Charmaine Bissessar *Editor*

Emergency Remote Learning, Teaching and Leading: Global Perspectives

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Preface

My interest in online education has been ongoing. This volume contains empirical data and literature on issues that surround emergency remote learning, teaching, and leading. The current educational landscape and the fact that we are on the cusp of a new way of engaging learning, teaching, and leading make this inquiry critical. How do we handle the limitations of the virtual world? How have we been coping with a volatile, uncertain, complex, and ambiguous environment (Bennis & Nanus, 1987)? How are teachers and leaders transforming volatility into vision, uncertainty into understanding, complexity into clarity, and ambiguity into adaptability and agility (Ghabour, 2020)? Such concerns are foremost in every educator's mind as we attempt a harmonious and seamless transition to the required emergency remote conditions. Since the full effects of the pandemic will not be felt for a very long time, there is a need to research, record, discuss, articulate, and ruminate on what is currently happening. It is also necessary to capture the nuances of the new and different responsibilities of students, teachers, and leaders in emergency remote teaching and learning. Teaching, leading, and learning are now being conducted via a keyboard and screen with the human touch absent.

This volume, therefore, encompasses a spectrum of empirical and anecdotal experiences from Trinidad, Grenada, Ghana, USA, Greece, Jamaica, and Ukraine with literature reviews conducted by professors in the UK. Each author is involved in teaching at the tertiary level and brings to bear a wealth of experience, expertise, and knowledge to his/her chapter. Each chapter gives the reader a glimpse of quotidian learning, teaching, and leading in a specific context.

The chapters in the first part relate to the challenges confronting students as perceived by teachers. Chap. 1 discusses research on Trinidadian and Grenadian teachers' perceptions of the attendance, motivation, and engagement of students during emergency remote learning. The author discusses issues of connectivity, Internet access, the evident disparity between the haves and the have-nots, and the digital divide. In Chap. 2, Sedofia and Ampadu deconstruct University of Ghana students' approach to emergency remote learning tools as they try to adjust to this new way of learning. The glaring issue of the digital divide is prominent in their discussion. Samioti, in Chap. 3, examines the challenges that secondary education teachers

encountered during the first wave of the COVID-19 pandemic in Greece. She concludes that one of the main challenges was the disruption of personal communication between teachers and students. In Chap. 4, Slater and Cojanu undertake a narrative literature review and reveal that learning definitions across primary and secondary schools have not provided alternatives where synchronous and asynchronous educational techniques could compete with the pandemic.

In Chap. 5, McCauley considers the feasibility of teaching Bachelor of Arts (BA) dance, drama, or performance degrees through online learning. She examines the standards necessary for a robust and comprehensive BA dance, drama, or performance education as espoused by the QAA and then questions whether they can be attained remotely. In Chap. 6, which concludes the first part, Ampadu and Sedofia investigate the challenges University of Ghana's students faced in emergency remote learning when schools closed because of the COVID-19 pandemic. They recommend ways in which the challenges might be addressed.

Part II contains two chapters. In Chap. 7, McFadzean and Mohabir-McKinley present a literature review exploring the competencies that online faculty need in order to develop and teach virtual classes. These include foundational competencies – cognitive, creative, moral, emotional, and social intelligences – and virtual ones such as didactic, technological, cultural, interactive, political, and time-management competencies. In Chap. 8, Stukalo discusses the extent to which the staff and students were prepared to teach and learn in pandemic conditions and examines their first reactions and actions.

In Part III, Chap. 9, Onyefulu examines Jamaican teachers' perceptions of their principals' leadership effectiveness in emergency remote learning during the pandemic. In Chap. 10, Hamid examines the literature on leading remotely and how faculty's activities and teamwork have been affected. She proposes a range of specific teaching and learning strategies to enhance the emergency remote work experience. In Chap. 11, Roofe examines instructional leadership practices of Jamaican principals and vice principals during a period of crisis and notes their responses to issues related to their followers' digital skills and competencies. Stukalo, in the final chapter, investigates the higher education quality assurance practices in emerging remote learning, teaching, and leading.

This volume is intended for researchers, students, educators, administrators, and policy makers who need contemporary, empirical knowledge and extant literature on learning, teaching, and leading during the present emergency. Its sole purpose is to create a space for researchers and key stakeholders involved in all aspects of education to share, discuss, and think about the prevailing challenges and opportunities that have resulted from the suspension of face-to-face education. It adds to the limited extant research on emergency remote education.

Docendo discimus
While teaching we learn

Turkeyen, Georgetown, Guyana Charmaine Bissessar

COVID-19

COVID-19 sneaked up upon us like a thief in the night
Shattering everything we thought education, socialization, and communication were.
We were forced to embrace this shift in paradigm and were galvanized into action
Most of us were unprepared.
Those who had some experience suddenly became experts, lending support, vision, and know-how to allow for a seamless transition from a face-to-face to emergency, remote leading, teaching, and learning.
Teachers had to learn to navigate the online environment in order to succeed and meet students' needs. Their accessibility or lack thereof was never taken into consideration.
Parents were suddenly given added the responsibilities of teaching their children as well as monitoring, supervising, and motivating them.
Under these onerous and concomitant responsibilities, parents feel overburdened, and lack the patience and understanding to fill the obvious silo in their children's education.
Teachers are burnt out and feel disconnected from their peers, students, and parents. They feel left behind.
Socialization as we know it seems to be lost.
The disconnect continues with leaders.
Leaders are learning how to lead via a screen.
They now have to learn how to influence, motivate, and show empathy via a keyboard….replacing the human touch.
COVID-19 continues unabated, unaware of the turmoil it has brought to our on society and how our culture is being redefined.

Acknowledgments

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Shahnaz Hamid is deeply grateful for the unconditional support of her husband, Mirza Khader, whom she loves and admires. She dedicates this work to her parents, Dr. Syed Hamid and Dr. Afsari Hamid; her husband, Mirza Khader; and beautiful kids, Ayesha and Junaid. Her deepest gratitude to Dr. Charmaine Bissessar and colleagues in academia for their enthusiastic support that kept her going. Thank you to the authors who have contributed towards this book. It is wonderful to be a member of this distinguished team!

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Part I
Emergency Remote Learning

Trinidadian and Grenadian Teachers' Perceptions of Students' Attendance, Motivation, and Engagement During Emergency Remote Teaching

Charmaine Bissessar

Introduction

The COVID-19 pandemic brought with it the need for 1.38 billion students to transition swiftly from face-to-face to emergency remote teaching and learning (UNESCO, 2020 as cited by Li & Lalani, 2020). As this occurred, students and teachers had to make paradigm shifts in their concepts as to what teaching and learning look like and what pertains within the context of the new normal. As emergency remote teaching (ERT) became more prevalent, the chinks in the proverbial armor began to show as issues in accessibility, attendance, motivation, and student engagement took center stage. Insightfully, according to Fore (as cited by Thompson, 2020), the "lack of internet access is costing the next generation their futures" (para. 5). In fact, Thompson (2020) reported, "Two thirds of the world's school-age children – or 1.3 billion children ages 3 to 17 years old - do not have internet connection in their homes, according to a new joint report from UNICEF and the International Telecommunication Union (ITU)" (para. 2). She furthered that it is no longer a "digital gap but a digital canyon" (para. 3).

Predictably, the digital divide is promoting and sustaining inequalities even more than before (Thompson, 2020). In a study conducted in the United States, Stelitano et al. (2020) found that students in more affluent areas of the United States had more and better access to technology than students in rural areas with lower-poverty schools reporting lack of access to technology. Similarly, in California, teachers are concerned about the digital divide and the "COVID slide" as the lacuna between the haves and have-nots amplify exponentially (Ceres, 2021, para. 8).

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According to Jaramillo (2020), Internet access is less than 50% in the Caribbean and Latin America. Jaramillo moved the discussion from digital gap/canyon to "digital poor" where there is not only limited access to Internet broadband but the repercussions of the pandemic can be felt in the loss of jobs inter alia. However, Internet access and lack of devices go hand-in-hand. Chaitram (2021), in describing the issues of access to devices and online classes in Trinidad, indicated that there are 30,000 students without devices to attend synchronous and asynchronous sessions. Furthermore, an updated report on Trinidadian students indicated that 46,770 students have never logged on to an online portal (McKenzie, 2021). The most "at risk" students are primary school students since 39,861 have been unable to access online resources. Additionally, 6309 secondary school students and 2195 early childhood education students have been unable to access online resources (McKenzie). This phenomenon is not just typical of Trinidad but is a global issue that has been in existence since the inception of technology in the classroom. With the issue of digital divide and digital gap, this study poses the following research questions:

1. What is students' attendance in Grenada and Trinidad during the early stages of the pandemic?
2. What are teachers' views on students' access to Internet broadband and devices in Trinidad and Grenada?
3. What are teachers' views of students' motivation and engagement?

Literature Review

Emergency Remote Teaching and Pandemic Learning Modes

Hodges et al. (2020) coined emergency remote teaching (ERT) as "a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances" (para. 10). They see this as teaching, which takes place synchronously and asynchronously and replaces face-to-face teaching due to extenuating circumstances. Nagpal (2020) termed learning during COVID-19 as pandemic learning modes, which encompass all aspects of remote/online learning. This was termed pandemic pedagogy (Hodges et al., 2020; Milman, 2020) and emergency remote learning (Rahiem, 2020).

Students' Attendance and Emergency Remote Teaching (ERT)

Earlier studies on students' attendance and achievement found that school attendance determined whether high school students graduated. Attendance at school could obliterate prior academic achievement (Heppen & Therriault, 2008, as cited

by Chambers et al. 2020). Therefore, the higher students' attendance the greater student achievement will be. Liberman (2020) reported that student absenteeism has doubled during the pandemic. In April 2020, according to Liberman, there was 5% absenteeism. However, as of October 2020, this has doubled to 10% absenteeism as reported by Liberman in a survey of educators in the United States.

Chambers et al. (2020) also found that educators and policy makers are concerned about students' attendance and, by extension, students' achievement during the pandemic. They stated that attendance predicts students' success. However, during the pandemic, huge disparities appeared in the United States where Blacks, Latinos, and Native American students were disproportionally disadvantaged because they could not attend classes due to a lack of access to high-speed Internet and devices (Attendance Works, 2020).

Moreover, Chambers et al. (2020) indicated that chronic absenteeism affects students' success and educational attainment. In virtual interviews in four districts in the United States, Chambers et al. found that there is no established definition of attendance within the emergency remote teaching and learning context. They also found that there is no accepted measure of attendance during the pandemic. With the absence of measures, educators used time spent on the learning management system (LMS) platforms and the "quantity of online activities completed" to determine attendance and engagement (p. 1).

However, regular attendance was stymied by such challenges as lack of Internet access, shared computers, varying schedules for parent and child, disruptions during synchronous sessions, and no quiet space to attend sessions (De Witt, 2020; Kajeet, 2020). Kajeet (2020) indicated that students might not have access to Internet and, pre-COVID-19, that students would have been accessing Internet via public facilities such as libraries, hot spots, and community centers. De Witt (2020) and Liberman (2020) reported that students not only have issues with lack of access to Internet but also have no devices. Another issue is that of shared devices where there might be one device for the entire family with children and parents competing for that device (Kajeet, 2020).

Digital Divide

Digital divide was popularized in the 1990s when researchers began to see a gap in the broadband access to information (The Digital Divide, ICT, and Broadband Internet, 2021). President Clinton in 2000 in his state of the union speech indicated that there was a need to close the digital gap (Daley, 2020). Twenty years later, the digital divide continues to be an issue in every education system. This is more chronic given emergency remote teaching. In fact, the digital divide has expanded, as more persons have no access to Internet broadband and devices (Thompson, 2020). This preoccupation with the inequality and inequity in access and use of technology is exacerbated further since the pandemic has left billions without access to education via no Internet connectivity (Thompson). Furthermore, Hilbert

(2016) indicated that the digital inequality is increasing instead of decreasing. With the pandemic in full force, one wonders how much this has increased over the last year. Put bluntly, with the lack of access to education through Internet and technology, that divide has now become a canyon. According to Thompson:

> The digital divide is perpetuating inequalities that already divide countries and communities, the report notes. Children and young people from the poorest households, rural and lower income states are falling even further behind their peers and are left with very little opportunity to ever catch up. (para. 10)

Accessibility

As education at all levels transitioned to synchronous or asynchronous modes of delivery, students' accessibility became a fundamental issue. In a poll conducted, Mangrum (2020) concluded that more than half of teachers were concerned with students' access to ERT. Barna (2020) echoed that students who do not have access to Internet, devices, and broadband communication are being left behind in ERT. In a poll conducted by the Trinidadian Ministry of Education, it was reported that "34.1 percent of primary school teachers and 35.3 percent of secondary school teachers agreed that their students did not have reliable internet" (McKenzie, 2021, p.1).

The Internet abounds with stories of students not being able to access Internet (a paradox in itself) or their lack of devices with students and parents spending the school day outside schools in order to access the Internet. There are also numerous stories of students being given devices as an act of philanthropy among organizations and altruistic individuals. However, these attempts at bridging the canyon between access and lack thereof, are but small droplets in the ocean with regard to students being left behind because of inaccessibility to basic resources. Barna (2020) underscored this evident crisis when he stated that the first semester of the academic year 2020/2021 would result in millions of students without access to high-speed broadband Internet. This is similar to Stelitano et al.'s (2020) RAND study, which found that teachers in high-poverty schools reported higher inaccessibility to Internet and devices.

In schools in the United States located in high-poverty areas, teachers reported that only 30% of their students did not have access to Internet as opposed to 83% for teachers in low-poverty areas. This study concluded that poverty played a pivotal role in students' accessibility or lack thereof to high-speed Internet access. Thompson (2020) also found that most of the students globally do not have access to high-speed Internet and are being left behind. In their Pew study, Vogels et al. (2020) found that "a disproportionate share of those who lack access to a reliable internet connection and devices are Black, Hispanic, live in rural areas, or come from low-income households" (para. 6). Instead of creating bridges, technology has created a digital canyon with a bulk of the world's students being left behind.

This is confirmed in a study conducted by Lake and Makori (2020) who drew similar conclusions as Thompson, Stelitano et al. (2020), and Barna (2020).

Mangrum (2020) stated that only 38% of the teachers they polled were teaching virtually. Similarly, Lake and Makori (2020) concluded that students in low-poverty areas are less likely to expect teachers to provide synchronous and asynchronous sessions. These students were also less likely to expect teachers to "track attendance, or grade their assignments" (para. 1). They credited this with the digital divide, which they described as "the inability of students to do schoolwork at home due to lack of internet or device access" (para. 2). Daley (2020) also mentioned the homework gap stating that those who do not have Internet access are at a disadvantage when it comes to homework. She stated, "1 in 5 teenage students frequently miss homework assignments because of lack of technology or Internet access" (para. 5). Similarly, a Pew Study by Vogels et al. (2020) found that the lower the income of the American family, the more that family is likely to feel the pinch of the digital divide or digital "home-work gap." However, according to Daley, there is no surprise there in the homework gap and the link to digital gap.

It is critical that all countries find ways to fill the digital gap between the haves and have-nots. Stelitano et al. (2020) recommended that infrastructure and access are critical problems and key stakeholders need to ensure that they put effective mechanisms in place to stymie the continued digital gap between high- and low-poverty students. Furthermore, Barna (2020) described some of the stories that were mentioned in social media and other newsfeeds. He stated, "Some students have been relegated to traveling miles to Wi-Fi parking lots, where they pick up an internet signal - such as from a library, coffee shop or hotspot - to take remote classes and do homework" (p. 5). This has become the new normal as students and parents attempt to fill the digital canyon that is threatening to engulf them vis-a-vis accessibility to high-speed Internet and devices. Nevertheless, Barna indicated that the USA implemented a Lifeline program geared toward targeting the lack of accessibility to Internet among low-income families. However, Barna segued that this initiative would help seven million students in the United States. This is a start.

Lake and Makori (2020) stated that there is a need for national (and global) drive to close the gap, which is axiomatic and has been widening instead of contracting. Daley (2020) took this further and described that Washington, DC, planned to provide free Internet access to 25,000 low-income families. She also indicated that Chicago plans to provide Internet access to 100,000 public schools over a 4-year period. She cited the long-term importance of this where studies have shown that students with Internet access perform better academically. These are baby steps in filling the digital canyon that currently exists between students who have access to Internet and those who do not have access. However, she said that there is a need to transcend the ideas of simply making Internet more accessible and examine how the Internet is being used.

Furthermore, Daley (2020) stated that there is a need to provide "digital navigators" who will help individuals who have access to the technology with digital literary. Congruently, Li and Lalani (2020) resonated these statements indicating that training in digital literacy is needed in addition to access to Internet and devices.

This author agrees with this since, from her own experience, she has found that digital literacy is needed and transcends generations. It is needed for both digital immigrants and natives who need to navigate ERT and pandemic modes of learning/pandemic pedagogy or emergency remote learning (ERL).

Parental Involvement During ERT

In their discussion of parental involvement during the pandemic, Bhamani et al. (2020) concluded that Pakistani parents have stepped up to the plate and filled the gaps in teaching and learning for their children. They indicated that when parents helped their children with their school work, such collaborations formed bonds. Conversely, Garbe et al. (2020) concluded that parents in the United States struggled with issues such as added responsibilities, their children's motivation, and accessibility to resources. Parents in both studies felt overwhelmed and struggled to deal with several learners in the same house and learner motivation. The Pakistani parents struggled with their children vis-a-vis maintaining schedules. In Trinidad, Mc Kenzie (2021) noted that most "parents felt comfortable supporting their children academically during virtual classes, there were challenges in managing their own work and their children's schoolwork and keeping a steady schedule for their child" (p. 1).

Students' Motivation/Engagement During ERT

Bissessar, Black, and Boolaky (2019) conducted a study of online graduate students' self-determination to succeed despite the odds. They concluded that the more motivated, autonomous, and competent the student, the more successful the student would be in completing his/her study. This was before the pandemic, when students opted to study online rather than face-to-face. However, with the pandemic, emergency remote teaching was foisted on students and teachers forcing quick changes to facilitate a seamless education with little disruption. In terms of students' motivation, Gillis (2020) suggested that the lack of access to Internet and devices could lead to demotivated students and have an effect on their attendance. The literature on students' motivation during the pandemic focuses on tips and best practices rather than any studies examining students' motivation in ERT. Therefore, this study adds to the extant empirical research.

Chambers, Scala, and English (2020) stated that educators and policy makers are concerned about students' attendance, being able to reach students, and being able to engage students. They considered attendance and engagement as interconnected. However, scant research exists on students' attendance and engagement during the pandemic in the K-12 environment. A poll conducted by the Trinidadian Ministry of Education found that "51.9 percent of primary school students and

52.1% of secondary school students – reported difficulty staying focused during remote learning" (McKenzie, 2021, p. 1). McKenzie further stated that most students felt unusually stressed.

Fredericks, Blumenfield, and Parris (2004) discussed three types of engagement: behavioral, affective, and cognitive. They are interrelated and interconnected. They defined behavioral as actively participating in class through question and answers, paying attention, effort, and persistence. Affective relates to the individual's emotions, sense of belonging, attitudes, values, and ability to become absorbed in the task. Cognitive involves deep rather than surface learning where the individual values learning and moves along the continuum from lower-order to higher-order thinking.

Chambers et al. (2020) found that some families reached out to teachers and were willing to give feedback. They also concluded that, in instances, where there were more personalized connections made between students and teachers that the level of student engagement was higher. For example, they affirmed that students who shared their personal stories with the teachers felt a bond and this resulted in increased engagement. They further noted that the families that normally do not engage in the face-to-face environment also do not engage during the pandemic. From the educators' perspectives, Carter, Pleasants, and Muhammed (2021) suggested that teachers should strive to entertain. They should share funny stories with their students in order to create connections and humanize the ERT environment.

Keller's (2009) ARC is suggested as a framework that could be used to foster students' motivation during pandemic modes of learning/ERL. The letter "A" stands for attention, which is concerned with capitalizing on students' curiosity, and maintain it. The letter "R" encompasses relevance and addresses the question of the value of the discussion/information/class to the students' present personal worth (Gillis, 2020). Additionally, relevance begs the question, "What would this class mean to the student in the future?" Confidence involves the students' belief that they will succeed and grow in small steps. Students should be satisfied with their accomplishments and sense of achievement. The types of feedback and reinforcements are critical to increased student motivation.

Methodology

This qualitative intrinsic case study using the interpretivist paradigm compared the perspectives of 37 Trinidadian and 44 Grenadian teachers regarding their views on their students' attendance, engagement, and motivation during the start of the COVID-19 pandemic in April and May 2020. The approach of qualitative research used was case study because a case study allows data to be collected based on a single phenomenon (Yin, 2009). The sampling method was purposive since the questionnaire was posted online on two teachers' Facebook pages. The administrators of both Facebook pages gave permission for the questionnaire to be posted online seeking participants. The participants were assured anonymity and

confidentiality with results recorded collectively rather than individually. Participants completed the questionnaire via Google forms. The researcher was the only person who had access to the Google forms.

