CONCLUSIONS

The disruption caused by the COVID-19 pandemic has shown a range of responses by education systems worldwide (Stracke et al., 2020, 2021). Most notably has been the unpreparedness of formal education systems for such disruption challenging its quality (Stracke, 2017). We observed novel ideas, pedagogical practices, strategies, tools and techniques adopted by individual teachers and students and also by institutions. Low usage or lack of open education and OER revealed economic inequities (access to infrastructure and resources), cultural injustice (the lack of cultural sensitivity) and political injustice where teachers in various constrained environments lack voice and empowerment (Hodgkinson-Williams & Trotter, 2018). The digital divide has also become more prominent in terms of access to devices and Internet connections. A positive development we noted, however, is increased collaboration between teachers and at the institutional level. We noted a greater need for the inclusiveness of digital education. This period further highlighted the need for open and direct communication and pro-active leadership that recognises the need for trauma-informed pedagogy of care, changed roles of parents as teachers, and increased domestic violence and student stress came. And while digital connectivity has been a 'lifeline' for many, too much exposure to webinars has also met with resistance and 'screen fatigue' (UNESCO et al., 2020, 2021). This period has heightened calls for policies for open education and openness. Assessment is crucial to robust educational process but has been threatened in online settings by increased cheating (and online services feeding this demand) and other non-ethical practices. Lastly, this study highlights the emergent need for inclusiveness and social justice in education.

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