On 9 January 2021, a perusal of the Trinidadian Facebook page – A Teacher's Voice – showed that there were 8200 members. Nevertheless, only 37 individuals participated in the study. There were 4 male and 33 female participants. Thirteen participants were ages 29–39 years old, 20 participants were ages 40–50 years old, and 4 participants were over 50 years old. The administrator of the Grenadian Facebook page Heart 2 Heart gave the researcher permission to conduct the study. Questions were posted on April 11 and 12, and 44 responses were obtained. Thirty-five females and nine males with ages ranging from 23 to over 56 responded to the questionnaire. Five participants were ages 23–33, 10 were ages 34–44, 26 were ages 45–55, and 3 persons were over 56 years. Seven participants were school administrators, 21 taught at the primary level, 4 taught at kindergarten, 11 at secondary level, with 1 at the tertiary level. A visit to the Facebook page Heart 2 Heart on January 9, 2021, indicated that there are 550 members; however, only 44 individuals opted to complete the questionnaire. Teachers responded to the following questions:

1. What percentage of your student population has attended the online classes?
2. Do you believe that you are engaging students in the online environment. If yes, give an example, if no why not?
3. Do you believe that your students are motivated to learn via the online learning environment. If yes, give an example, if no why not?

Data Analysis

Thematic analysis of the data latently and semantically indicated that there were recurring themes and ideas (Gibbs, 2007). The data were analyzed between case studies since there were no significance differences found within case studies. Creswell's (2012) six steps to data analysis were adhered to where the researcher became familiar with the data; generated initial codes; searched for themes; reviewed the themes; defined themes; and wrapped up. The researcher used the inductive approach to data analysis as is associated with qualitative methodology (Saldaña, 2016). First, open coding determined the various themes that recurred. The researcher used descriptive coding where themes of similar data sets were examined (Saldaña). The researcher conducted simultaneous coding where she coded the data by applying more than one code to the data set based on latent and manifest meanings (Saldaña). The researcher did this to ensure that the rich data were represented in the coding process. As much as possible, the researcher attempted to be as objective as possible in analyzing the data by coding and leaving the data for a 2-week period and re-coding the data. This allowed for credibility and dependability of the final themes generated. She also conducted an intraclass

coefficient (ICC) reliability test. According to Cicchetti (1994), the ICC reliability of 0.804 is a good level based on Shrout and Fleiss's (1979) convention of the third model of ICC (3.1) where the researcher was the only rater of interest to assess the data.

Findings

Attendance

There was an obvious deficit in students' attendance during the synchronous sessions for both Trinidadian and Grenadian students. The percentages below point to the serious issue of attendance and the ripple effect of student achievement because of their lack of attendance. The issue of lack of attendance and students left behind is a worrisome one especially given the pandemic. Chambers et al. (2020) were concerned about students' attendance and engagement, while Kajeet (2020) and De Witt (2020) found that students' attendance or lack thereof could be attributed to such factors as dearth of Internet, devices, shared devices, serving as caregivers for younger siblings, and lack of a quiet space inter alia. The attendance percentages below for both islands do not indicate the reasons for poor attendance given the fact that one participant indicated that the students cannot be reached and another stated that they are not turning up and logging on. However, more research could lead to generalizations and substantiate the conclusions as to students' lack of attendance in both islands and in the Caribbean.

All Trinidadian participants indicated that the attendance is poor. However, when pressed to give a percentage of the students who are present online, the following statistics were indicated. Two persons said none. One person said it was not applicable. One indicated that she was only conducting asynchronous classes. However, for attendance of students from 1% to 40%, 10 participants indicated that their students' attendance was within this range. Five participants indicated that their attendance was 50% with five teachers having attendance between 80% and 100%. Four participants had attendance at 60% and nine participants had attendance from 66% to 79%. Trinidadian Participant 16 stated, "Students are not turning up." Trinidadian Participant 36 indicated that the students' attendance is poor because they are waiting for face-to-face teaching. The Trinidadian participants also indicated that students are simply not logging on. Furthermore, they are not motivated to attend the online sessions.

Two Grenadian participants indicated that they just send work to their students and do not have classes. One Grenadian participant indicated that she could not calculate the percentage of attendance. Nine participants indicated that their students' attendance was between 0% and 40%. Fourteen participants indicated that their students' attendance was from 41% to 70%. Seventeen participants indicated that their students' attendance was from 71% to 100%.

Shared Resources

The issue of shared computers and the resulting lack of attendance is a challenge. Kajeet (2020) and Chambers et al. (2020) reported that students might have poor attendance due to several persons in the house having to share one device. Within this study, shared resources did not recur many times. Nevertheless, it is an important barrier to students' attendance, motivation, and engagement. Trinidadian Participant 31 pointed out the issue of shared resources in one family. She stated, "Most of them don't have their own computer to use and they have to depend on parents and older siblings' devices." Grenadian Participant 13 stated, "Most students don't have proper devices. They are using their parents' phones and there may be more than one child who has to receive work from that one." Therefore, the issue of shared devices is significant when considering students' attendance.

Digital Divide

Accessibility to Students

Even before the pandemic, students' access to high-speed Internet and devices was an issue. However, the pandemic has amplified the situation. Mangrum (2020), Barna (2020), Stelitano et al. (2020), Thompson (2020), and Vogels et al. (2020) found that teachers are concerned about students' access to high-speed Internet and devices. According to both Grenadian and Trinidadian participants, students' accessibility to devices and the Internet seemed to be the most critical issue facing them when teaching remotely. Teachers complained that students had issues in accessibility. In some instances where they had Internet access, they were refusing to attend classes.

However, there were instances where there was no access. Trinidadian Participant 8 stated, "Most of my students do not have access to devices and internet." It must be noted that Participant 8 indicated that she teaches in rural Trinidad, which could also reflect differences between the haves and have-nots in rural and urban households. Trinidadian Participant 12 also stated that the students "have no devices of their own." This participant indicated that she teaches in South Trinidad, which could also link to lack of access to Internet and devices in rural areas. A report on the mapping of poverty rate in Trinidad in 2011 indicated that South-West Trinidad has a Multidimensional Poverty Index of 0.016 (Oxford Poverty and Human Development Initiative, 2011). These responses reflect similar conclusions drawn by Thompson (2020), Mangrum (2020), Barna (2020), and Chambers et al. (2020). Although the teachers' responses did not determine whether families are high- or low-income, the teachers taught at rural schools, where access to high-speed Internet and devices could be limited.Vogels et al. (2020) found that a similar situation existed in the United States.

Grenadian Participant 1 stated, "Yes but not 100% due to accessibility of computer or other devices and internet." Grenadian Participant 12 stated, "A lot of them do not have the necessary facilities and tools needed for such an approach to be effective." Grenadian Participant 2 stated, "At times, I can sense the interest and students are very attentive, however, I think oftentimes students are distracted and some have connectivity issues, therefore, during class they may not be seen then reappear." Trinidadian Participant 19 explained, "They are distracted easily when their friends come on and they start to chat. Sometimes family members interrupt them during the session." These responses exemplify both disruption and connectivity issues, which are related to access. In fact, De Witt (2020) discussed the issue of disruption due to family responsibilities, which could lead to low or no attendance.

Digital "Homework Gap" and Parental Involvement

Trinidadian Participant 14 mentioned the need for more parental involvement indicating, "Most parents don't take the time to transfer information." In this case, it was evident that this was not because of lack of access to technology but lack of parental involvement. On the other hand, Grenadian Participant 24 complained about too much parental involvement. She opined, "There is evidence that some of the assignments submitted by students were done by their parents." Grenadian Participant 38 stated same, "I believe that the parents are the ones completing activities." Therefore, there is definitely too much parental involvement and more need for students to take the initiative in their learning. These statements point to the fact that parents might have been overwhelmed and not help in anyway or took on the tasks themselves. However, further probing would have revealed whether this was the reason. It must be noted that parents in Bhamani et al. (2020) and Garbe et al.'s (2020) studies complained about being overwhelmed and that they struggled to cope with their children's demotivation.

Grenadian Participant 9 explained, "The majority are not being engaged because they don't have their own devices and parents take the assignments and pass on to the students who have to get them." This is similar to findings by Lake and Makori (2020), Daley (2020), and Vogels et al. (2020) who concluded that there was a homework gap because of the digital divide. Parents from low-income home with no access to the Internet are at a disadvantage. From issues in lack of engagement, Trinidadian Participant 20 highlighted the short attention span and stated, "Some students do not learn unless they engage in activities that allow them to see the content in action also it's a challenge to keep students occupied for more than 30 minutes." These responses reflect Keller's (2009) ARCS where students need to see the value of what they are learning and their curiosity needs to be aroused.

Accessibility to Teachers

There is a dearth of information on teachers' access to high-speed Internet and devices; however, this is a real issue which this researcher has experienced first-hand. The participants in this study indicated that there were issues in access to devices. According to McKenzie (2021), in a poll conducted by the Trinidadian Ministry of Education, "81.5 percent of secondary school teachers and 71.0 percent of primary school teachers" agreed that they had reliable Internet connections (p. 2). Therefore, the issue in access was relevant not only to students but also to teachers. Trinidadian Participant 3 (taught in rural Trinidad) explained that she did not think that she was able to engage the students fully because "I don't do live teaching because I do not have a reliable computer and I don't have a whiteboard." This echoes what Steiltano et al. (2020) found in their RAND study. They concluded that teachers in low-income areas will have issues in accessibility to the Internet and devices. Congruently, Lake and Makori (2020) also reported that students and teachers in rural areas are less likely to participate in synchronous and asynchronous sessions. It must be noted that the Multidimensional Poverty Index (MPI) for Central Trinidad, where this teacher taught, is 0.02. This percentage is low.

Students' Motivation or Lack Thereof

In their discussion of motivation, teachers mentioned the inaccessibility to resources as diminishing students' motivation. Trinidadian Participant 20 explained, "Students are facing their own unique challenges at home. Some can connect while others cannot and it can severely demotivate students." As mentioned by Daley (2020) and Li and Lalani (2020), digital literacy is important to students, teachers, and parents, and it is more than just an issue of accessibility. This is also similar to Gillis' (2020) view that the lack of access to Internet and devices could lead to demotivated students. Trinidadian Participant 22's response mirrors this. She explained that some students are "Eager to use the technology but some are not sure how to use it and some don't have the needed resources. Some just not interested or motivated." However, she also highlighted the lack of student motivation, which seems to be weaving an indelible thread throughout this discussion. This would suggest that there is a need for instructional design techniques to be implemented for the teachers to arouse and engage their students (Keller, 2009).

Daley (2020) indicated that there was a transference of similar behavior from face-to-face to emergency remote learning. Students who were motivated and interested before the pandemic would be the same during the pandemic. Trinidadian Participant 33 stated, "They are lazy and do not work in the school environment and doing so online is the same." Trinidadian Participant 29 noted, "The ones that

were the same at school are doing the same online. Those who were not showing any interest are still doing it online."

Students' Engagement or Lack Thereof

It was difficult to determine whether students were engaged behaviorally, affectively, or cognitively because the teachers' responses only indicated enjoyment. Out of the three types of engagement, it would appear that behavioral was the most repeated form of engagement and no references were made to the cognitive aspect of engagement. Grenadian Participant 4 lamented, "I am not really engaging them I am simply keeping them occupied." Grenadian Participant 14 also underscored the lack of devices as being critical to student engagement and learning "the lack of devices and poor connections often limit the interactions."

Behavioral

Students display behavioral engagement by participating in class, asking and answering questions (Fredricks et al. (2004). In the following examples, teachers described their students as enjoying their classes, which are interactive. Grenadian Participant 19 stated, "Students enjoy being on their devices because it is interactive, colorful and exciting." She did not explain what interaction entails. Grenadian Participant 24 stated, "It is evident that students of the early childhood levels are motivated and eager to submit assignments because of the creative ways lessons are presented by their teachers." However, this participant did not mention how this was done. A face-to-face interview would have facilitated further probes.

Grenadian Participant 43 stated, "Some students do enjoy the online learning environment. Some, I believe enjoy manipulating the gadgets." Trinidadian Participant 15 explained, "I do believe to the best of my ability in using the online forums that I am engaging my students to the degree that I am allowed to given the numerous constraints." Trinidadian Participant 17 stated, "Yes, they enjoy coming online to their class and are always eager for their Google Meet sessions." Trinidadian Participant 27 stated, "They enjoy the activities in short videos format." Trinidadian Participant 30 stated, "It's new, so some of them are interested." Grenadian Participant 17 stated, "Yes I am, I've been utilizing polls to interact with them and they've been submitting work and messaging me privately." Grenadian Participant 23 stated, "I am engaging some students. They respond well to the lessons." These participants' responses indicated that they are implementing different technologies with their students and allowing them to enjoy the process. Participants could have given more information to elucidate the specific ways in which students are engaged.

Affective

There was not enough information given to suggest specific ways in which participants fostered affective engagement. Trinidadian Participant 37 explained, "Introverted students appreciate online learning. Extrovert students miss the classroom interaction." Grenadian Participant 27 stated, "It depends on the type of child and their learning style. Some love it as they like working with technology, others not so much. They want that social environment." This is true of the younger students who need the socialization process and miss it.

Discussions

Generally, there was a marked fluctuation in attendance for all students as reported by the Trinidadian and Grenadian participants. The participants reported that students' attendance was poor due to lack of Internet access, no devices, shared devices, having to take care of their younger siblings, and paucity of a quiet working space. McKenzie (2021) reported that over 46,000 Trinidadian students had never logged on to online resources. Moreover, Chambers et al. (2020), De Witt (2020), and Kajeet (2020) reported similar impediments to ERT in the United States. Another prevailing issue was the issue of shared resource. Shared resource resulted in lack of attendance where there was competition for the one device in the home. The digital divide has been a perennial issue since the inception of technology and has been afforded further prominence during the pandemic since reliance on basic everyday activities requires the click of a mouse and the touch of a key.

Mangrum (2020), Barna (2020), Stelitano et al. (2020), Thompson (2020), and Vogels et al. (2020) emphasized the digital canyon that, at present, exists between the haves and have-nots due to scarcity of Internet access and lack of access to a device. What is more striking is the fact that the Trinidadian participants whose students do not have access to Internet and devices teach in what is considered rural areas. Although no definite statement could be made as to whether these areas contain lower-income households than the urban areas, there is definitely a disparity between accessibility to Internet and devices between urban and rural Trinidad. Thompson (2020), Mangrum (2020), Barna (2020), and Chambers et al. (2020) made similar conclusions between high- and low-income households. Participants mentioned that the lack of a quiet working space resulted in disruptions during synchronous sessions, which results in poor attendance according to De Witt (2020). Furthermore, the OPHI (2011) for Trinidad found that the Multidimensional Poverty Index for North Central and South West Trinidad were 0.020 and 0.016, respectively.

Grenadian participant mentioned the issue of too much or too little parental involvement. Some parents did not bother to find out what assignments their students had, while others did the assignments for them. Further probes could have

revealed whether or not parents were overwhelmed by the entire ERT. Interestingly, the parents in the studies by Bhamani et al. (2020) and Garbe et al.'s (2020) complained about being overwhelmed and struggling to cope with learner demotivation and the onerous and concomitant responsibilities of supervising their children.

Additionally, polls conducted in Trinidad did indicate that there are issues in teacher accessibility to reliable Internet connections (McKenzie, 2021). In this study, Trinidadian teachers in rural areas complained that they did not have access to Internet and a device, which means that they were not able to engage their students completely in ERT. This is similar to the findings of the RAND study, which indicated that teachers in low-income areas have issues with connectivity and access to a device (Stelitano et al., 2020). In this case, it cannot be confirmed that the area contained low-income households. However, it must be noted that the area is considered rural Trinidad, and the Multidimensional Poverty Index (MPI) for South West and North Central Trinidad is 0.020 and 0.016, respectively (OPHI, 2011).

All of the aforementioned challenges and barriers culminated in students' demotivation. The participants indicated that connectivity issues, lack of a device, issues finding a quiet space, and the need for digital literacy led to demotivation and disengagement among students (Daley, 2020; Gillis, 2020; Li & Lalani, 2020). Moreover, participants noted that the students who were motivated, attentive, and eager during the face-to-face sessions were the ones motivated, eager, and attentive in the pandemic learning mode/ERL.

According to the participants, students were engaged. However, these participants did not specifically indicate how they were engaged. It would have been helpful to have given additional probes to determine whether students displayed behavioral, affective, or cognitive engagement. From the responses, students displayed some form of behavioral and affective engagement but no cognitive engagement could be discerned.

Conclusions and Recommendations

Emergency remote teaching and pandemic learning modes/pandemic pedagogy/ERL are the present face of education at all levels until the pandemic is controlled. With this continued emphasis on ERT, there is a need to find ways to meet the unreachable and to motivate the demotivated so that the digital canyon will not widen and start to contract and no child or teacher will be left behind. This study set out to determine Trinidadian and Grenadian teachers' perceptions of their students' attendance, motivation, and engagement. Conclusions were discussed; however, more questions were raised as to the types of student engagement, the level and types of parental involvement, and issues in teacher accessibility to Internet and a device, not only issues in teacher access but also issues in access between rural and urban Trinidad.

The author discussed recommendations from other researchers as to the ways in which organizations, committees, and key stakeholders are attempting to fill the digital divide. However, input is needed from educators, policy makers, and other persons in authority to address the obvious deficits in all aspects of emergency remote teaching and pandemic modes of learning/ERL/pandemic pedagogy. More studies are needed to illuminate the challenges teachers and students face and to understand how these could be eliminated. As the issue of ERT and pandemic modes of learning/ERL/pandemic pedagogy continue to be part of the new normal and the ever evolving vocabulary, the impetus should be on investing in the digital and human capital so that no teacher, student, leader, community, and country is left behind.

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COVID-19 and Emergency Education Strategies in University of Ghana: Students' Knowledge of Emergency Remote Learning

John Sedofia and Ernest Ampadu

Introduction

The coronavirus pandemic, also known as COVID-19 pandemic, is a viral disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (World Health Organization (WHO) (2020). The outbreak was first identified in the Chinese city of Wuhan in December 2019 (Huang et al., 2020) and continues to wreak havoc on every sector of the world's economy (Nicola et al., 2020), including the education sector (Murphy, 2020; Mohmmed et al., 2020). In the education sector, for example, the pandemic has forced schools to close indefinitely, raising concerns that the effect on education would be dire and last for several years to come.

UNESCO (2020) estimated that some one billion learners in schools, from preschool to tertiary levels across the globe, have been negatively affected by the closure of schools occasioned by the COVID-19 outbreak. As the pandemic rages on and most schools in the world remain closed, there are calls for more innovative ways of teaching and learning and emergency education strategies. In response to these calls, many educational institutions cancelled all their face-to-face classes, including laboratory and other learning experiences, and have mandated faculty to move their teaching online (Hodges et al., 2020).

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Background to the Study

Emergency education is education in situations where learners' access to education is disrupted because of man-made crises or natural disasters. In times of emergencies, children lose their loved ones and homes; access to safe drinking water, quality health care and food; and without access to education, they risk losing their futures (UNICEF, 2020). The right to education must not be lost to emergencies. This is because, 'Education in emergencies is not only a basic human right but also an essential tool of protection' (UNHCR, 2007, p. 415). Moreover, education promotes economic growth, increases individuals' ability to lead a healthy life and reduces poverty and inequality (UNICEF, 2020).

One of the challenges faced by most educational authorities during the COVID-19 pandemic has to do with how to keep students learning in this new normal. Accordingly, as an emergency response, classes that were hitherto held in a face-to-face mode had to be shifted online with the assistance of digital technology tools and educational websites (Mohmmed et al., 2020). This shift brought in its wake the need to engage in emergency remote teaching (ERT), which Hodges et al. (2020) defined as a sudden stopgap measure of shifting instructional delivery to an online delivery mode because of an immense catastrophe. Hodges et al. argued that online learning is different from courses that are offered online in response to an emergency. ERT involves exploitation of the available remote teaching tools for delivering the curriculum that under normal circumstances would have been delivered in a face-to-face or blended mode (Mohmmed et al., 2020).

Although 'the COVID-19 response is not the first time that emergency eLearning programmes have been considered as appropriate crisis-response measures' (Murphy, 2020, p. 496), it is important to take a critical look at emergency educational strategies during a pandemic that is believed to be caused by a novel virus and, at a time, that technology has seen advancement. This is because, in spite of technological advancement, the digital divide is still an issue in most developing countries including Ghana. Thus, developing emergency educational strategies in response to the COVID-19 pandemic will contribute significantly to reducing learning loss in our educational institutions. Al-Samarraie and Saeed (2018) projected that online education would become mainstream by the year 2025. However, it is obvious that that projection has been hastened five clear years by the coronavirus pandemic.

The shift towards a more comprehensive use of online teaching and learning tools like Zoom, Sakai and Google Teams within the educational sector, for instance, has been met with excitement and uncertainty at the same time. As the pandemic wars on, many governments and schools around the world continue to experiment with innovative ideas and strategies that will help sustain their educational systems (Govindarajan & Srivastava, 2020). The single most common innovative strategy adopted in education during the pandemic is the shift of teaching and learning from face-to-face to the online mode particularly in educational institutions where teaching and learning were conducted in the traditional face-to-face mode.

Virtual learning protects individual health and community safety, saves travel time, exposes students to new forms of learning, helps keep up with the original plan of the semester, gives learners extra time for self-study and provides easy access to online resources (Dung, 2020). Furthermore, virtual learning offers the convenience of time and space, has the capability of reaching a greater student population and draws the attention of a new group of digital learners (Barr & Miller, 2013). However, Murphy (2020) warned that removing face-to-face education from the realm of normal discourse would be a costly action to take.

Although there is a plethora of research on the use of digital technologies in teaching and learning, most of these studies have taken place outside the Ghanaian context (Akande et al., 2020; Hofmeister & Pilz, 2020; Mahmood et al., 2020). Even the studies that were conducted within the Ghanaian context had different foci. Darko-Adjei (2019), for example, examined the use and effects of the smartphone as a learning tool in distance education at the University of Ghana and found that the distance-learning students found it easy to use a smartphone in their academic activities and that enhanced their perceived usefulness of using a smartphone for learning activities. Gyamfi and Gyaase (2017) also assessed the effect of integrating ICT to teaching and learning in Universities on students' performance. The results showed a marked improvement in the students' performance. See also (Djan, & George, 2016; Fianu et al., 2020; Freeman et al., 2019; Larbi-Apau et al., 2018).

Prior to COVID-19, the mode of delivery of teaching and learning in the University of Ghana was primarily face-to-face. Like many other institutions of higher learning in the world, the once conventional university was compelled by the COVID-19 pandemic to migrate its teaching and learning activities to the online mode. The literature reveals that research on the coronavirus pandemic, its effects on education and strategies to deal with it abound in the international settings (Huang et al., 2020; Mohmmed et al., 2020; Murphy, 2020). However, studies that focus on COVID-19 and emergency education strategies within the Ghanaian context seem to be non-existent. This situation has led to a gap in our knowledge about the emergency remote learning tools that are available and students' knowledge of such tools in the University of Ghana. To fill this knowledge gap, this study investigated the level of knowledge of University of Ghana students about emergency remote learning during the COVID-19 pandemic. The aim was to determine the online teaching tools available in the University of Ghana and the level of knowledge of students about emergency remote learning. To achieve this aim, the following research questions were posed.

1. What emergency remote teaching and learning tools are available at the University of Ghana?
2. What is the level of knowledge of students about emergency remote learning?
3. What is the relationship between gender, knowledge and usage of emergency remote learning?

It is hoped that findings from this study might bring to the fore students' level of knowledge about emergency remote learning tools. This would be useful in

planning to meet the needs of every student and potentially lead to the achievement of the global and local goals on quality education as enshrined in the Sustainable Development Goal 4 (SDG 4).

Theoretical Framework and Empirical Studies

Conceptual Exploration

Online learning is the modern application of the distance learning/correspondence course model where a virtual learning environment is utilised to share recorded lectures and student resources (University of Essex, 2016). In online learning, teaching, learning, assignments and tests are all carried out on the Internet or through virtual means (Pop, 2020). Some researchers use online learning and e-learning interchangeably (Maseleno et al., 2018). In blended learning, learning is done both online and in physical classrooms. Blended learning is the combination of learning at a distance and learning that takes place on campus, in a classroom (Pop, 2020).

The origins of e-learning can be traced to the mid-1990s (Garrison, 2011). E-learning refers to the interaction that takes place between a student and a teacher online (Pop, 2020). The application of e-learning includes a computer-based learning as well as Web-based learning (Basak et al., 2018), and the contents can be transferred via Internet, intranet, video/audio tapes, CD-ROM, DVD and TV channels (Mohanna, 2015). Mobile learning is the use of handheld information technology devices such as personal digital assistants (PDAs), mobile phones and laptops in teaching and learning (Basak et al., 2018). It involves the use of a mobile device to teach (Crompton & Burke, 2018).

Emergency remote teaching (ERT) (Hodges et al., 2020), emergency remote learning (ERL) (Rahiem, 2020) or pandemic pedagogy (Hughes et al., 2020; Milman, 2020) is a form of education in which instructional delivery is temporarily moved from the face-to-face mode to a remote mode, because of a crisis or emergency. The primary objective is to provide continued teaching and learning in order to prevent learning loss due to an unforeseen circumstance. Experts insist that emergency remote teaching or learning is different from online learning because the former is only a stopgap or temporal measure aimed at mitigating the interruptions that emergencies might bring into the educational delivery process. The introduction of emergency remote learning and teaching during the coronavirus pandemic has become the new normal for most educational institutions. Different emergency remote learning strategies have been adopted by many educational authorities, and in Ghana, the use of both online teaching modes and other mediums such as radio and TV lessons have been instituted to help reduce the effect of the pandemic on student learning and academic achievements.

Personalised learning involves tailoring and pacing teaching to meet the needs and learning preferences of different learners so as to connect to the learners' interests and experiences and meet the needs, abilities and interests of every student through shaping curriculum and learning activities to the individual (Bartle, 2015). Personalised learning aims at creating an educational system that responds directly to the diverse needs of every individual rather than merely imposing a 'one size fits all' model on students (Bates, 2014; Williams, 2013). 'The "one size fits all" approach no longer works in education' (Jasute et al., 2016, p. 1078). The new normal has provided educators and learners with the opportunity to adjust their teaching and learning to fit the varied conditions and diversity in our societies. In places where access to Internet and other online learning tools is problematic, students are introduced to other forms of learning such as lessons on radio and TV.

Online Teaching and Learning Tools

There is a growing belief that digital technologies offer a more effective means of operating in higher education than the traditional university setup with its fixed buildings and estates, costly face-to-face procedures and arcane conventions of academic time, space, place and status (Selwyn, 2014). This belief may be responsible, at least in part, for the increased reliance on digital technologies in higher educational institutions. As the world of technology continues to see key advancements, the virtual learning space has welcomed newer and more effective tools for teaching and learning. The role of technology in education has thus become a key component in the instructional curricula of many institutions offering programmes in education (Allen & Seaman, 2006 as cited in Barr & Miller, 2013; Benta et al., 2014). A study by Baran et al. (2011) revealed that there is a gradual change in the roles of teachers and the nature of the teaching process because of ongoing trends in online education. The study which focused on the competencies of online teachers sought to provide a comprehensive outline of online teaching tools, approaches and methodologies, as captured in the literature.

Elsewhere, Son (2011) explored the need for a much wider awareness creation on potential online teaching and learning tools, especially within the writer's study scope: online tools for language teaching. Some key online teaching tools or platforms outlined by the researcher within categorised groups include Learning/content management systems (Blackboard, Drupal, Sakai, Joomla, and Moodle), Communication tools (yahoo messenger, Skype, TokBox, Windows Live Messenger), Live and virtual worlds (Elluminate, Livestream, OpenSimulator, ActiveWorlds) and so on. Newer online tools and frameworks for teaching and learning have been examined in several other studies. With the current trends of social media platforms like WhatsApp, YouTube and Facebook which provide the options of 'going live' with a discussion and having others join in 'real time', the place of social media in online education is further taking shape (Dlamiri, 2017; Fee, 2013;). Akande et al. (2020) revealed that Facebook Live, Google Classroom,

Web-based learning platforms, Zoom and Microsoft's Team are the topmost emerging technologies with which respondents were familiar, while the topmost social media platforms with which they were familiar are Facebook, Twitter, Instagram, WhatsApp, Telegram, Snapchat and YouTube. Earlier, Iqbal and Rehman (2016) explored the views of students about Facebook as an instructional tool in Lahore College for Women University (LCWU) and University of the Punjab (PU). The results showed that Facebook was an important online learning tool which is flexible in use and not time specific.

In another study to assess the pros and cons of using media applications like Zoom and Skype for teaching, Dharma et al. (2017) underscored the key roles these technological tools continue to play by providing options that allow teachers and students to engage in e-learning, in a similar fashion as the off-line learning systems. With integrated options such as the screen-sharing capabilities in Skype and Zoom, the use of presentations (PowerPoint) is easily enabled for effective teaching and learning. The onslaught of the current COVID-19 pandemic has, however, caused an exponential use of the Zoom application in particular, not only within the education sector but also across all other sectors of life and work (Clopper et al., 2020). Abidin and Saputro (2020) explored students' experiences in using Google Classroom as a mathematics learning space. The study revealed that Google Classroom has good potential to support students' learning as students could access the learning resources provided by the teacher at anytime and anywhere. During the COVID-19 lockdown and school closures, Google Classroom became one of the popular digital tools for online teaching and learning because of the flexibility and relative convenience it offers. It provides a virtual alternative to the traditional classroom.

Learning management systems (LMSs) are among the technological tools used in teaching and learning online. According to Srichanyachon (2014), a learning management system is a Web-based software application, which is designed and used to manage teaching and learning (content, student interaction, assessment, reports of learning progress and student activities). LMSs allow teachers and students to upload or download content, resources and assessment. There is an incontrovertibly endless list of LMSs. The popular ones include Moodle, Sakai, ATutor, Claroline, MyGuru2, MyLMS, Blackboard, SuccessFactors, SumTotal, Litmos, Angle learning, Geo learning, Cornerstone, Connect Edu, SAKAY, Digital Chalk, Docebo, SaaS LMS, TalentLMS, Firmwater LMS and Design2Leran (Chaubey & Bhattacharya, 2015; Kasim & Khalid, 2016). The role of LMSs in higher education cannot be underestimated. In a study to investigate the perceptions and use of the Sakai LMS among distance learning students of the University of Ghana, Darko-Adjei (2018) revealed that though there was a universal awareness of the Sakai LMS by the students, most of them said that they did not have the intention to use the Sakai LMS due to some perceived challenges.

Students' Knowledge About Online Teaching and Learning

Although the use of e-learning systems and tools is not a new phenomenon, it appears that the knowledge levels of many teachers and students remain low with respect to effectively engaging online learning frameworks. The obvious unfamiliarity of most students with online learning tools has been observed and associated with the key challenges (i.e. poor technical knowledge, low computer literacy, adaptability struggles) most of them face in trying to maximise the benefits of these virtual platforms (Kumar, 2015).

For example, Narh et al. (2019) found that poor computer skills, weak knowledge of Internet handles and the lack of effective time management skills were factors that constrained students' efficient use of e-learning platforms. Their study revealed that 70% (28) of the respondents sampled identified poor computer skills as a factor that inhibited their efficient use of e-learning platforms and systems. Sixty-five per cent (26) and 77.5% (31), respectively, of the respondents also identified weak knowledge of Internet handles and poor time management as a factor that hampered their efficient use of virtual learning platforms. This suggests a limited knowledge capacity of a good number of students concerning how to properly use virtual platforms like Sakai (a key virtual platform adopted by the University of Ghana, for instance) and other available platforms.

In contrast to the findings of Narh et al. (2019), however, Popovici and Mironou (2014) suggest that students are generally open to innovations within the e-learning space, as many more are 'digital natives and use technology as an integral part of their everyday lives' (p. 1518). The study which sought to explore students' perceptions of using eLearning technologies, further revealed that 98.11% of the 115 participants considered that they have 'a medium and advanced expertise in using a computer or laptop', while 96.52% declared the same level of expertise for Internet usage (search engines, e-mail, etc.).

Gulatee et al. (2018) also carried out a study on students' ownership of technology devices, their access to software and Web-based utilities and their related preferences. It included the devices that instructors use in the classroom, how students use online learning systems provided by the university and students' skill levels when using technology for learning. The aim was to provide a long-term comparative analysis across a Thai University to determine if students' and lecturers' use of technology for teaching and learning had changed. The findings indicate that although students used mobile devices (phones and tablets) to access online learning materials, overall, most students and staff lacked basic knowledge in using information technology for study purposes. In a different study, Hamzah et al. (2019) surveyed 247 users of MOOC from Universiti Teknologi Malaysia (UTM) in order to measure students' level of knowledge on the importance of the use of MOOC and its application in teaching and learning. The results showed that the level of knowledge, usage, acceptance and effectiveness was high among the students.

Methods

Based on the purpose of the study, the descriptive survey research design was chosen to investigate University of Ghana students' knowledge of online teaching and learning during the second semester of the 2019/2020 academic year when the University was forced to close down and move to emergency remote teaching and learning because of the COVID-19 pandemic. More specifically, the design was chosen to find answers to the research questions guiding the study.

The target population was all University of Ghana students. For the selection of our sample, the survey instrument which was designed by the researchers via Google doc forms was circulated to the various students' platforms, and a total of 265 undergraduate and postgraduate students, 142 (53.6%) females and 123 (46.4%) males, with a majority of the respondents 210 (79.2%) between the ages of 20–25 years completed it. The survey instrument consisted of three parts. The first part contained three items and was used to elicit students' background information. The second section had 15 items and was used to gather information about the different online teaching tools available at the University of Ghana. The third and final part consisted of 20 items, and these questions elicited students' views about their knowledge and usage of online learning and teaching tools.

The data collection process started when the University gave an official communique that the rest of the semester was to be conducted online using various online platforms but more specifically, the Sakai learning management system and Zoom. As highlighted earlier, a 38-item questionnaire was circulated to the various students' platforms for completion. After scrutinising the data for correctness and completeness, they were entered into SPSS version 21.0 and analysed using both descriptive (frequencies and percentages) and inferential (T-test) statistics. The Cronbach Alpha reliability estimate of the instrument was 0.71. Two main ethical considerations of anonymity and confidentiality were adhered to throughout the research process.

Results

RQ1: Online Teaching Tools Available at the University of Ghana

To answer this question, the participants were asked to indicate the level of the availability of 15 online teaching tools in the University of Ghana and the results is depicted in Table 1.

From Table 1, various online learning tools are available and used for teaching and learning during the period that the University was closed, and all lessons were conducted via virtual mode. Analysis of the results from Table 1 shows that four main learning tools were available and used during this period (i.e. Sakai LMS,

Table 1 Availability of Online Teaching Tools

Online learning tool	NA	NAw	SA	AA	Mean	SD
Sakai LMS	1.10	1.10	46	51.7	3.48	0.584
Kahoot	11.7	81.9	5.3	1.10	1.96	0.463
Zoom	3.0	5.70	55.1	36.2	3.25	1.694
Facebook	–	61.5	15.4	23.4	2.62	0.841
Twitter	23.8	44.2	11.3	20.8	2.29	1.049
Telegram	17.0	31.3	20.8	30.9	2.66	1.090
WhatsApp	7.20	–	21.9	70.9	3.65	0.698
Blackboard	26.0	61.1	4.50	8.30	1.95	0.799
Adobe Captive Prime	16.2	78.5	3.00	2.30	1.91	0.526
Moodle	19.2	80.8	–	–	1.81	0.395
Digital Chalk	–	95.1	2.30	2.60	2.08	0.351
Schoology	15.5	77.7	3.40	3.40	1.97	0.568
Google Classroom	17.7	33.2	30.6	18.5	2.5	0.989
Khan Academy	19.6	68.3	5.30	6.80	1.99	0.723
Talent LMS	18.2	75.8	3.00	3.00	1.91	0.570

NA Not available, *NAw* Not aware of it, *SA* Sometimes available, *AA* Always available

Zoom, Telegram and WhatsApp). Sakai was the most available and commonly used learning tool with an overwhelming majority (97.7%) of the respondents indicating that it was either sometimes or always available for teaching and learning. This was followed by Zoom, with about 91.3% of the respondents indicating that it was either always or sometimes available. This may be because the two tools were the official tools recommended by the University during the virtual learning period. In addition, an overwhelming majority (92.8%) of the respondents indicated that the WhatsApp learning tool was either always or sometimes available for learning. The possible reason for this may be the user-friendly nature of this tool or the accessibility of this learning tool. The analysis of the results suggests that the majority of these students are not familiar with the numerous online tools for learning. This can therefore be considered a great concern in our quest for becoming competitive in this era of technology and the presence of the pandemic, where all students are expected to use varied online learning tools to learn and develop an understanding of the concepts learnt. It is therefore imperative to introduce these students to the use of more online tools to help them to be able to compete at both the national and international levels.

RQ 2: Students' Knowledge and Usage of Online Learning Tools and Platforms

To find answers to this research question, the respondents were asked to indicate the extent to which they agree or disagree with 20 items. These items were further categorised into four main themes (access to a smartphone or computer, knowledge of

Table 2 Students' knowledge and usage of online learning tools and platforms

Statements	SA	A	U	D	SD	Mean	SD
Access to smartphone/computer (3 questions)	37	33.7	6.4	16.4	6.5	4.15	1.11
Knowledge of basic functions of a smartphone/computer (4 questions)	50.0	26.8	10.75	8.5	3.98	4.11	0.93
Knowledge of use smartphone/computer for e-mails, download documents and navigate Web pages (6 questions)	41.1	29.65	14.90	12.47	1.88	4.24	0.9
Attending classes online, join discussion forum and take tests and check results (7 questions)	30.29	46.1	12.5	7.54	3.57	3.98	0.95

SA Strongly agree, *A* Agree, *D* Disagree, *SD* Strongly disagree

Table 3 Relationship between sex, knowledge and usage of online learning

Gender	N	Mean	SD	df	t	*p*
Male	142	4.10	0.87	263	1.23	0.21
Female	123	3.91	1.02			

$P<0.05$

basic functions of the computer or smartphone, knowledge of how to use a smartphone/computer for e-mails, download documents and navigate Web page, and knowledge of how to join online class platforms, discussion forums and take tests). The result is presented in Tables 2 and 3.

From Table 2, it can be argued that the majority (70.7%) have either a smartphone or access to a computer to enable them to take part in the online learning process. However, it is worth noting that about 22.9% of these students have neither a smartphone nor a computer. Additionally, about 6.4% were of the view that they were not sure if they would have a smartphone or a computer for their online studies, and this could be a major concern for both the individual students and the University as a whole. Regarding knowledge of basic computer skills, a majority (76.8%) of the respondents ascribed positively to these statements suggesting that these students could actively participate in the online teaching-learning process. However, like the number of students who indicated that they did not have access to a smartphone or a computer, about 12.48% of the students indicated that they lack basic computing skills like save/open documents, shut down the computer properly and resolve common hardware or software problems.

With regard to students' knowledge of using a smartphone/computer for e-mails, download documents and navigate Web pages, about 76.8% of the students suggested that they know how to use their smartphones or computer to perform these functions. These are quite similar to the requirements for using most of the learning management systems like Sakai, which is used at the University. One can therefore argue that about 76.8% of these students are likely to participate in online teaching without any major challenges. It is therefore not surprising that almost the same percentage of students (76.30) indicated that they are able to attend classes online,

join the discussion forum, take tests and check results from the Sakai learning management system. However, about 12.48% of these students may not be able to take part in such online learning processes as they suggested that they have challenges using a smartphone or a computer for e-mails, download documents and navigate Web pages. Similarly, 11.11% of the respondents could not or had challenges taking part in online learning on Sakai, which is the University's official learning management system.

Apart from the respondents' level of agreement to the 20 statements, the researchers wanted to find out if there is any statistical difference between gender and knowledge and usage of online learning. The analysis of the results shows that although male students ascribed more positively to the statements, there was no statistical difference between the male and female students on their knowledge and usage of online learning platforms and tools (M = 4.10, SD = 0.87 and M = 3.91, SD = 1.02) [$t_{(263)} = 1.23$, $p = 0.21$].

Discussion

Online and blended learning have, over the years, become the new means of delivering different academic programmes especially now that most countries are striving to achieve the Sustainable Development Goal 4 (to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all). With the current global demand for new ways of delivering academic programmes in a distance mode because of the need for developing emergency educational strategies in response to the COVID-19 pandemic, examining students' knowledge and usage of different online learning tools is critical. The results from the study suggest that students are familiar with and use different online learning tools to help them learn. However, despite the use of the Sakai learning management system, which is the University of Ghana's official learning management system, Zoom and WhatsApp were the main learning tools and platforms that students used most during the virtual learning period. Over 90% of the students who took part in the present study indicated that these three tools were used to facilitate the teaching-learning process. Thus, they confirmed that Sakai is one of the key online teaching tools for learning/content management (Chaubey & Bhattacharya, 2015; Kasim & Khalid, 2016); Son, 2011) and contrasting sharply with the revelation by Darko-Adjei (2018) that students said they did not intend to use the Sakai LMS.

Zoom was also found to be among the topmost emerging technologies with which students are familiar (Akande et al., 2020; Clopper et al., 2020). The analyses of the results also suggest that the majority of these students are only familiar with limited online tools for learning during this period where the use of online learning has become the new normal. As highlighted by Patel et al. (2020), the current sudden shift from classroom-based learning to remote learning has had a significant effect on the use of educational technology, hence, the need to introduce students to

a variety of these online learning tools to equip them with the needed skills and competencies to be globally competitive.

Similar to the findings of Popovici and Mironou (2014) and Hamzah et al. (2019), the results from this study established that students know and use different online learning tools. This was evident from the results in Table 1 where the participants in almost all cases indicated that they had heard or used different online learning tools. It is worth noting that apart from the Sakai learning management system and Zoom, which were the official learning tools recommended by the University, students indicated that they were aware of other tools like Telegram, Google Classroom, among others. Akande et al. (2020) further support this finding, and Dharma et al. (2017) buttress the observation by Baran et al. (2011) that changes in the roles of teachers and the nature of the teaching process are taking place gradually. The finding, however, departs from those of Abidin and Saputro (2020) and Iqbal and Rehman (2016) who found Google Classroom and Facebook to be the popular virtual learning tools, respectively.

Contrary to the findings of Narh et al. (2019), the findings from this study revealed that an overwhelming majority (76.8%) of the respondents indicated that they had basic computer skills necessary to participate effectively in learning online. Narh et al. (2019) established that there are poor computer skills, weak knowledge of Internet handles and the lack of effective time management skills. Kumar (2015) also concluded that due to students' unfamiliarity with online learning tools, most of them would face challenges with virtual platforms. However, these findings are not supported by the present study as only 12.48% of the respondents indicated that they lacked the basic skills. This is not surprising because according to Popovici and Mironou (2014), most students would embrace innovations within the e-learning space and use technology as an integral part of their everyday lives.

In addition, as established by Gulatee et al. (2018), the findings from the present study show that although students use mobile devices (phones and tablets) to access online learning materials, some of these students might lack the competencies needed to engage effectively in online learning. This is evident from Table 2 where some 12.48% of the students indicated that they might not be able to take part in such online learning process as they had challenges using a smartphone or a computer for e-mails, download documents and navigate Web pages. In addition, 11.11% of the respondents could not or had challenges taking part in the online learning on Sakai, which is the University's official learning management system.

Recommendations and Limitations

From the earlier discussions, despite the challenges that some students may face in participating actively in online learning, it is important for the University to make use of different online tools to help improve the quality of instructional delivery. Therefore, it is recommended that leaders at the University of Ghana take a second look at reducing the number of face-to-face programmes and look for more

innovative ways of using the blended learning approach in delivering most of its programmes to increase access and provide equal opportunities. Despite the insightful findings from the study, the study is limited in some ways. One major limitation of the present study is the relatively small sample size used. The study was conducted in only one of the over 54 institutions of higher learning in Ghana. Although the sampling technique used increased the maximum variation of the study sample, the inclusion of more university's and institutions of higher learning would have provided value to the research by providing in-depth analysis of the issue under consideration from a more representative view which could be generalised to a larger population. This limitation, notwithstanding some of the findings from this study, support the findings of other researchers (Gulatee et al., 2018; Popovici & Mironou, 2014). Another limitation of this study is the issue of limited research in this area, especially within the Ghanaian context. The analysis and discussions were therefore done looking mainly at what other researchers from other countries have done with little or no comparison with studies within the Ghanaian context.

Conclusions

This study makes a distinct contribution to teaching and learning during the COVID-19 pandemic by examining and recording University of Ghana students' experiences and knowledge of emergency remote learning. As highlighted by Zhao (2020), the COVID-19 pandemic has given educators, educational authorities and all stakeholders in the education sector the opportunity to rethink the definition of education to focus on the 'what, how, and where of learning' as we try to make efforts to improve students' learning experiences in this new normal. As highlighted earlier, this study sought to investigate the emergency remote learning tools that were available to the students of University of Ghana during the emergency remote learning occasioned by the coronavirus pandemic, students' level of knowledge about these tools, and the relationship between gender, knowledge and usage of the emergency remote learning tools. The findings indicate that the University of Ghana deployed several tools during the virtual learning period. Most students were familiar with and used those tools for learning virtually. The three topmost tools that were available and used by the students to learn are Sakai LMS, Zoom and WhatsApp. In addition, only 12.48% of the participants indicated that they lacked the technical knowhow to learn online. Finally, it was established that there is no statistically significant difference between males and females in their knowledge of emergency remote learning tools. Based on these findings, some directions for future research have been proffered, and some limitations were identified to guide users of the results.

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Emergency Remote Educational Challenges During COVID-19: The Case of Secondary Education Teachers in Greece

Panagiota Samioti

Introduction

In March 2020, 87.4% of the global enrolled learners and over a billion and a half young people in 181 countries were forced to abruptly move to emergency remote learning due to COVID-19 pandemic (European Schoolnet, 2020a; Raluca et al., 2020). In these unprecedented times, teachers, instructors and professors were the first to undertake tasks during the shifting in delivery mode (Doucet et al., 2020; Hodges et al., 2020) and the ones to make the best decisions for their students. However, online education in such circumstances, defined as "emergency remote teaching", differs significantly from a high-quality online education offered in non-emergency conditions (Hodges et al., 2020), and, as no time was granted for a smooth transition to the online educational context, teachers were faced with a totally new and difficult experience.

Given that remote emergency education remains an "uncharted territory" (European Schoolnet, 2020b), this small-scale case study with a qualitative research design aims to fill the current research gap by exploring the difficulties Greek secondary school teachers encountered during the lockdown period. However, as every problem can be an opportunity in disguise, this research also considers some possible future changes which may be able to transform the emergency remote teaching into effective online/distance education after the pandemic.

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Background to the Study

Greek Education System

The Greek education system is under the central responsibility and supervision of the Ministry of Education, Research and Religious Affairs (MofERRA). Compulsory education consists of primary education (*Demotiko*), which lasts 6 years, and lower Secondary Education (*Gymnasium*), which lasts 3 years. Non-compulsory Upper Secondary Education lasts 3 years (OECD, 2018). Students who want to pursue tertiary education take the Panhellenic (Greek) National exams, which give access to the higher education institutions (HEIs) (OECD, 2018). Given the geographical conditions on the islands and in mountainous areas, most schools are small with a few students (European Commission/EACEA/Eurydice, 2019). More specifically, according to the 2017 statistical data, one-third (34%) of schools were in large urban cities, while the rest of them were sparsely distributed in rural or semi-urban areas (OECD, 2018).

Digital Platforms and Technical Support

In Greece, the main supporting body for the digital education at schools is the Computer Technology Institute and Press "Diophantus", which supports the organization and operation of the electronic infrastructure of the MofERRA, the schools and other educational actors (European Commission/EACEA/Eurydice, 2019). Additionally, the IT and the New Technologies Coordinators, who are based on the regional support and educational planning centres (PEKESES/PEKES) (Regional Directorate of Primary and Secondary Education of Crete, 2020), are responsible for providing technical support and implementing traditional and new technologies in school units and laboratories (Agency, 2020).

During the lockdown period, training seminars were conducted by the PEKESES or the Educational Work Coordinators within them, who have the scientific responsibility of all the teachers in their scientific subject (*Regional Center for Educational Planning of Western Greece*, n.d.). Finally, there are various educational material portals certified by the Ministry of Education, which are available for the teachers at schools (i.e. *www.e-yliko.gr*, *http://dschool.edu.gr*, *Photodentro* (European Commission/EACEA/Eurydice, 2019)).

Teachers' In-Service Training in Information and Communication Technologies (ICTs)

There have been two stages of the ICTs in-service training provided by the Greek MofERRA. The first one (*A-level training*), which included training in technical skills, was widespread and many secondary school teachers attended this training. The second stage, which is still in progress, is the continuation of an older respective project *B-Level In-Service Training* completed in 2008 and aims to "familiarize teachers with appropriate educational software and the skills to adopt/integrate ICT in their everyday teaching practices" (Nikolopoulou & Gialamas, 2016, p. 63). However, not too many teachers have attended B-level training so far (YPEPTH, 2012, cited in Nikolopoulou & Gialamas, 2016).

Literature Review

Distance/Online Learning and Emergency Remote Education

Distance learning in this research, follows Schlosser and Simonson's (2009) definition, which is "institution-based, formal education, where the learning group is separated, and where interactive telecommunication systems are used to connect learners, resources, and instructors" (p. 1). Related terms to distance learning, but not identical, are online learning, E-learning, virtual schooling. For the purposes of this study, online and distance learning/education will be used interchangeably for both synchronous and asynchronous delivery mode.

Emergency remote teaching (ERT) is different from distance learning, as, according to Hodges et al. (2020), "it is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances" (para. 13). This means that the delivery mode will return to face-to-face classes after the crisis since the main aim of the remote emergency learning is to ensure that everyone would have access to education during an emergency.

Barriers to Distance Learning

Emergency remote education under the circumstances of a pandemic is a new phenomenon with a limited number of previous studies. However, it is obvious that one striking similarity between distance and remote emergency education is the delivery mode, which, in both cases, is via interactive telecommunication systems with the learning group physically separate. Therefore, in this research, it is expected that some of the challenges faced by the teachers during emergency remote education would be the same as the ones that occur in a distance education context.

According to Galusha's (1997) classification, challenges regarding the distance education may concern students, teachers and the organization. Some of the challenges students face are lack of social interaction, lack of motivation, lack of feedback and poor provision of student support and services. They also suffer from alienation and isolation, accessibility issues and lack of skills in relation to distance learning (Assareh & Hosseini Bidokht, 2011; Becker et al., 2013; Galusha, 1997; Kaya & Önder, 2002 in Hebebci et al., 2020; Muilenburg & Berge, 2001). On the other hand, barriers related to the teachers are the lack of teachers' experience and technical expertise, the lack of support for distance learning, faculty compensation and time (Galusha, 1997; Muilenburg & Berge, 2001). The lack of professional training has, also, been reported since "for decades, scholars have pointed out that educators have been "ill-prepared to teach with technology" (Foulger et al., 2017, p. 418). Moreover, impediments relevant to the organization are poor infrastructure, technical problems and administrative and legal issues (Galusha, 1997; Muilenburg & Berge, 2001). More specifically, the lack of management or administrative support is mentioned as a common obstacle in the online education (Becker et al., 2013). In the Greek educational context, Nikolopoulou and Gialamas (2016) noted that the three main barriers to online education are the "lack of confidence", "lack of equipment" and the "lack of support" (Nikolopoulou & Gialamas, 2016, p.59).

Research Method

Research Methodology

This is a small-scale case study with no conclusive results, which aims to explore the phenomenon of emergency remote education "within its real-life context" (Yin, 2009, p.14) by following a qualitative methodology. More specifically, the current study aims to answer the main question – "What are the challenges that Greek Secondary Education teachers encountered during the first wave of the COVID-19 pandemic?" – with the following sub-questions:

- How did Greek Secondary Education teachers view distance and emergency remote teaching and learning?
- What are the challenges the teachers faced during the implementation of emergency remote education?

In order to ensure adherence to ethics, a specific agreement process was carried out during which the participants were informed about the purpose of the research, the research procedure to be followed, its risks and benefits as well as the procedures used to protect anonymity and confidentiality. The voluntary nature of the research participation was also noted. All the participants gave their informed consent to be interviewed and for their responses and quotes to be used in this study with the knowledge that findings would be reported cumulatively.

The participants were chosen by the method of purposeful sampling (Elo et al., 2014; Patton, 2002), following the criterion of the best knowledge and experience regarding teaching in Secondary Education and of the use of emergency remote education. More specifically, 17 mostly experienced (70% had more than 10 years in-service) Secondary Education teachers from various geographical areas in Greece participated in the research. They taught various subjects online, either synchronously or asynchronously, during the lockdown period. The participants were recruited from the past professional environment of the researcher, who had no close personal or professional relationships with them at the time of the research. Due to the COVID-19 pandemic and the social distances measures taken during the lockdown period, the semi-structured interviews were conducted online during the second week of May 2020, including questions pertaining to the obstacles the teachers encountered while teaching online during the period of COVID-19 pandemic.

Data Analysis Process

Emergency remote education under the circumstances of a pandemic is a new phenomenon with a limited number of previous studies addressing it at the time the research was conducted. Therefore, to analyse the data, an inductive content analysis (Elo & Kyngäs, 2008) was carried out with no preconceived categories formed. Rather, the categories flowed from the data. The data analysis process focused on the manifest content "in order to organize large amounts of text into categories" (Kleinheksel et al., 2020, p. 128), in order to "answer the questions *who*, *what*, *when* or *where*" (Erlingsson & Brysiewicz, 2017, p.96).

Following Creswell's (2014) six-step approach, there was a data transcription stage in a Microsoft Word sheet, which were then analysed by hand. The data were read word by word to derive codes by highlighting the exact words from the text. To better visualize the data, the researcher gradually transferred the transcripts from Microsoft Word to Excel spreadsheet – "in vivo codes" (Creswell, 2014, p. 244). Next, the captured key thoughts or concepts were labelled so that a coding occurred. Finally, the researcher linked and grouped the codes into larger categories "by examining codes that the participants discuss most frequently" (Creswell, 2014, p.245), which were, finally, grouped into larger clusters.

Trustworthiness

The trustworthiness of the content analysis has been ensured by following Elo et al.'s (2014) checklist of questions during all the phases of the research (i.e., preparation, organization, reporting). Additionally, the questions were both open- and closed-ended to extract data for the intended purpose (i.e., about the obstacles they encountered while teaching online during the period of COVID-19 pandemic). During the interviews, further questions were posed to clarify any points, such as

"what do you mean?", with special attention paid not to influence the participants' answers in any way (Elo et al., 2014).

The researcher's self-evaluation and self-monitoring was constant during the whole process of the data collection process to avoid any bias and ensure trustworthiness. Furthermore, to minimize subjective interpretation of the data as much as possible, the researcher was fully aware of her assumptions and expectations regarding the findings by recording them before starting the analysis process. At the end of the data analysis process, these notes were crosschecked with the final categories found to examine if and how the researcher's assumptions and expectations had influenced the data analysis process. Finally, to increase credibility, during the data analysis period, there was a coding/recoding procedure within an interval of 1 week.

Findings

Demographics

Seventeen Secondary Education teachers participated in the research, with some of them teaching in more than one school at the time of the research. More specifically, the participants taught in 6 lower secondary education and 14 senior high secondary education schools. In terms of the geographical distribution, the schools were situated in rural (8), urban (4) and semi-rural (8) areas, with nine of them being small (50-150 students), eight medium (150-300 students) and three large (300-400 students). Most of the participants (70%) were experienced teachers with more than 10 years in service. The participants' ages ranged from 35 to 55 years, and half of them were married with children.

Most of the participants were ICT teachers (Table 1).

Apart from one, all had a formal qualification in ICT in general or in education (Table 2).

As soon as the schools closed due to COVID-19, teachers were asked on a voluntary basis to deliver online lessons to support the students. All participants were involved in the asynchronous distance education, with 12 of them also delivering synchronous online sessions. During the lockdown period, the participants used a

Table 1 Teachers' specialization

Participants	Subjects
9	Greek Language/Literature
3	Science
2	Maths
1	English
1	Physical Education
1	ICT

Table 2 Qualifications in ICTs

Participants	Qualifications
1	No qualification
2	ECDL (general)
7	A-Level in-service training (education specific)
5	B-Level in-service training (education specific)
1	Master's in learning technologies (education specific)
1	Bachelor in ICTs

variety of LMSs and online tools while engaging in emergency remote education, all suggested by the Ministry of Education, such as the asynchronous digital platforms (i.e. *E-class, E-me*), along with the *WebEx* platform for the synchronous online sessions.

Obstacles and Challenges During the Pandemic

As shown in Table 3, there is one major challenge presented by all the participants, which is relevant to the lack of personal communication and interaction with the students. This specific issue was particularly linked to the problems caused by the online delivery mode. The rest of the obstacles identified by the participants are relevant either to the students or to the teachers, or they are linked to organizational issues. Table 3 shows that the most common challenges presented are the lack of personal communication with the students (all the participants), the lack of equipment and Internet (13 out of 17), students' low participation (13 out of 17) and the lack of teachers' training regarding the online education (11 out of 17).

Lack of Personal Communication and Interaction with the Students

All the participants believed that there were problems in personal communication and interaction with the students. Participants indicated that personal communication is easier to maintain in the face-to-face classroom when there is eye contact (P2, P4, P8, P10, P11, P13, P14, P15). Additionally, they stated that emotions are better expressed in face-to-face lessons than online (P1, P3, P14, P17). The lack of "visual" and "personal" contact was a recurring theme among the participants. Participants also stated that they felt that the face-to-face lesson flows easier than online since the communication between students and teachers is more "direct" (P11, P13). Most notably, P11 stated:

Table 3 Obstacles and challenges

Codes	Categories
See, visual/eye contact Directly/direct communication/contact (Inter)personal communication	Lack of personal communication and interaction with the students (all the participants)
Bored, speak, respond, motivated, homework, feedback	**Students' issues** Low participation and interaction (P2, P4, P5, P6, P7, P8, P9, P11, P12, P13, P14, P16, P17)
Internet usage, skills, experience(d)	Lack of online skills (P2, P8, P15, P16)
Experience(d)/inexperienced, training	**Teachers' issues** Lack of knowledge and training (P1, P3, P4, P5, P6, P10, P11, P13, P14, P16, P17).
Work, overloaded, (extra)time	Workload (P11, P13, P14, P15, P16, P17)
Manage, control, check, hold accountable	Lack of control (P5, P9, P10, P13, P17)
Technical equipment, problems, Internet, computer, mobile	**Organizational issues** Lack of equipment and unreliable internet (P1, P2, P3, P7, P8, P9, P10, P11, P13, P14, P15, P16, P17)
Personal data, legal framework	Personal data issues (P2, P3, P12, P13, P14, P15, P16, P17)
Organization, guidelines, instructions, policy, Ministry of Education	Unclear or no governmental directives (P5, P9, P11, P12, P15)
Problems, support	Lack of support (P1, P4, P7, P14)

> *One of the disadvantages regarding distance education is that in general it does not promote direct communication with the students, even if you can see them (during the synchronous sessions) on camera. Asynchronous sessions are even worse. But even synchronous online education cannot replace face-to-face classes.*

Two of the participants mentioned problems relevant to the specific context of emergency remote education, in which there was minimum personal contact and interaction with the students because the teachers felt they had to follow the Ministry of Education suggestions to keep the cameras off (P4, P13).

Students' Issues

Students' Low Participation and Interaction

The lack of students' participation in both the synchronous and the asynchronous classes was a recurring topic in most of the participants' responses. It is worth noting that only one participant explicitly expressed his/her satisfaction with the students' participation (P10). Teachers noted that, while the students were enthusiastic about attending the lessons at the beginning of the lockdown period, after some time they stopped joining the synchronous online classes, with the attendance rate being lowered to only one-third of the students (P4, P6, P8, P11, P12, P13). The teachers also expressed their dissatisfaction about the efforts they needed to make in order to motivate students during the synchronous online sessions (P2, P4, P11), and they stated that the lack of students' interaction and feedback caused important difficulties in their teaching practice.

The teachers believed that the main reason for this was the fact that emergency remote education was not obligatory (P4, P5, P9, P13, P16, P17). The participants also mentioned that, according to the Ministry of Education guidelines, they were not allowed to teach new content, but only revise what the students had already been taught in class, which resulted in the students becoming bored (P4, P7). In addition, the teachers felt that the students were not responsive even when they were present during the synchronous classes (P5, P11, P17). They indicated that there was a lack of response because the students were not familiar with the online delivery mode, they lacked the necessary technical knowledge or they felt too embarrassed to engage with the lesson. Therefore, in some cases, even students who were responsive in the face-to-face classes were not willing to participate online (P12, P16).

> *The students are bored.* (P2)
>
> *What I miss are the students' responses. They don't speak at all… I wait for them to turn on their camera, but they don't….I think that the students are indifferent…they rarely attend the lesson or they enter the online class but they don't speak.* (P4)
>
> *The students are not easily motivated.* (P5)

According to the teachers, students' responses in the lower levels of Senior High School or Gymnasium were also low. However, as teachers argued, the final year students' attendance in face-to-face and online classes was equivalent (P6, P9, P14). More specifically, the participants indicated that the final year students preferred private lessons or studying intensively by themselves to prepare for the final university entrance exams (P7, P11, P13, P14).

Students' Online Skills

Five of the participants noted that students do not know how to use computers and online tools for educational purposes. For example, they said that the students did not know how to search for specific information to be used in an assignment (P14).

They added that students did not know how to write their texts by using digital tools (P2, P8), or how to use the platforms to communicate with their teachers and upload their homework (P15, P16).

Teachers' Issues

Teachers' Training and Knowledge

The results from this research show that, even though the teachers held formal qualifications in ICTs, they did not feel confident enough to use them during the lockdown period. In addition, there was the view amongst the interviewees that many teachers did not know how to use the synchronous platform Webex (P1, P3, P11). This may be related to the feelings of anxiety and distress that five of the participants expressed because they were not sure if the synchronous sessions would be successful and interesting for the students (P4, P13, P14, P16, P17). In addition, the feeling of uncertainty was linked to a feeling of insecurity mainly caused to the participants because they did not feel sure that they were able to effectively implement online teaching practices (P7).

The lack and the necessity of training was a recurring topic amongst the participants (P1, P3, P5, P6, P10, P14, P16, P17). Even though it was stated that there were some attempts by the Regional Education Centers to provide a fast-track training regarding the platforms, it was noted that these were held late, after the second week of the lockdown, when the teachers had already started their synchronous sessions with the students (P14). A further obstacle regarding the fast-track training was that not all the teachers had the same level of technical knowledge, and that the provided training courses were either too difficult or too easy for them to attend (P3, P4).

If there was training, the synchronous distance education would have been better. (P1)

I feel uncertain because there is no training with a suggested integrated framework to follow. As a result, I created a lesson on my own way without following any specifications. (P3)

Not every teacher is familiarized with the online educational tools or platforms. As a result, they chose not to carry out synchronous online lessons. A fast-track training by the Ministry of Education, the one of 15 hours that had been announced, may have been a solution to the problem. (P5)

The training is essential. The fact that somebody knows to use the tools does not mean that they use it pedagogically in the right way. It is not distance education to just upload a scanned pdf to E-class. (P6)

The Ministry of Education could have provided some training to those with no knowledge, especially to teachers over 55 years old who encountered difficulties in carrying out distance education and chose not to do anything. (P10)

I had no experience regarding distance education and there was no training before I started the synchronous sessions. When I started (the synchronous sessions), I did not know how to coordinate everything and everyone. I did not even know how the microphones worked. …After the first session, I was desperate. (P14)

It (remote emergency education) was very sudden, and we did not know anything. It was like you don't know anything about cooking and you are asked to get into the kitchen and

cook a meal. Training is necessary first for the teachers to acquire a level of knowledge and then to the students who should also be gradually trained. (P16)

I feel anxious, stressed and insecure because not all the teachers are on the same starting point regarding the knowledge of distance teaching. Training could solve this problem. (P17)

Workload

The extra time that the teachers needed to create their educational materials was also considered a problem. The findings revealed that, even though there was an abundance of online resources and materials to be used for each subject, these were not always appropriate for the level or the students' specific needs (P13, P16). Furthermore, two participants (P14, P17) noted that they had to adapt their materials so that they were functional for the new online teaching mode, by digitalizing them or by adding more detailed instructions and guidelines for the students who would access the assignments asynchronously on their own without the teacher being present. Moreover, one participant (P15) said that it was necessary to update all the materials he/she already used in class or online and to make them accessible to the students who would use mobile phones. In addition, P17 felt that, as it took him/her much time to search the internet for material, he/she preferred to adapt his/her own. Finally, P11 said that, especially at the beginning of the lockdown, there was an overload with emails and administrative school documents, which caused him/her anxiety, along with the abundance of online information related to the materials, which were difficult to be filtered and organized for his/her teaching purposes.

Lack of Control

Participants stated that during online teaching, they could not check whether the students were attending the lesson carefully or if they were involved in other activities at the same time (e.g. *just walking out their dog*, P17). On the contrary, during the face-to-face lessons, teachers felt that they had more control of what the students are doing (P5, P9, P10, P13, P17).

I feel that I can't lead the lesson in the direction I want, that I can't manage the situation and control the lesson. (P5)

There were problems that I could not control myself. For example, there was a period that I was not allowed to demand anything from the students. I could not check if the students had been doing their work or not as I did not have any visual contact. (P9)

Of course, students may have their computer on, but they may also be asleep. So, I can't control what the students do while we have a lesson. Apart from the lack of feedback, there is also a lack of control. (P10)

I cannot hold students accountable for submitting their work. I can't control what the students do while we are having a lesson. They may surf the internet or they may be doing something else. (P13)

Organizational Issues

Lack of Equipment and Unreliable Internet

Participants argued that one of the most significant challenges was the lack of equipment (e.g. computers) and reliable high-speed Internet. For example, it was noted that in many, mainly remote and rural, areas not only the students but also the teachers either did not have any access to the Internet or they had slow Internet speed and unstable Internet connections (P1, P2, P8, P9, P11, P13, P15, P16, P17). Consequently, it was difficult for both the teachers and the students to communicate, especially during the synchronous online sessions, since the cameras remained off due to poor Internet connection. Moreover, due to unreliable Internet, there were technical issues, and students could not use their microphones to speak and participate in the lesson (P9). In addition, due to technical problems, the web pages or the synchronous platform crashed (P10). These problems can also be associated with the communication and the interaction difficulties that all the participants agreed existed during emergency remote education.

One more practical issue identified by the participants in this research was that many children did not own computers as they were coming from poor families and they used their mobiles instead, which, nevertheless, were of old technology (P1, P3, P7, P8, P14, P15, P16). Therefore, according to the participants, it was not possible for them to carry out the assigned activities, either synchronously or asynchronously, since some of the platforms' applications were not compatible with the mobile operating system. Moreover, some teachers stated that in the cases where more than one member of the family needed to have access to the home computer for educational purposes, it was difficult for both the students and the teachers to participate in the synchronous sessions at the same time (P14). This resulted in increasing the feelings of anxiety, as P13 noted, because his/her two children also needed a computer for their synchronous sessions and there were not enough computers at home.

Personal Data Issues

Seven participants stated that personal data issues make them anxious (P2, P12, P13, P14, P15, P16, P17). For example, two participants noted that their anxiety was linked to the fact that if something went wrong there was no legal framework to protect both the teachers and the students (P2, P12). Furthermore, three participants described cases during the synchronous sessions when the students had violated the teachers' or other students' personal data (P3, P12, P16). Furthermore, P15 emphatically stated that the Ministry of Education did not take any measures to protect the students and the teachers or to make them aware of how important the personal data issues are. Moreover, P12 suggested that the Greek Ministry of Education could have followed the process that the Ministry of Education in Cyprus had

implemented regarding the personal data issue by having cameras deactivated during the synchronous sessions by default. Finally, some participants felt that they could not control who else may have been present during the lesson apart from the students (P13).

Unclear or No Governmental Directives

Some participants stated that emergency remote education was not very well organized by the Ministry of Education, especially during the first weeks of the lockdown. For example, it was argued that the guidelines of what to teach or which platform to use were not very clear. Moreover, there was a lack of instructions regarding personal data laws or how to organize the online materials (P5, P9, P11, P12, P15).

> *We were called to do administrative work, which could have been organised centrally by the Ministry of Education. For example, we were asked to gather the students' email addresses, register them on the network and send them email invitations to enter the platform. We wasted much of the time and effort to do it, while it could have been done by the Ministry (of Education).* (P5)
>
> *The most important thing is that there was not a collective organizational effort at a school level. For example, there could have been a common platform for the teachers to upload and share their material. However, this may not have been so easy to be created due to the emergency nature of online education. In general, I could say that remote emergency education was not well-organised. It was more an effort of necessity in an emergency. That is, we could say that we mostly adapted ourselves to a new situation which was not a well-organized effort and we did this without following a specific way*. (P9)
>
> *We knew what platforms the suggested ones by the Ministry of Education were, but there were no specific directions of how to use them.* (P11)
>
> *The remote emergency education should have been better organized. The Ministry of Education just said: "Do online lessons" and that was all. … I feel afraid because there is a general sloppiness displayed and there is no coordination.* (P12)
>
> *There was a lack of agreement regarding the policies to be followed. As a result, we could not do our job and the students could not handle it.* (P15)

Lack of Technical Support

Some of the participants mentioned the lack of technical support. For example, one participant noted that the most common technical help the teachers received was the platform's manual sent by email (P1), which, however, was not very useful to them. Additionally, GSN's helpdesk was overloaded and unable to respond to teachers' individual requests for help (P4). On the other hand, one participant felt that it was very helpful when the school's principal was actively engaged in providing technical support (P14) or when the educational work coordinator organized training sessions for a specific group of schools or teachers specialized in a specific subject (P4, P7).

Discussion

All the challenges faced by the participants during the pandemic are the same as the ones identified in the distance education research, apart from the teachers' feeling that they cannot control the students' learning. More specifically, the lack of social interaction, the unmotivated students, students' accessibility issues and students' lack of skills in relation to distance learning have also been substantiated in the literature (Assareh & Hosseini Bidokht, 2011; Becker et al., 2013; Galusha, 1997; Kaya & Önder, 2002 in Hebebci et al., 2020; Muilenburg & Berge, 2001). The same holds true for the teachers' issues, such as the lack of teachers' training and support for distance learning, the teachers' heavy workload and the lack of technical expertise (Galusha, 1997; Muilenburg & Berge, 2001; Foulger et al., 2017). Regarding the organizational issues, the poor infrastructure and the technology-related problems were particularly noted by the participants, agreeing with Nikolopoulou and Gialamas' (2016) findings. They identified the "lack of equipment" as one of the major problems in the Greek online educational context. The administrative and legal issues have been identified in the distance education literature (Galusha, 1997; Muilenburg & Berge, 2001). However, some of those presented by the participants are specifically linked to the emergency aspect of teaching, such as the lack of legal framework regarding the personal data and the lack of specific curriculum directions and guidelines.

Findings Within the Context of the Remote Emergency Education Worldwide

Most of the difficulties encountered by the participants in this research were also faced by the teachers worldwide during the first wave of COVID-19. For instance, the lack of communication and interaction between the teachers and the students was also faced by teachers in other countries, and it was linked to "low participation, lack of communication and connection problems" (Arora & Srinivasan, 2020, cited in Hebebci et al., 2020, p.279). Furthermore, the problem of the lack of equipment and Internet reported in the present research confirms the view that in emergency settings there is often a lack of "typical services provided by schools, such as IEP providers and supports" or "lack of electrical power, access to technology or reliable Internet" (Rush et al., 2016, cited in Trust & Whalen, 2020, p.194). It is noteworthy that participants linked the lack of equipment and reliable internet connection to accessibility issues, especially in rural or poorer areas. This has been particularly stressed in the literature as one of the main constraints that students may encounter in a crisis period, especially in low-income countries (Raluca et al., 2020). Similar accessibility issues due to poverty were also identified as a problem by teachers in other countries such as Turkey (Hebebci et al., 2020) and the USA (Stelitano et al., 2020).

The United Nations (2020) stresses that teachers' lack of preparation, training and support create additional stressors and barriers to teaching remotely, as, also, reported by the participants in this research. The same holds for the teachers in a research carried out in China during the pandemic, who stated that "they were not well-prepared for teaching online" (Zhang, 2020, p.8) or "that they felt powerless in classroom management or poor-prepared for remote teaching" (Zhang, 2020, p.10). In addition, in a research conducted by Trust and Whalen (2020) during the COVID-19 outbreak in the USA, one of the difficulties identified was the lack of teachers' knowledge about online/remote teaching strategies or tools. In the same research, it was particularly noted that the most important obstacle to the successful online teaching in such an emergency was that the teachers were not appropriately trained, educated or supported to design a high-quality instruction, which caused additional stress to them (Trust & Whalen, 2020). Apart from the lack of sufficient teacher training, the present research revealed that there was a gap in teachers' knowledge which has been foreseen by the literature as a possible problem at a time of crisis (Raluca et al., 2020).

Another challenge faced by the participants in this research was that they could not hold students accountable. Similar problems occurred during emergency remote education in other countries, such as in China, where the teachers felt that "it was hard to monitor students in remote learning" and "some students pushed back against learning in a remote mode such as silence or "disappearance" in-class interactions with teachers and other students" (Zhang, 2020, p.8). Similarly, in the USA "the most common response from teachers was that they lacked the ability to hold students accountable" (Marshall et al., 2020, p.5). Finally, the present research reveals some concerns or difficulties faced by the teachers, which were not widely found in other countries, such as the personal data issues, teachers' workload, problems caused by the unclear or no governmental directives and the lack of students' online skills.

Implications and Suggestions

The findings of this research have made visible the difficulties that teachers encountered during emergency remote education, which are the same as the ones existing in the distance education. Therefore, policies and practices should be implemented to ensure that distance education in Greece would be effectively carried out in the future in any situation, emergency or non-emergency. Regarding the communication problems, which resulted in difficulties in the interaction between the teachers and the students, the provision of internet access and devices to both the teachers and the students is of great significance. As any education policy should be based on the principles of equity and inclusion during a crisis (Bozkurt & Sharma, 2020; United Nations, 2020), the Ministry of Education should invest more in ensuring that all the stakeholders (i.e. teachers, students, schools) have access to ICT equipment and the Internet. To avoid accessibility issues, especially in very poor areas, a

suggested solution is for the government to "seek innovative options to help teachers provide good instruction even when internet access is not possible" (Stelitano et al., 2020, p.7). If emergency remote teaching becomes mandatory for both the students and the teachers, accessibility issues should be taken into consideration. By fostering communication and interaction, students' engagement could be enhanced and teachers would be able to provide more support (Jelińska & Paradowski, 2021).

Professional training regarding distance education should also be provided to all the teachers to minimize the knowledge gap, a solution also suggested in other countries (König et al., 2020). However, as suggested by the United Nations (2020):

> more important than training teachers in ICT skills, is ensuring that they have the assessment and pedagogical skills to meet students at their level and to implement the accelerated curricula and differentiated learning strategies likely to emerge in the return to school. (p.23)

Moreover, the findings in this research suggest that the formal ICTs qualifications and their training before the pandemic did not help the teachers to be confident in implementing effective online teaching during the lockdown. This means that a pedagogical transition is necessary which would be achieved via a change in the online culture of the teachers. Therefore, training courses should be offered with a focus on familiarizing teachers with their new teaching roles and with pedagogical practices more appropriate for the online educational context so that they can "redesign learning towards a constructivist approach" (Redmond, 2011, p. 1052). Finally, practices and policies which promote blended learning should be implemented after the crisis so that both teachers and students would develop positive attitudes towards distance learning. This could be achieved if the subject of ICTs taught at school is upgraded so that the students acquire the necessary online learning skills and change their online culture, as suggested by P15.

Furthermore, solutions suggested in other countries for similar problems might also be implemented in Greece. For example, the unclear governmental directions or the lack of central organization could have been dealt with by investing more in "equipping schools with a standardized online teaching/learning management system and online resources" (Zhang, 2020, p.12). Overall, the involvement of all the education stakeholders is necessary for the design and implementation of a "clear and consistent plan" within an "evaluated and monitored framework" "to ensure consistency, learning and achievement" (Vlachopoulos, 2020, p.17). For this plan to be created, research should be conducted after the schools open so that the necessary data are gathered to "diagnose and treat learning gaps that have emerged during the crisis" (Raluca et al., 2020, p.7).

Limitations of the Study and Further Research

As already mentioned, this is a qualitative small-scale case study with non-conclusive results. Even though it was shown that the findings are similar to other studies' results worldwide, they are not generalizable. Therefore, future quantitative research with more participants should be carried out to substantiate the present findings. Students' responses and their interaction could justify the significance of

the specific problems. Other issues could also be researched which are associated with the challenges teachers encountered such as their feelings due to the pandemic and how these feelings influence their teaching during emergency remote education. Finally, the teachers' views regarding the lack of control in the online classroom could be further investigated within the Greek educational context, as it seems that it has not been widely researched in the distance education literature.

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Student Internships: COVID-19 Implications and Recommendations for Higher Education

Lori A. Slater and Kevin A. Cojanu

Introduction

We are experiencing a global pandemic that has had an enormous effect on the global economy. These impacts are extensive and have forced business, industry, and education to rethink how to work and deliver education. The challenges directly affect processes, supply chains, and people with the knowledge required to provide these systems to our global economy. The education system is globally affected in a similar more profound way as traditional delivery systems are no longer effective in educating K12 and college level (Bâcă, 2020). The impact to these systems comes from the domino effect of teachers unable or unwilling to expand their learning to increase their knowledge of delivery system methods; delivering needed educational components and keeping the necessary knowledge and competencies flowing to maintain the worker supply chain supported with the necessary knowledge and competencies of real-world expertise.

Changing the educational system by force due to the pandemic caused a decline in forward growth which, in turn, caused a regression resulting in reduced budgets and a plan based on an "it will get better soon" methodology from administrators and educators. Kumar and Pathak (2020) indicated that the expectation of educational organizations in India was that the pandemic was a blip and would soon pass with normal methods returning. This was and is the common view of a system in need of reform to effectively grow our future.

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The impact of COVID-19 has created a knowledge void in the education industry's ability to provide meaningful and productive education systems. In many instances, the K12 systems have been obstructed as virtual learning in these systems is not practiced. As the global pandemic multiplied, schools were not able to meet the expectancy of virtual education during lockdowns and expected closures. The scramble that occurred was met with highly trained educators hard pressed to deliver quality education. The other side revolved around the impact on community public institutions that were unable to provide a positive on-ground experience during normal operations due to funding. In addition, programs within schools to support special educational needs could not effectively support these students to keep them on a path of improvement (Nelson & Murakami, 2020). The effect across all programs created a serious void with education relegated to providing minimal programs for essential learning.

There is a continuous fear of the words "virtual, remote, and online." The challenge is that there was no comfortable strategy for becoming an effective educator or growing an effective workforce. Online learning was given a scarlet letter in the research by Woldeab, Yawson, and Osafo (2020). The act of virtual learning in the 1990s had an approval of roughly 24% and degrees were not accepted by governing educational bodies or employers. Through evolution and the need of employees to grow business, the acceptance rate is now at nearly 90 plus percentage with the real concerns being the quality of the programs and the governing bodies themselves. The change has taken a decade to develop and become a value to the success of business and education.

Moreover, there is an impact on high school students who seek higher education to enter the workforce. Young adults are affected in more ways because of specific requirements for graduation, college entrance, etc., including the needed technical skills to enter trade positions. If we expand the effect of the pandemic, we see college students, in many cases, learning the standards of their field virtually. However, they are often in situations where they lack the skills and experience to enter their field as internships and apprenticeships are unavailable to support their growth (Campbell et al., 2020). Furthermore, students are found to be emotionally distracted in the experience encountering mental anguish due to pandemic challenges of shutdowns and employers are unable or unwilling to hire new, unproven individuals without professional skills and competencies.

We often miss the underlying effect of this kind of emergency creating unexpected challenges to generations. Educators (K12 or college) are held responsible for the challenges to those entering the workforce. Additionally, there is a drive to accomplish every aspect of education with technology, which becomes the scholastic norm. Moreover, technology is expected to become the "be all end all" in the classroom. Now, the pandemic, creating the expectation of teaching virtually through technology is challenged as many educational leaders see the process as a method to limit costs and execute an average or lower delivery without worrying about the overall effect.

COVID-19 is impactful as it lessened the high-level expectations of how and why interactive education, training and development, effective competencies, including the practice of internships and apprenticeships, change the success of

education and the future workforce (Girelli et al., 2020). Education must not expect industry to accept full responsibility for developing the future of work. We must have a combined effort to create a complete package for future workers both currently and in a post-COVID world. The population has never experienced something as impactful as a pandemic. Some have experienced unrest, war, and small outbreaks of disease that have inflicted small global impact. The pandemic has brought about a significant blow to our education systems. Our education systems must change including numerous transformations to elevate the level of student ability and future career expectations. This chapter uses a narrative literature review approach with the intent to objectively relate current knowledge regarding COVID-19's implications for student internships and from said knowledge makes recommendations regarding how higher education might meet the evolving needs of said students.

The importance of this body of work is to note that the research available is not as robust as the other bodies of research related to virtual learning across multiple environments. In the higher-value databases, the research regarding COVID-19 is limited to more detailed studies regarding the medical impact and applied actions for reduced influence on patients versus the domino effect to societal functions of everyday teaching, working, and life in general. During the investigative stage of developing this body of knowledge, the active research applied took into consideration the fact that COVID-19 and virtual learning needed to be combined in a mutually inclusive manner. What is not the norm is combining research of a disease, executing education, and work in the same relational approach where each are affected by the other. In this body of knowledge, the research and content are encompassing separate research that comes together in the Venn diagram of COVID-19 and virtual education.

Institutions were unprepared from the start of the pandemic and find themselves still struggling to meet the needs of education. There are and will be existing gaps in the system that will be thought through and the research will create new methods of education that this body of knowledge will not cover.

Open Discussion About Two Decades of Education and Workforce

Ruggiero and Boehm (2016) discussed the innovation of education and more specifically the needs of industry to meet employment requirements for the workforce with necessary skills to be competitive and grow. Internships and apprenticeships are big opportunities to drive success in education and industry through the placement of students to learn real skills resulting in a stronger workforce. Later, there came a push to develop virtual reality programs that were felt would provide an alternative to the internship process as it allowed industry to reduce unproductive time with interns. Though it works for some industries, it was not providing real practice. Then, came a unique opportunity to provide learning, experiences, and recruiting talent.

The virtual internship was truly born and it provides unique opportunities to change the dynamic of "kicking the tires" of future employees and providing experience. However, defining the ultimate value of a virtual internship looks like this:

> Virtual internships offer the same benefits as traditional internships, but also reduce the need for relocation or unnecessary travel while giving the intern an opportunity to gain experience working in a virtual environment. In fact, virtual internships add particular value to traditional education, as well as to distance education. (Jeske & Axtell, 2016, p. 20)

The concepts of the needed skills are developed into needed domains based on the employment field. Both virtual and on-ground internships are built and designed to provide opportunities for students to seek needed knowledge and practice skills to become a valued asset to industry.

The move to STEM (science, technology, engineering, and mathematics) and STEAM (science, technology, engineering, art, and mathematics) offered the opportunity to advance learning to new levels and increased the opportunities of learning to spark the interest of students to understand that there are many opportunities for their future (Ashton, 2014). The education systems from K12, college, and individually specialized programs became a norm of providing expected knowledge in these learning domains (Just & Thomas, 2011).

In the last two decades, starting at the turn of the new century, the opportunity of job prospects and the development of essential workers to increase growth and develop new technologies have slowed considerably (Martins & Ungerer, 2017). The effect of economic conditions has seen generations fall into disarray through complacent work conditions that have led to a dysfunctional job market and workforce picture. These past two decades have shown the rise of basic job definitions focused on more blue-collar positions in manufacturing and construction-related roles. Moreover, we have seen a decline in college-bound students seeking higher levels of education right after emerging from the K12 systems. This shift comes from a lack of change in the mainstream career development in higher education.

As we moved forward, however, we saw our military men and women seeking a higher level of education to enhance career options and create a marketable career in multiple disciplines. Returning veterans were seeking careers that would benefit their future success. What happened was corporate fear of PTSD (posttraumatic stress disorder) and its effect on the civilian workforce already employed (Rice et al., 2018). This notion created a completely new future for many veterans who were often looking for the edge to move past this label of fear from employers.

As we come to the immediate decade, there are emerging challenges of "Protectionism" of our youth from the world and the importance of experience and change. This experience is driven by the need to protect and prevent bad things from happening and manage the experiences to block many of the challenging parts of life across the board. This protectionism is unfortunate as many of our young people are deeply into social networks. Children are more dramatically influenced by manipulated media. These influences become the fork in the road and affect the child's direction (Ivbijaro et al., 2020). School-age children learn more through social media platforms.

COVID-19 Change Behests Experience

The word "pandemic" is something devoted to the film industry. Dramas are developed around the confines of a pandemic that will affect the globe. The Hollywood feature we see today is that in order to change old, outdated methods of education and workforce preparation, it takes a pandemic to open new conditions for change; it is a real-life experience today. Millions are contracting the disease, which means we must work to sustain our livelihood and the economic fate of all nations, and we must educate to maintain the cycle of building new talent in the pipeline to continue the evolution of invention and creative growth for the world.

In recent strategy discussions across corporations, it has been determined that work can be accomplished with less employees as the process of defining the work needing to be done can be driven more through technology and less human engagement. The pandemic has had an effect on education to deliver the necessary skills-based experiences because the requirements for hiring have become less related to a degree and more focused on the need for certifications and skills related to specific needs of businesses versus broad educational needs for growth. Dolgon and Roth (2016) suggested that America's education system has not evolved to modify the level of academic rigor needed to create a modern, effective workforce.

Is There an Influence on Education?

COVID-19 has changed our world completely. Many expect that we will return to the "Old" ways once a vaccine is created, evaluated, and distributed. Really? We fail to recognize that the pandemic has changed our once simple, acceptable, and comfortable environment to a new modern system of virtual delivery and impactful action leading with accountability in our methods. It all sounds complicated, and for many stuck in the old comfortable ways, it is complicated and stretches them to become outdated with no desire to make a change in education and workforce strategies (Hierro et al., 2020). Our impact from COVID-19 will not go away, and we will not engage traditionally anymore in classrooms and office cubicles. We will be virtual and be expected to learn our core education and learn new modern technology, technical skills across all of the domains.

It should be expected that education administrators are seeking to look out for the best interest of the children. However, often these conditions seek to force reading, writing, and arithmetic above opportunities to learn real life skills that will be needed in the workforce. The unfortunate part of the process is that industry is looking to teach critical skills. Things like professional soft skills, technical skills, and first hand application of these in a combined experience that allows for application. Educators take a bullish approach and push back by indicating that they drive these professional soft skills in the classroom – yes, but if Sally struggles to utilize them properly, educators grade and ultimately are telling Sally she does not have these

skills because her grades indicate so. The challenge is to perfect these skills through practice in a real environment and make mistakes where she learns to perfect and become better without seeking a "grade" for the effort but instead she acquires feedback and mentorship with industry veterans. Andrews and Higson (2008) conducted research in European countries seeking to understand the best places to gain and apply skills related to engage in industry. This study applied the combination of soft professional and specialized industry skills. They concluded that building a baseline of both provided the opportunity to develop their skill sets at a greater level through real industry engagement and experience.

Pole Star Experiential Learning provided an example of the different learning scenarios as it relates to experience versus education (student's name and school's name will be withheld):

Individual Jim (names changed to protect the student) was an IEP (Individualized Education Program) student who was getting weekly assistance across all subjects except Information Technology courses in his high school program. He was a student on the verge of failing high school and would struggle in the workforce because of his educational challenges. Jim was given an opportunity to engage in a virtual internship through Pole Star Experiential Learning over the summer. He was involved in a technical program to develop a database for the client. Jim was coached on how to capture requirements and given the opportunity to develop his questions to engage the client – he was nervous, but ready. When he contacted the client to gather the technical requirements he failed to ask any questions of the client. In order to establish the learning process he was immediately asked to document the requirements and create the specifications.

A couple hours later, Jim reached out to his Development Leader in distress. He felt that he did not do his job and was afraid it would affect his grade. The Development Leader immediately asked Jim what went wrong and how he believes he should correct this challenge. He began by outlining what happened and what he should have asked the client. Then, he moved to how he felt he should communicate with the client. Then he expressed his concern that the client would be mad and was unsure of how to work with this issue. Jim's Development Leader offered some suggestions and he was nervous but ready to face the client again. Jim was successful in addressing the client directly. His effort was rewarded when the client indicated he was pleased and he returned to obtain clarification of his needs. Jim was successful when he realized this was not about grades, it was about applying change concepts and dealing directly with mistakes. He was successful and his level of confidence and personal growth grew tenfold. When Jim returned to high school in the fall, he declined all of his IEP assistance, as he did not need it anymore. Jim graduated high school with all "A's and B's" and entered a university Cyber Security Program and now works for a cybersecurity firm. Jim is an example of the kinds of education necessary to develop successfully by challenging failure to ensure that it does not follow the student for the rest of his/her life.

Activity across college programs is impactful as well. Before COVID-19 programs created onsite opportunities for numerous students to practice their eventual craft. Most of these experiences provided value based on how much opportunity was offered and how much individuals chose to get out of the experience itself. The

pandemic began affecting all of these programs, leaving students without opportunities to complete the requirements for their degree.

The virtual internship opportunities create learning experiences, which change the trajectory of a graduating student. It is important to recognize that COVID-19 influenced the necessity of changing the delivery method. It is also important to note that methods for delivering internships changed and the system did not adjust. The system did not increase the versatility of the process that would meet the demands of students at both the K-12 and college levels.

The data that are continuously tracked at Pole Star Experiential Learning's virtual internship program indicate interesting support for the need for an internship of any kind; however, the program measures result from participants who have outlined the importance of specific competencies along with the value of the experiences in assisting in career development.

Competencies such as communication, decision-making, teamwork, planning, or project management are all rated by individual participants to exceed a value of 8.3-plus out of 10 for positive ratings as required for success in the workplace (Pole Star Experiential Learning 2020, Internal Data). Some specific points made by participants provide a very similar message.

> These competencies are important to every workplace as the expectations for every worker is to become a contributing member of the team to make a positive impact to work the team is doing. When every individual meets or exceeds the opportunity to practice, perform and learn through experience the ability to build success and confidence will create an effective workforce. (Kolb, 1984a, b, p. 25)

Conversation across education institutions relates to the "emergency" nature of teaching in K-12 to college. The challenges are often related how to teach students virtually, how to get them to learn materials effectively, and are they paying attention. While valid concerns, these points are the same circumstances related to teaching and learning in general. It is important to recognize that COVID-19 is not the cause but an escalation of issues that have been experienced for decades. The gaps in education are opportunities we can discuss in conversations among educators, administrators, parents, and students to find common ground for change.

Let us posit that none of this is easy nor perfect; however, the willingness to change the process and seek outside the box opportunities to test the dynamics of change and positive impact is necessary. If there is a need for adjustments it should be easily recognized from the outcomes and seeking feedback from students themselves. Imagine engaging with students working toward outcomes that have a community or a personal benefit to the student.

We need to dive deeper into understanding what education looks like during and after COVID-19. The first initial challenge is educators' and teachers' ability to manage virtual classrooms that incorporate working through maintaining classroom order and students' accountability. This is not an easy task. However, the importance of developing interactive processes that create engagement with the students fosters value in the learning process. The trials that have developed from the pandemic have put educators in a spot where the thoughts are that delivering the core education is best done in a simple and basic format. The reality is that educators are

confronted with finding new and innovative delivery models to change the core academic areas (Afshan, & Ahmed, 2020). Education administrations must open the doors on teachers' flexibility to provide new concepts that are necessary to meet the challenges of virtual education utilizing communication technology across numerous platforms. The image of learners in seats in a classroom with an educator standing in front is no longer the future of education.

The pandemic is incredibly demanding on students with special needs, and we must not fail them in the necessary growth for success. Meeting every student at his/her level is necessary to elevate special needs programs to convert learning of content through application versus standardized learning. Success is achieved by application of lessons to real life. The "practice" needs to become the process of choice, as it will lead to interactive behaviors to learn more.

The toll of COVID-19 on the education system and the generations of students who emerged in the system's dysfunction is impactful. A breakdown of learning career skills occurs in Grades 9–12 in the United States. These challenges provide greater risk to these students entering the workforce during their teen years and postgraduation as our education system has been challenged by COVID-19 resulting in career needs becoming an afterthought.

The impact of COVID-19 on college environments is profound as well. Colleges work within a virtual environment all the time, delivering virtual programs that are, in almost every case, nothing more than self-paced programs. The delivery is often a lecture, read, assignments, and repeat. There are no interactive engagements that increase collaborative practices to develop professional growth. During COVID-19, colleges are finding the challenge that individual students, who were willing to learn independently, now seek contact. COVID-19 has flipped the learning model with no change to meet this expectation (Paterson, 2020).

Organizations have internship programs that function across different programs that are built with the best possible intentions for providing experiences to students. There are often challenges for administrators who enact policy to provide opportunity to only the best students. This segregation prevents the average student with the opportunity to gain the skills they need to advance in the workforce. Interpretations are made that the average student is defined as a risk to employers.

The opportunity is to seek alternatives for student interns to develop stronger skills through work-based learning (WBL) virtual internships, and build an effective level of skills to then seek greater experience. Students requesting an internship are assessed but the determination is that they are not at a level of ability to work in the workforce until they develop at a greater level. By engaging them in a virtual program that is built on a work-based learning approach, they can develop and grow effectively. The challenge to educational institutions is it is time for change in the development of students to become ready for successful transitions to the workforce. This straightforward option is developing a process of assessment and placement to meet students where they are and increase development. This policy opportunity is about inclusion and increased participation because when you prevent advancement from a willing participant the development of this student will unfortunately diminish.

What Does Change Look Like?

Before COVID-19, industry was seeking change to global education to increase the value of the potential employees in order to reduce training needs and turnover rates. The education system and the level of knowledge and competencies people possess are suspect. There exists a severe lack of competencies or soft skills necessary to support industry and positive growth without remedial development. Lack of skills dramatically affects success and often increases hiring cost. Cojanu (2018) found that industries are often selecting the individual who is easiest to train and develop the needed competencies. The expectation should be to hire individuals with required skills and competencies necessary. COVID-19 drives dramatically changing requirements, forcing industry to seek the most equipped personnel, able to work virtually, and meet all of the expectations for organizational success.

Meeting industry hiring needs with required technical and soft skill requirements has dramatically increased due to COVID-19. Educational organizations seek not to engage in realistic programs to increase skilled workers. Developing individuals to meet industry needs is crucial for being workforce ready (Wood, 2020). The pandemic created new requirements for remote work, yet our educational systems do not meet expectations as they view it as short lived and providing innovation is not a priority, but holds the status quo.

The disconnection between education and industry has been a problem for decades, although some progress exists. However, they remain distant to find common ground to meet immediate needs. The effort by industry to support education and reach changing parameters is met with huge lead time to execute and challenges in teaching theory versus practice. Industry often seeks practical application to move faster to meet needs, where education often is theory focused (Piggott, & Winchester-Seeto, 2020).

Changing Business Needs Driven by COVID-19

Organizations are changing operational strategies during and post-COVID. Business and education must partner to ensure a workforce prepared for high performance. According to Distefano and Singh (2020), post-COVID, management must ensure that employees have both hard and soft skill development to successfully manage the rebound. Organizations need to adapt to ambiguity and constant disruption. Employees need the ability to thrive through change separating "the winners from the losers" (Distefano & Singh, 2020). Agrawal et al. (2020) assert that a post-COVID trend for businesses to shift at least 35% of their workforce to work virtually permanently. This results in a continuing need to upskill employees and management as leaders adapt to leading teams "virtually".

Changing business needs post-COVID, individuals must change job preparation strategies to build career resilience in this changed work environment. Marr (2020)

positions five factors as key contributors to building career resilience. Traditional practices of keeping résumés updated and highlighting skills is important and ensuring that a résumé demonstrates accomplishments with results. Professionals need an online presence promoting skills. Post-COVID, businesses will seek workforce flexibility. Those looking for work must understand intellectual capital and market it in ways that show quantitative value. Networking is important in this environment. Networking virtually through technology is the strategy. Continuing to gain skills is critical – not only technical skills but also professional competencies, such as communication, time management, leadership, and other important transferable skills (Marr, 2020).

Carver (1996) discussed the need to incorporate into our educational system the concepts outlined by Kolb (1984a, b) and Dewey (1923). These concepts indicate that learning through experience is the critical infrastructure of developing success for individuals seeking a positive employment future. Likewise, Ferrández-Berrueco et al. (2016) emphasized that the use of work-based learning would increase the skills and competencies among individuals entering the workforce because work-based learning engages employees in solving industry challenges through educational experiences recognized by industry. Similarly, Azevedo et al. (2012) promoted the need for industry to align itself with undergraduate programs in college and university systems to outline an education capable of meeting new industry needs. This revised education can and should be based on the needs of industry, combining core competencies and expected technical skills.

Even prior to the impact of COVID-19, organizations were evolving from places willing to hire college graduates without real-world business experience to an environment where employers expected students to be ready on the Day 1 after college graduation. They are expected to possess "the necessary hard skills (i.e., knowledge of business or trade) and soft skills to be effective in the workplace, although many students are not graduating from college with the essential soft skills to do so" (Stack & Fede, 2017, p. 21). According to Distefano and Singh (2020), in the post-COVID-19 world, management must ensure that employees have not only hard skill development but soft skill development as well in order to successfully manage through the rebound. Organizations will need to adapt to operating in an environment of ambiguity and constant disruption. An employee's ability to not just tolerate this environment but also thrive in it will, "separate the winners from the losers" (Distefano & Singh, 2020, p. 19). Learners in higher education institutions will need to have experience in applying the theories they are learning in school to real-world business experiences prior to joining the workforce to ensure that they are among those considered "winners."

Another consideration for institutions of higher learning, students, and businesses is that COVID-19 is not a temporary problem requiring a temporary solution. According to Harvard medical researchers, warm weather is not expected to halt the spread and that periods of social distancing are going to be required at regular intervals until a vaccine is available in the next year to 18 months – partnership between public health and business is going to be key to managing the situation (Powel, 2020).

Prior to COVID-19, it is estimated that 14–26% of the world's workforce would change occupations or gain new skills by 2030 due to artificial intelligence or automation (McKinsey Global Institute as cited in Agrawal et al., 2020). Workforce change is occurring while 87% of executives say there will be skill gaps in their workforce (McKinsey Global Survey as cited in Agrawal et al., 2020). According to *The Economist Intelligence Unit* (2015), only 34% of executives report satisfaction with their new hires' achievement level and 52% of these executives indicate this gap is negatively affecting performance. Add COVID-19 to the mix and the need to upskill and reskill workers becomes critical.

As businesses make strategic changes due to COVID-19 impacts, management must align recovery strategies to skill changes required to the groups affected. The greatest investment is to drive employees to build a suite of skills that are cross-beneficial to the company regardless of employee evaluation – skills that improve ability to work digitally (technology and data understanding), think critically, and problem resolution, and overall effectiveness in a changing landscape. Professional competencies such as problem solving, critical thinking, and interpersonal skills bridge the skills gap. Management's obligation beyond strategic planning is toward employee-focused development. Executives must implement new strategies for this need (Agrawal et al., 2020). Iipinge et al. (2020) agree in their study of employers' needs in Namibia. Employers are raising concerns that university students placed in their companies for internships do not possess the basic professional competencies necessary to be successful, such as basic communication and flexibility. These employers rely on higher education to equip students with not only a theoretical understanding but also the ability to think independently to new and challenging situations. Zegwaard et al. (2020) concur that during and post-COVID, institutions of higher learning need to move away from the practice of job placement for face-to-face internships to technology-driven virtual development of professional competencies. However, are the virtual simulated work scenarios recommended in these studies the most effective way for students to develop and strengthen professional competencies?

Traditional internships are evolving. Companies are pushing back on face-to-face internships while others consider transitioning to virtual internships (Yaffe-Bellany, 2020). According to *Financial Times* (as cited in Ho, 2020), over 12 of the 22 Wall Street financial firms surveyed are considering only virtual internships this summer while eight other firms are considering internships that start virtually, evolving into traditional face-to-face. Internships are traditionally viewed by students as not only critical for developing technical skills in their chosen profession but also as an industry networking opportunity. Another survey conducted by the Ivy Research Council found many students concerned about losing client interaction without face-to-face internships (Ho, 2020). How do institutions of higher learning navigate these challenges to assure their students the opportunity to develop the professional competencies employers say are critical during and post-COVID?

Traditionally, colleges and universities have depended on face-to-face internships to secure this experience for their students but now many companies, including Yelp and Glassdoor, are cancelling plans to host interns (Gerdelmann, 2020).

These traditional internships were essential to ensuring professional development in communication, teamwork, initiative, and analytical skills – deemed critical to be successful in the workplace (Stack & Fede, 2017). How do students secure the professional development needed for success in the post-COVID environment when face-to-face opportunities are practically nonexistent? Many companies are now considering virtual internships critical to ensuring new employee readiness. According to a National Association of Colleges and Employers poll, 36% of its 200 members have switched to virtual internships, including large companies like SAP (Gerdelmann, 2020). As per Butterworth (2020), virtual internships provide students in cities and rural communities alike the opportunity to: (1) gain remote work skills; (2) have access to working with companies around the world; (3) obtain experience working on real projects with real business impact; (4) save money on commuting cost; (5) start building a global network of future potential employers; and (6) demonstrate initiative and discipline so necessary in virtual work environments. Competency-based virtual internships driven by experiential learning are key to achieving the employee abilities needed by businesses operating in a world dealing with COVID-19. Partnerships among colleges, universities, and businesses will ensure that students can meet the business need.

The Strength of Practice

Some will begin to think, "What does this have to do with COVID-19 and Education?" The answer is everything! The education system that supports K16 (high school through a bachelor's degree) is the most significant part of changing workforce purpose and growth. Created experiences must always be in forward motion and continuous evolution with the needs of industry. STEM (Science, technology, engineering, and mathematics) and STEAM (science, technology, engineering, art, and mathematics) are prime examples for change. The programs provide opportunities to raise students' knowledge in specific skill complements such as technology and engineering. Roberts and Schnepp (2020) recommend the need to expand these practices to work with industry to apply WBL challenges to increase the experience and practice to enhance future learning. The pandemic has limited real application for industry to basic learning.

STEM/STEAM programs lack the opportunity to provide practical programs that bring WBL practices to both on-ground and virtual environments. The need to offer prospects in practice related to working these techniques is key. Developing practice methods will drive vital competencies that engage industry to support these techniques in the education systems. Simple, yes, the application of STEM/STEAM in real-world instances increases competencies of every student to recognize the overarching necessity of the learning process and impact for future opportunity in industry (Hosier, 2013).

Career and technical education (CTE) is viewed as the savior for the future of work. The training and learning opportunities are designed to deliver a blue-collar set of skills regarding building trades and manufacturing, creating opportunities for students to seek roles in career paths such as welding, building, and other manufacturing positions. CTE recognizes the importance of advancing these careers in technical categories. CTE skills are offered through K-12 school programs as an extracurricular opportunity (Carver & Kosloski, 2015). What is missing is the chance to engage in outside programs that offer real practice in an adjacent field to create a larger pool of skill sets and practical working experience across industry. Programs focus around coding, AI (artificial intelligence), machine learning, cybersecurity, HR (human resources), entrepreneurship, the list is endless. Schools are often unwilling across the K16 realm to expand partnerships with organizations that expanded learning opportunities (Sibert et al., 2007). Student success must revolve around opportunities that interest the student and provide the pathway needed to have a career. Partnerships are the answer to success.

The importance of practice throughout the K16 space is built on real-life skills or career competencies that expand student maturity for success in the world of work. Individuals may have technical skills but often do not have the soft skills necessary to maturely work and function in the workplace. The world of work holds multiple personalities; therefore, teamwork and communication are essential to successful decision-making and commitment to successful ideas (Bazarsky et al., 2020). Programs in school provide for students the "need to know" meaning of the words "career competencies;" these words appear on tests and exams. However, career competencies are never adequately practiced and understood based on the effect they have when not executed properly. When applying the pandemic conditions to this mix, problems that arise relate directly to students' inability to deal with knowledge and practice of soft skills and core competencies necessary to engage in a nonphysical location. Without the ability to practice in virtual and on-ground conditions, their individual and group success will dwindle and lead to unnecessary situations (Wright, 2020).

COVID-19 has created conditions where traditional internships have been nullified. Impact on both students and industry has provided severe concerns that have limited gains for students' experience and eliminated the opportunity for industry to evaluate talent for future employment. These conditions present the opportunity to practice virtual internships and for students and industry to commit to an ongoing process for the long term. To enable this different approach to internships there is a need to change the process by engaging organizations that provide traditional internships to begin delivering with cohorts that allow the process to be managed through work-based learning (WBL) working projects where engagement with the business is managed by a third party that presents assessment processes that the business can monitor through virtual engagement (Wieland & Kollias, 2020). This engagement creates the opportunity for organizations to evaluate and select quality employees. The third-party organization prepares, educates, and monitors the interns' success

to learn and practice the necessary core career competencies and earn certifications that provide credentials to increase the interns' value to the businesses interested in their skills.

Most of the impact the pandemic represents can be overcome through innovations and partnerships with organizations that deliver and adjust quickly to industry needs. Educational systems often take a minimum of a year to apply needed change to keep up with adjustments the industry makes to remain competitive. The necessity for fast change in delivery is something outside organizations partnering with education can provide with excellent service and can do without cumbersome processes which education alone cannot.

It is necessary to address the challenges of the educational systems by providing training and delivering real industry experience to students. A teacher who teaches multiple subjects and provides career training represents a challenge in career development. Consider the impact of knowing Mr. Smith teaches a student math in third period and says there are challenges with them in getting along, and then in fifth period, Mr. Smith teaches career skills to that same student. The mismatch represents a less than acceptable arrangement for building the student learning process (Golen et al., 1984). Utilizing outside organizations' programs can create the level of delivery that students will see the difference between the instructors and the different skill sets they provide to the student learning process.

Change Is Hard, But…

Change is critical! Changes need to be made regarding the educational value provided to all students who need to prepare for the workforce. COVID-19 presents that opportunity for change by creating conditions that demand a more practical delivery. Easy to say because all the changes around the ability to conduct courses in a classroom have been costly and budget problems have become the biggest challenge to every educational organization. Budget can be a problem, but it should not be identified as an excuse that cannot be overcome. Creativity and open discussions with outside vendors are the first and most significant step learning institutions can take. This partnership grounded in open communication represents an opportunity for unique solutions that work in the best interest of both education systems and the vendor (El Guindi, 2020). There are numerous instances for grants, pilots, and foundations that are often willing to support new and innovative engagement to change how we educate and create more substantial student success. There are always opportunities, and COVID-19 has opened the door for innovation and new conversations to impact modernizing the workforce positively. COVID-19 has not created challenges that reduced students' success; it creates the opportunity for innovative partnerships to drive solutions.

The Future of Higher Education – Preparing Students for Careers in a COVID-19 Landscape

How can higher education help students prepare for the changing business need? According to UNESCO, as of March 2020, 777 million children and students in over 100 countries have had to leave traditional schools and universities due to COVID-19 (van Fleet, 2020). In an initial response to COVID-19, higher education institutions postponed various face-to-face activities, including internships (Crawford et al., 2020). However, professionals within higher education are recognizing the changing business needs and evolving education challenges and are striving to evolve to ensure students are prepared. As McGuigan and Ghio with the Aspen Institute's Business School (*Ideas Worth Teaching*, 2020) note that social distancing is prompting business schools to reconsider how they connect with students. Higher education, in particular, business schools need to focus on communication, transparent leadership, and team dynamics post-COVID, according to Regina Abrami with the Wharton School of Business (*Ideas Worth Teaching*, 2020). Melissa Bradley with Georgetown University predicts a stronger partnership between technology companies and colleges to support the need for more virtual learning experiences. Jerry Davis at the University of Michigan describes a future where MBA programs need to focus on dispersed and temporary projects (*Ideas Worth Teaching*, 2020).

Some educators are viewing COVID-19 as an opportunity to bring innovative models forward. Some are advocating for competency-based education, which would have students focused on mastering learning objectives using specific supports. The Lindsay School in California has used a competency-based technology-driven education model for quite some time with success after transitioning from a lower-performing traditional model (Mathewson, 2020). According to Young (2020), some universities are partnering with companies to offer virtual internships. One company that managed virtual internships reported doubling the number of partnerships with universities in a 2-week period. Indiana University's Kelley School of Business and others are encouraging the use of internships managed through these companies. This approach enables students to demonstrate that their COVID-19 summer was not spent hanging out by the pool but are the virtual internships being offered meeting the evolving needs of businesses looking for competency-based education?

What are the indicators that a university and company partnership offering virtual internships meets the needs of businesses for new employees to perform strongly in professional competencies on Day 1? Are the internships providing realistic experiential learning to students? According to Fede, Gorman, and Cimini (as cited in Cojanu, 2018), internship models need to support student learning through experience, executing the knowledge they gain in school in a live working environment. Schaller (2018) concurred and noted the importance of immersing the student into their chosen field using reflection and the power of observation. Bilsland et al. (2020) propose a virtual internship model for hospitality and tourism education

programs which includes partnerships among education providers, industry professionals, and students using a technology-driven virtual asynchronous learning blended with both virtual and face-to-face synchronous learning to develop competencies critical to the industry such as communication, teamwork, intercultural, interpersonal, technical skills, and more. The proposal points out the unlimited potential of virtual internships to offer students the experience of learning how to manage a large variety of potential customer situations that may not present themselves in a face-to-face internship during a limited time period – an experiential learning approach. Noting limitations to this model in some areas of the globe, Rakesh et al. (2020) note that learning for students in the hospitality and tourism industry is particularly challenging due to COVID-19 as practical experience of actually doing the work is so critical to preparing the student for his/her future career.

Practical experience is traditionally provided by schools using face-to-face internships. Surveying hospitality students in the Dehradun region of India, researchers found that lack of technology infrastructure was a key challenge to remote learning with 97% of students noting this challenge, and while over 70% of students found online learning useful, the learning mode was not preferred (Rakesh et al., 2020). In contrast, in their study of 182 hospitality students at an Australian university prior to COVID-19, Patiar et al. (2017) used questionnaires to determine the impact of an interactive virtual field trip website in helping students with practical aspects of the profession. Their findings revealed that the learning scenarios were considered effective relative to student learning and cost to the learning institution. Feedback indicated ease of technology access was important as well as the need to ensure the latest in multimedia technology be used which hints at a need for university and industry partnership. Making the case that the need for remote work is necessary during COVID-19 will remain in place after COVID-19 due to reducing the cost related to their office footprint, Dent and White (2020) postulate that it is critical to ensure that students majoring in Business and IT are prepared to work remotely. Academic preparation is not enough to ensure success. The Association to Advance Collegiate Schools of Business standards support the benefits of experiential learning and interdisciplinary work for both students and faculty professional development (AACSB, 2013 as cited in Dent & White, 2020).

Business and IT positions such as marketing as well as software code and web development include work well-suited for remote academic and internships. The study involved a farm apprenticeship program that was threatened with cancellation due to COVID-19. The study made adjustments to the original job description to require less onsite engagement; worked with the school and client to ensure the client, student, and faculty roles and responsibilities were adapted to remote collaboration with supporting technology. Faculty and the client were more fully integrated into the internship process than in a traditional internship from student project assignment to internship completion to ensure the client's comfort and buy-in to students working remotely. For example, in the traditional internship, the student is often assigned to work on a company's project through random selection, becoming

part of a project team. In the new remote design, the client has more input into aligning students with the company's projects and students are given more tasks to complete on their own in addition to working with the team to ensure that the student develops in areas of empowerment and ownership for managing his/her own work with direct supervision (Dent & White, 2020).

Recommendations for Higher Education – The Future Is Now

Trends across the literature from the academic and professional sources reviewed in this chapter indicate that: 1) business needs are changing, resulting in students needing to be prepared to work in an environment that demands that entry-level employees possess strong professional competencies on Day 1; and 2) students need to know how to work effectively in a virtual work environment. Colleges and universities need to establish virtual internships with a focus on developing professional competencies through experiential learning in order to meet the evolving needs of business. What should this approach to student learning look like?

Experiential Learning-Focused Learning

Experiential learning is not a new concept. According to Thoman (2018), recognized theorists in the field postulate that true learning only happens when the student reflects on actual experience. Through reflection on experiences, the student raises his/her professional competency level from beginner to master to expert (Thoman, 2018). Kolb's experiential learning model includes four stages as per Abdulwahed and Nagy (2009): concrete experience ability (stimulation), reflective observation ability (reflection), abstract conceptualization ability (abstraction), and experimentation ability (experimentation). A student achieves optimal learning when his/her learning experience balances all four. According to Turesky and Gallagher (2011), coaches can better adjust their coaching strategies to client's individual learning styles by using Kolb's experiential learning theory using four modes that a student engage in during any experience (concrete experience, reflective observation, abstract conceptualism, and active experimentation). These modes, in turn, form four learning styles (diverger, assimilator, converger, and accommodator). A successful coach accesses all four modes and corresponding learning styles in themselves to more effectively coach clients who may have a different learning style than the coach (Turesky & Gallagher, 2011).

Dreyfus' skill acquisition theory is another experiential learning model, which includes five levels (Lyon, 2015):

Level	Characteristics
Novice	Learner has no context to assess and decide requiring coach/textbook explanation
Advanced beginner	Begins to relate situations to past experiences to inform decision-making
Competent performer	Integrates more experiences from area of expertise into problem-solving, better able to manage contingencies; context is more important
Proficiency	Recognizes a situation as similar or different from past experiences and takes appropriate action, reflection is helpful to processing
Expertise	Responds to context, analyzes, and acts fluidly, as well as responds intuitively

Student immersion in work experiences, which prompt the use of professional competencies and reflection on the experience, is critical to the learning process. Reflection is a critical component of the experiential learning process. In their qualitative study of students in a coaching master's level program at a university in South Africa, van Coller-Peter and de Coning (2017) used both interviews with students and the content of the students' reflections to study the effect of integrating reflection into the coaching practices that the students were learning and applying when working with clients. The program is designed to include learning about coaching theories; practical application in a coaching context through work-based practice. The program's requirements include suggesting areas of reflection, which the student documents in a journal. Areas of reflection included the student reflecting on his/her own learning style, reflecting on the growth of his/her own personal coaching framework, and reflection on his/her "learning days, supervision-groups, and skill practices with the key focus being how these inform the student's development as a coach" (p. 3). Findings indicate that integrating the practice of reflection throughout the coaching program resulted in students being more focused in their coaching sessions with clients, which, in turn, influenced positive behavioral changes in the client. The students moved from reflection to application, improving their learning experiences.

The study acknowledged that although other variables may have also influenced some changes in behavior, critical reflection purposefully integrated into the learning program enabled a more meaningful learning experience (van Coller-Peter & de Coning, 2017). Tiessen (2018) concurs with findings from her study of students by evaluating reports on their work-term reports in which students reflected on their experiences in co-op jobs, volunteer work, and internships. These were analyzed to determine themes and differences between two different types of reports, including the preparation and facilitation of learning associated with each and how this, in turn, influenced students' critical reflection. The study found that the various types of experiential learning placements (volunteer, co-op, or internship) have less to do with meaningful learning than does the opportunity for facilitated critical reflection. Tiessen concluded that these types of assignments need to have support from faculty and administration to enable the student to move beyond basic reflection about what

they learned to mechanisms that encourage the student to analyze their work experience, and reflect on how those experiences can help them improve thinking (Higgenbottom, 2020; Tiessen, 2018).

Partnering for Technology-Supported Competency-Driven Experiential Learning Internships

According to Cojanu, Pettine, and Slater's (2020) research of over 400 participants from a network of teachers, educators, career technical educators, as well as business executives and business owners, and leaders from business and industry, 69% of the participants identified a combination of educational institutions, workforce development organizations, and corporations as jointly responsible for developing the future workforce. Deeter-Schmelz (2015) noted the need for education and corporations to partner in lockstep in the preparation of students for future work. Ferrandez-Berrueco et al. (2016) recommended an approach of industry-approved work-based learning to increase skills and competencies. Past research reveals various approaches to "work-based learning" – simulation with minimal partnering and partnering with firms with real-world projects to help students develop professional competencies. Which offers a richer experience for students? (Table 1)

Simulation pales in comparison to project-based learning. Internships using a project-based experiential learning model to help students develop professional competencies will need technology to support such enterprises during and post-COVID-19. Colleges and universities wanting to offer virtual or hybrid learning need technology to support the internship experience. According to Higginbottom (2020), by 2023, virtual reality used in business will grow to $4.26 billion from $829 million in 2018. Driven by the pandemic and the change in business operations that VR technology will bring, internship offering project experiences enhanced by VR technology will provide students with not only professional competency development but also the comfort level necessary to perform their job using high-level technology.

Sanchez-Cabrero et al. (2018) studied the interest of 117 first-generation VR users in Spain via an online questionnaire as to whether VR technology would be welcomed as a learning tool. More participants were interested in using VR as a learning tool than were currently using it with 28.2% expressing an interest in VR as a learning tool. For example, 51.3% of participants had an interest in using VR in formal education at some point in the future. Furthermore, 47% of participants indicated an optimism regarding the future possibilities of using VR for pedagogical purposes but student and teacher access to such advanced technology might be an inhibitor. Earlier research was cited as having similar results (Yildirim, 2017; Fernandez-Robles, 2016 as cited in Sanchez-Cabrero, 2018). In the meantime, more accessible digital technology options such as Zoom, BlackBoard, and interactive LXPs (Learning Experience Platforms) may help fill the gap.

Table 1 Simulation versus project-based learning

Strategy	Objective	Results
Simulated ship's bridge (Sellberg et al., 2018)	Determine if simulation can be used to teach application of seamanship/international mariner regulations	Simulated experience is important for learning but requires timely instruction, monitoring, and intervention using assessment
Student-driven simulation: Form business organization, allocate roles, assignment tasks, and complete tasks professionally (Iipinge et al., 2020)	Confirm if simulation can be used to teach leadership, professionalism, teamwork, problem solving, communication, etc. better on campus or virtually	Professional competencies are more significantly developed face- to- face than virtually. Online version needed enhancement
University collaborates with industry on real project: Student-driven with regular interaction between student and client, and client involved in assessment (Baaken et al., 2015)	Learn professional competencies: Problem solving, self-management, think/act in changing situations, etc.	Students learned openness to change, self-management, planning, analytical skills, teamwork, communication, etc.
Project-based learning (Chandrasekaran et al. 2012)	Learn professional competencies	Students developed/enhanced skills: Problem-solving, critical thinking, communication, and collaboration. Motivation increased; stakeholder benefits (school, industry, community, and students)
Project-based learning (Larmer et al., 2015)	Learn critical thinking, analytical thinking, communication, apply real-world knowledge to various situations, etc.	High school students designed low-cost solar oven for nonprofit

Conclusion

COVID-19 is driving industry evolution. Businesses making changes during the pandemic do not intend to revert. Higher education will need to keep pace with industry to produce graduates prepared for professional positions. Trends in literature recommend that higher learning institutions and industry use a project-based learning approach within an experiential learning framework including instructor–/coach-guided experiences and continuous monitoring with regular assessment to ensure that students possess the professional competencies necessary for the current and future workforce. The internship should be delivered virtually during and after the pandemic.

This chapter utilized a narrative literature review approach intended to objectively relate current knowledge regarding implications to student internships because of COVID-19, and from said knowledge made recommendations as to how

institutions of higher learning might meet the evolving needs of said students. As of this writing, COVID-19 has only recently become a factor in business operations and student learning resulting in more industry-driven literature focusing on evolving needs of industry than from academic sources studying how higher education might better prepare students to fill that need. This disconnect must be addressed to ensure student preparedness. There is opportunity moving forward for academic institutions partnered with industry to drive the research necessary to determine educational and business training models, which will best serve students using internships to prepare themselves to enter a post-COVID workforce.

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Higher Education Dance, Drama and Performance Through Distance Learning Beyond Times of Crisis

Kate McCauley

Introduction

Since its evolution from traditional correspondence study courses in the 1800s, online learning has emerged as an invaluable tool for connecting teachers and students. Learning by distance enables students to train at any time or in any place without the constraints of geographical boundaries. Adult learners with limited financial capabilities are often more able to combine studies with their professional practice. Furthermore, learners who have physical or mental challenges that inhibit their participation in face-to-face classrooms potentially find it easier to utilise online learning platforms. Distance learning (DL) students can often dictate the speed at which classes are completed while having a wealth of knowledge available to them. Additionally, during times of national or international crisis in which security and social restrictions may arise, DL has played a pivotal role in enabling learners to continue their education. In this chapter the author considers the feasibility of teaching Bachelor of Arts (BA) Dance, Drama or Performance degrees through online learning. In Britain, the government appointed independent body Quality Assurance Agency for United Kingdom (UK) Higher Education (QAA) meets with a taskforce of university providers, regulatory bodies and student groups to set guidelines for university courses by reviewing systems and standards (QAA, 2020a). The author examines the standards necessary for a formidable and comprehensive BA Dance, Drama or Performance education as espoused by the QAA's learning outcomes and then questions whether these can be achieved through DL. This chapter also features a critical review of relevant literature investigating the learning and teaching of performing arts subjects through DL, particularly during times of crisis like the coronavirus disease (COVID-19) global pandemic. The author questions

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whether third level students of Dance, Drama or Performance would be disadvantaged if studying these creative and practical subjects in an online context beyond emergency education.

Learning by Correspondence in Higher Education: A Brief History

In Britain during the early 1800s, 'The Philanthropic Society for the Diffusion of Useful Knowledge' (Mokyr, 2009) encouraged self-education through their printing and distribution of educational materials. This led to correspondence-based courses involving teacher and student interaction, which were advertised as early as 1833 (Garrison, 1985). Education by distance became more structured and developed with courses to learn shorthand in 1844 (Tait, 2003), enabling students to receive teacher feedback on submitted work (Hunt, 2020). This impacted the development of private correspondence in Britain for educational purposes that began to thrive in the late 1800s, largely in part due to the development of the postal service and the continued construction of railway infrastructures. In 1858, a Royal Charter stated that the University of London would allow the enrolment of students by correspondence to sit examinations as the University no longer required a certificate of study from a recognised institution (Hunt, 2020). This greatly influenced higher education (HE) institutions at the time and led to the University Correspondence College, Wolsey Hall and the Rapid Results College offering tuition by correspondence course for each University of London examination. 'In 1865 71% of those who registered as 'private' students failed to pass. By the end of the century, thanks largely to the efforts of the correspondence colleges, the situation had reversed' (Kenyon-Jones in Hunt, 2020, p. 348).

Particularly during times of war and conflict, correspondence colleges enabled British people the opportunity to complete qualifications ranging from matriculation-level diplomas to master's degrees (Hunt, 2020). Between 1887 and 1931, 39,326 students passed examinations through university correspondence college despite the effect of the First World War on British families (De Salvo, 2002). The Commerce Degree Bureau of the University of London was founded in the wake of World War I to offer tuition in economics via correspondence (Tight in Hunt, 2020). Similarly, correspondence colleges partnered with the Institute of Army Education during the Second World War to provide tuition so that service personnel could avail of classes ranging from secondary school to degree-level courses that were accredited by the University of London (Morrish, 1970).

Correspondence education ultimately progressed as technological advancements grew. In 1963, Michael Young established the National Extension College as a not-for-profit college combining television and radio recordings with course material by correspondence and face-to-face instruction. It was described as a 'multi-media college' (Smith, 1971, 36) and affected the formation of the 'University of the Air'

which later became the 'Open University' in 1969 (NEC, 2016), which, to this day, is a leader in offering correspondence degree courses incorporating technological innovations (Hunt, 2020). Today, many British universities offer DL courses through online technology because it is a flexible learning medium enabling adult students to complete their studies whilst remaining active in the workplace (Laurillard & Kennedy, 2018). Online education is defined as a form of distance learning that utilises computers and the Internet as the delivery mechanism, with at least 80% of the course content delivered online (Allen & Seaman, 2008; Shelton & Saltsman, 2005). Poley (1998) believes that it is more about teaching and learning than it is about technology, however. Effective distance education course design initially focused on the provision of high-quality, affordable learning opportunities at a time and place convenient to the learner. Technology was used to bridge the physical gap between instructors and learners, but it remained important that methods and technologies were appropriate to the instructional tasks and the learner was at the centre of the process (Poley, 1998).

Universities Adapt to Distance Learning During the 2020 Global Pandemic

Prior to the COVID-19 pandemic, there was a gradual increase in the number of UK HE institutions offering courses through distance education. Online learning made up 16% of all provision at UK higher education institutions, with the Open University accounting for 65% of all online learning (Universities UK, 2018). At that time, the majority of HE institutions in the UK reported that they 'had invested or were aiming to invest' in online provision (Universities UK, 2018, p. 14). It was probable that this provision would be largely aimed at adult learners in employment seeking to enhance their careers. In addition, online learning courses would likely be designed to address the demands of employers who needed to develop their workforce with massive open online courses (MOOC) (Universities UK, 2018).

The 2020 global COVID-19 pandemic prompted British universities to adapt their teaching and learning strategies to ensure the continuation of academic quality and standards whilst emphasising student and staff safety (Universities UK, 2020). Universities were encouraged to consider flexible modes of study (Universities UK, 2020) in guidance literature written by Universities UK, Independent HE and the Association of Colleges. Degree awarding bodies were told to be conscious of geographical challenges that may be present for the teaching provider (Universities UK, 2020), such as multi-site campuses, overlaps with public spaces and transport accessibility. Additionally, HE institutions were prompted to engage in discussions about changing the method and location of course delivery and/or assessment requirements (Universities UK, 2020). Faculty who had experience with altering course material and assessments for online, digital or small group delivery were encouraged to share good practice.

The COVID-19 pandemic made HE institutions 'quickly pivot' (QAA, 2020b, p. 1) to digital teaching and assessment. HE providers released statements regarding their intent to either retain a wholly digital approach, return to onsite provision or offer a blend of both (QAA, 2020b). It was anticipated that digital learning approaches would remain a crucial aspect of how academic quality was maintained. Consequently, the QAA published a guidance booklet to enhance the quality of HE digital provision (QAA, 2020b) emphasising the importance of having a strategic focus when designing future university courses in Britain so that they consider programme design, approval and management. The new QAA guidelines addressed student-centred learning, teaching and assessment considerations and discussed the effect of digital learning on teaching staff. Learning resources and student support were also the focus of the QAA booklet (QAA, 2020b), which highlighted the importance of budgetary concerns, security measures, timetabling, student support and the access and training needed if implementing new technologies.

Whilst universities in Britain could avail themselves of independent and government documents offering guidance on how best to transition from traditional face-to-face teaching to online learning, third-level students had to also adapt to new learning experiences whilst potentially facing stressful safety concerns, isolation or anxiety due to financial worries (Casagrande et al., 2020; Flett & Hewitt, 2020). 'Whilst there have been extensive discussions and analyses of the merits and challenges of online learning… such learning is best when it is planned in advance or involves a gradual transition' (Besser et al., 2020, p. 2). Besser et al.'s (2020) article reflects the experiences of university students in Israel and documents the extent to which an abrupt transition to synchronous online learning affects university students. Students were asked to rate their learning experiences after engaging in emergency online education. The researchers also measured student adaptability by utilising a version of Martin et al.'s (2013) Adaptability Scale to gauge levels of coping. The broad personality traits of the participants were measured due to an expectation that there would be associations between the 'personality traits and adaptability' and between 'adaptability and responses to the pandemic' (Martin et al., 2013). Participants included 1,200 undergraduates from five academic colleges in Israel, all studying a variety of specialist subjects, but very few had been exposed to online learning prior to the pandemic. Data collected from online questionnaires indicated that when compared to face-to-face instruction, participants felt that online learning was a less positive experience (Martin et al., 2013) and increased students' feelings of stress and isolation 'as well as negative mood… and lowered levels of concentration and focus, motivation and performance' (Martin et al., 2013, p.12).

It is important to note the context of this study, however, when putting the research into perspective. When considering the quick turnaround of HE academic courses from traditional to online formats, it is understandable that learners may struggle to adapt. Israeli academic institutions were given one week to urgently adjust their courses, and students and faculty were not expecting the alterations (Martin et al., 2013). They had 'little, if any, experience with online learning, in general' (Martin et al., 2013, p. 6). An area of focus for future research would be to

re-visit this sampled group once a more structured programme of online provision has been implemented in Israel. Additionally, the researchers do not identify how soon after the online learning began that the study was completed. There is no analysis of the students' personality traits nor levels of stress and anxiety prior to beginning their online learning. Finally, for many learners there was an ongoing exposure to Israeli-Palestinian conflict, including terror attacks that involved negative mental health consequences (Martin et al., 2013). It is suggested that some of these students may be failing to adjust to the pandemic due to their past traumatic experiences.

Verawardina et al. (2020) disagree slightly with Besser et al. (2020) and argue that online education is necessary to ease disruptions to education caused by the COVID-19 outbreak. In their literature review, the authors primarily refer to the experiences of Indonesian learners but highlight that UNESCO (2020) supported online learning across international HE institutions during the outbreak of the global pandemic by publishing a list of online apps and appropriate online learning platforms. Verawardina et al. (2020) emphasise the positive attributes associated with utilising online learning in Indonesia. They suggest it has economic advantages because HE students can potentially shorten their learning time. Furthermore, students can engage directly with the academic materials and instruction can be accessed at any time. The researchers acknowledge the limitations that are associated with online learning during the pandemic, however. In particular, fast Internet connections may be lacking in remote areas leading to a 'digital divide' between university students based on their locations (Verawardina et al., 2020, p. 391). In addition, a motivation to learn needs to be fostered amongst students. HE institutions need to encourage the socialisation of student groups engaging in online learning and teachers should avail themselves of training to master new technologies with which they may not be familiar.

Similarly, Liu et al. (2020) suggest that online learning platforms should be sufficiently represented in HE institutions. Their study compares popular distance learning platforms, whilst also presenting data collected from 40 semi-structured interviews with teachers from Russian and Chinese universities. After analysing online learning platforms such as Moodle, Open edX and NEO Learning Management System (LMS) for their system features, content support, content creation, user management and reporting systems, they found that Moodle was the most thorough learning platform (Liu et al., 2020). Similarly, after utilising the Moodle platform, 300 sampled undergraduates improved their attainment levels on testing that was issued both before and after implementing distance learning across a variety of subject areas. Respondents spoke favourably of applying distance learning technologies to aid learning, but researchers emphasise that the effects of online learning depend on proper planning and teaching (Liu et al., 2020). It was unfortunate, however, that this study had a small sample size and was completed without a control group or a pilot study.

O'Shea et al.'s (2015) qualitative narrative enquiry considers the effect online education had on adult university learners in HE institutions in Australia. Completed before the pandemic, it uses Pittaway's (2012) Engagement Framework to investigate strategies that were employed by students to remain engaged in online learning.

Whilst only having a small sample size of 38 questionnaire respondents and 19 interview respondents, this research is unique in that it also highlights literature that recognises the limitations of online learning. Specifically, the authors cite Saltmarsh and Sutherland-Smith (2010) who espouse that teaching represents more than 'content' (Saltmarsh & Sutherland-Smith in O'Shea et al., 2015, p. 42) and teachers' beliefs, values and practices are often disrupted when the course is delivered through technology (Saltmarsh & Sutherland-Smith in O'Shea et al., 2015). In addition to student disengagement when using technology (Hughes, 2007), teachers can also show reluctance to adapt (Dyment et al., 2013; Mitchell & Geva-May, 2009), with Salmon (2005) commenting that teaching is 'an individual and traditional craft' (p. 205) which may not translate to an online format. O'Shea et al.'s (2015) research gives a balanced view of the Australian HE student experience when working in DL contexts. Some sampled adult learners wrote that online discussion forums were 'unhelpful and largely a waste of time' (O'Shea et al., 2015, p. 50) if large numbers of students were present and the forums were unmediated. In addition, others wrote of opinionated and forceful students in chat rooms, which left classmates finding the experience of contributing to be 'daunting' (O'Shea et al., p. 50). Respondents commented that online learners were sometimes a lower priority than on-campus learners (O'Shea et al.) and that they did not feel engaged with the university. The majority of interview respondents voiced concerns over outdated materials, repetitive formats and poor structure (O'Shea et al.) but felt that the flexibility of the programme was a positive attribute, even though one student claimed 'I really taught myself… I just felt like I was teaching myself everything' (O'Shea et al., 2015, p. 52).

Fakinlede et al. (2015) investigated the readiness of Nigerian HE students to engage in online learning by considering if students possess the technological and independent learning skills that are necessary to be self-directed learners. They suggest that Nigerian universities will lose relevance and will not be able to compete with universities on a global scene (Fakinlede et al., 2015) if online technologies are not implemented. In addition, the authors cite Fabiyi and Uzoka (2008) who claim that 72% of Nigerian universities are over-enrolled, over-crowded and over-populated and facilities are over-stretched. Fakinlede et al. (2015) believe that Nigeria's higher education needs are not being met. This mixed-method study issued surveys and interviews to 119 Nigerian undergraduates studying a variety of specialist subjects at one university. Findings showed that students responded positively to the possibility of participating in online learning, but that Internet access was largely accessed via cyber cafes and on mobile phones due to poor online connectivity in Nigeria. The researchers would benefit from sampling a larger number of participants from a variety of Nigerian universities. However, there are many relevant points that were made in this study that are applicable to learners and teachers in different geographical locations.

Babcock et al. (2020) investigated how the online student mentoring process has altered because of the global COVID-19 pandemic. Their research examines how faculty at Northcentral University, a large American private online institution offering DL to students from 19 countries, supported learners to continue their studies

amidst their stress and challenges. Faculty noticed that students had added financial worries, a loss of study time and mounting concern about sick family members. The Dissertation Chair and Faculty Senator wanted to support home schooling parents and, therefore, implemented a series of Zoom video calls in which members of the leadership team read children's stories to allow working mothers the opportunity to 'have thirty minutes of downtime' (Babcock et al., 2020, 62). Additionally, staff coffee chats were formed to allow faculty to discuss how best to support students. Teachers discussed stories about learner experiences like one student who 'contracted the virus… but was trying to work on their assignment in the hospital until nurses confiscated their phones and laptop' (Babcock et al., 2020, p. 62). Babcock et al. (2020) found that faculty had a need for connection, support, community and resources. The research concludes that learners are helped if faculty acknowledge student circumstances during the pandemic. In addition, an 'incomplete' grade option enables learners to have more time to complete assignments (Babcock et al., 2020). Online meetings were recorded so that students could retain information more easily. Additionally, individual student emails from faculty members enabled learners to feel connected to the wider university community. Northcentral University has also implemented a virtual support centre to offer guidance through the development of podcasts, resources and blogs to teachers, as well as administrators and parents of school-aged children (Babcock et al., 2020).

Regulating British Higher Education Dance, Drama and Performance Courses

Universities in Britain are autonomous and responsible for their own standards (Coughlan, 2014) but since 1997 the QAA, a government appointed independent body, has maintained and enhanced the quality of university courses by reviewing the systems and standards of institutions (QAA, 2020a). Peer-led QAA reviewers work with stakeholders from regulatory bodies and student groups (QAA, 2020a) to offer advice and ensure the quality of university courses by addressing issues like course design, recruitment, learning and teaching methods, student participation, assessment, external examining, course updating, appeals and complaints, collaboration and research (McGhee, 2014). Reviewers ascertain whether providers are maintaining academic standards and quality as espoused in the UK Quality Code for Higher Education (UKSCQA, 2018).

In order to ensure comparable quality and standards across individual degree courses in institutions, the QAA also published criteria for each taught subject. The QAA's 'Dance, Drama and Performance' Subject Benchmark Statement (SBS) (QAA, 2019) describes the nature of these subjects and defines the academic standards that can be expected of graduates. SBSs provide general guidance for articulating learning outcomes but it is the university's responsibility to specify teaching, learning and assessment approaches. Subject statements aim to be sufficiently

generic with a wide range and diversity of provision (QAA, 2019) so guidelines are applicable in a number of third-level educational settings.

The 'Dance, Drama and Performance' SBS (QAA, 2019) details the characteristics of these specialist subject areas and then identifies their nature and scope by setting guidelines for the subjects' field of study. These should ideally include students engaging in practical work in a range of contexts, students partaking in critical studies and students developing their techniques and technical training for craft skills and development. In addition, students of dance, drama and performance should be exposed to the integration of emerging technologies into performance and be prepared for employment within performing arts industries (QAA, 2019).

The QAA emphasises the common features that should characterise dance, drama and performance degree programmes as seen in Table 1. For example, courses should typically demonstrate knowledge and understanding of the ways in which performance originates and emphasise the importance of 'acquisition of practice-based knowledge through physical engagement in technical exercises to develop skills in craft and technique' (QAA, 2019, p. 5). (See Table 1).

Additionally, dance, drama and performance undergraduates should be able to demonstrate knowledge and understanding in a range of areas as outlined in Table 2. Students should have a grasp of practitioners and practices, comprehending histories, forms and traditions of performance, and having a critical awareness of research methodologies.

There are also a number of subject-specific skill sets that undergraduate students of dance, drama or performance should acquire. These include making, creating and performing skills, being able to analyse and critically respond to materials, and demonstrating the ability to consider applications and participation (QAA, 2019). More generic skills should also be emphasised, as outlined in Table 3. These should include the ability to self-manage, have critical engagement, to communicate and present ideas and to use social skills when working in a group or a team (See Table 3).

Similar learning outcomes are expected of students across the performing arts subjects. The QAA (2019) states that teaching, learning and assessment will be underpinned by a commitment to inclusive practice and that experiential learning will be an important principle (QAA, 2019). However, the QAA emphasises that 'reasonable adjustments' may be made, when appropriate, in recognition of individual needs (QAA, 2019, p. 11).

Teaching and learning should take place in a variety of contexts and include a balance of exposure to workshops, rehearsals, productions, practical classes, studio-based practice, screenings, lectures, seminars, tutorials and web-based interactions (QAA, 2019). These will often be characterised by group and individual learning through work-based and resource-based learning with tutor-led and student-led study. Undergraduates will use subject-specific technology and experience professional events (QAA, 2019). Additionally, diverse modes of assessment techniques should be utilised when giving formative and summative feedback to BA students of dance, drama and performance. Ultimately, however, tutors should assess critical understanding knowledge, ability, technique, creativity, artistry and application

through both coursework and examination, whether in practical or written forms (QAA, 2019). In addition, the QAA (2019) insists that assessment should be valid and reliable, and should be supported by clear criteria for marking and grading (QAA, 2019).

Delivering Higher Education Dance, Drama and Performance Courses Through Distance Learning

Prior to the global pandemic, British universities indicated that they valued the benefits of offering dance, drama and performance courses through online platforms, as a variety of foundation, pre-degree, short courses and MOOC classes in the

Table 1 Common features that should characterise B.A. Dance, Drama or Performance degree courses

- Knowledge and understanding of the ways in which performance originates, is constructed, circulated and received; this may include 'embodied knowledge' and 'practice research'
- Acquisition of knowledge, skills and understanding through processes of research, action, reflection and evaluation of ethical practice and arts citizenship
- Acquisition of discipline-specific skills and techniques
- Acquisition of practice-based knowledge through physical engagement in technical exercises to develop skills in craft and technique
- Practical, workshop-based learning is normally a feature of all dance, drama and performance courses
- Practical learning can involve active participation in all, some or a combination of the following:
  - rehearsal/devising processes
  - craft skills/technique development
  - production
  - performance
  - digital media
  - production arts
- Reflecting the public and community nature of performance practice, particular emphasis may be placed on collaborative learning and heuristic principles, on 'learning through doing' in group contexts
- Study that may embrace analysis of theory and of performance texts, which may be written or notated. Equally, emphasis may be placed upon the study of the design and creation of performance as an event or process
- Research - practical and/or theoretical - is seen as a necessary requirement for engagement with all facets of performance and production practice and theory
- The location of practice within an appropriate framework of ideas, histories and skills

QAA (2019, 5)

Table 2 Knowledge, understanding and abilities that should be demonstrated by B.A. Dance, Drama or Performance graduates

- creative and intelligent engagement with forms, practices, techniques, traditions, histories and applications of performance
- creative and intelligent engagement with the key components of performance and the processes by which it is created, realised, managed, distributed and documented
- intelligent engagement with critical and theoretical perspectives appropriate to the study of performance
- intelligent engagement with key practitioners and practices and/or theorists and their cultural and/or historical contexts
- creative and intelligent engagement with the role and function of performance in social, educational, community and other participatory settings
- intelligent understanding of the interplay between critical and creative modes of enquiry within the field of study
- intelligent understanding of how to read and interpret texts, media, dance notations and/or scores to create performance
- creative and intelligent understanding of group and collective processes
- creative and intelligent understanding of key components of performance within the
- disciplines such as the role and function of ideational sources, performers, body, space, sound, text, movement and environment
- creative and intelligent understanding of appropriate interdisciplinary elements of dance, drama and performance and how to apply knowledge, practices, concepts and skills from other disciplines
- intelligent understanding of the responsibilities of performance practitioners to facilitate safe, environmentally sensitive, sustainable and ethical working practices

QAA (2019, 16)

performing arts were available online. Institutions realised that online learning could be used to teach many kinds of subjects to different populations in diverse settings (Bowen et al., 2013). Only two British HE institutions, Rose Bruford College and the University of Surrey, offered performance-based practical Dance, Drama or Performance BA degree programmes entirely through distance learning, however (DL portal, 2020). Theatre and drama are areas of performance and inquiry, which usually assume engagement and commitment to the ensemble or group process supported by individual input (Philip & Nicholls, 2007). Philip and Nicholls (2007) question whether ensemble dynamics can be brought into DL performing arts courses without careful design and implementation to foster an atmosphere and 'energy' that is usually only gained through the physical engagement of students, teachers and mentors.

Rose Bruford College (RBC) in London was the first UK University to offer a university-level degree in acting in the 1970s and is currently one of Britain's largest drama conservatoires due to its student body from over 40 countries and the variety of courses that it has on offer (RBC, 2020). Rose Bruford College believes that their teaching, learning and training ethos emphasises artistry, collaboration, community,

Table 3 Subject-specific and generic skills that should be demonstrated by BA Dance, Drama and Performance graduates

Engage creatively and critically with the skills and processes of performance and production, and have an ability to select, refine and present these in performance
Engage creatively and critically with the possibilities for performance implied by a text, dance notation or score and, as appropriate, to realise these sources sensitively through design and performance
Engage creatively and critically with the creation and/or production of performance through a developed and sensitive understanding of appropriate performance vocabularies, techniques, crafts, structures and working methods
Engage creatively and critically in appropriate independent research, whether investigating past or present performances or as part of the process of creating new performance
Identify and interpret critically the cultural frameworks that surround performance events and on which these events impinge
Have critical and analytical skills in developing ideas and constructing arguments and the capacity to evaluate and present them in a range of ways
Have a developed capacity to analyse and critically examine and evaluate forms of discourse and their effects on representation in the arts, media and public life
Be able to work creatively and imaginatively in a group and have the developed creative skills needed for the realisation of practice-based work
Be able to manage personal workloads efficiently and effectively, meet deadlines and negotiate and pursue goals with others
Have developed the ability to constructively and effectively manage creative, personal and interpersonal issues
Have acquired information retrieval skills needed to gather, sift, synthesise and organise material independently and to critically evaluate its significance
Have acquired and developed appropriate information technology skills, and have developed considerable awareness of their application and potential within the field of study

QAA (2019, 16–17)

discovery, diversity, employability, independence and professionalism (RBC, 2020) with face-to-face performing arts students making and producing over 75 shows a year. Their online learning practical Theatre Studies BA Honours degree can be completed over a period of 3 years for full-time study, or up to 12 years part-time study (RBC, 2018) and is awarded through the University of Manchester. The programme aims to enable 'anyone who is interested in theatre, but who cannot free themselves from commitments where they work and live, to study for a degree in Theatre at their own pace from home' (RBC, 2018, p. 4). They also hope to provide areas of opportunity for further study for those who wish to develop their careers in relation to theatre or the arts (RBC, 2018). Rose Bruford College intends for their online learners to have an awareness of theoretical, historical and contextual aspects of theatre and performance, and to be prepared for post-graduate study. The programme proposes to enrich students' experiences and appreciation of live theatre and production (RBC, 2018) and to provide students with a range of transferrable skills in analysis, research and communication.

The Theatre Studies BA Honours degree at Rose Bruford College adheres to the QAA's Dance, Drama and Performance Benchmark Guidelines (QAA, 2019) by

addressing the typical standards of knowledge and understanding, intellectual skills, practical skills and transferrable skills (QAA, 2019). Students complete written and practical coursework, keep reflective journals, complete assignments, watch webinars, engage in tutorials and participate in group forums. Modules cover subjects like 'Theatre at Work', 'The Critical Audience', 'Elements of the Performance', 'The Playwright', 'The Director', 'The Actor and the Realist Tradition', 'Greek Theatre' and 'Musical Theatre', amongst other topic areas (RBC, 2018, p. 10). In addition, assignments and coursework include practical elements like the filming of performance videos, sketches, presentations or audio excerpts. Many students completing the Theatre Studies BA degree at Rose Bruford College are professionals who work in the performing arts industries and so the degree content complements what they are doing in their professional practice. This is also the case for students earning their 1-year BA Honours degree in Theatre at the University of Surrey. As part of the Guildford School of Acting, the performance-based undergraduate degree course is entirely online and advertises that it enables professionals the opportunity to continue their studies whilst working in the performing arts industries (UoSurrey, 2020). Their course offers a range of modules from contemporary performer training and political theatre to musical theatre, playwriting, theatre design and choreography with an optional professional training placement. Learning materials are provided electronically, and students attend seminars, lectures and correspond via email and group forums. Assessment is based on a combination of examination and coursework, including essays and creative assignments working on playwriting, choreography, theatre design or musical theatre (UoSurrey, 2020).

Philip and Nicholls (2007) believe that performing arts courses can be successfully delivered online if they are designed to be as engaging, interesting and innovative as traditionally designed courses. In 'Theatre Online: The design and drama of e-learning' (Philip and Nicholls, 2007), they investigate the process of designing a five modular online course entitled 'The Genres of European Theatre' for undergraduates at an Australian university. Their action research study gathered findings from student evaluation data that were collated over a period of 3 years. Data were also collected through observations and the examination of discussion board posts, chat room content, emails, attainment results and questionnaire responses (Philip and Nicholls, 2007). Online course design and delivery were also the focus in Karakas et al.'s (2008) study investigating the design of 'Understanding the Visual and Performing Arts', a large undergraduate Humanities course at Florida Gulf Coast University in America. Originally delivered in a traditional face-to-face lecture-style format, the course started to be taught by part-time faculty and the consistency of the teaching and course materials tended to decline (Karakas et al., 2008). Consequently, the course was made entirely virtual in order to provide coherence whilst reducing costs. The new online course consisted of three self-directed modules emphasising both the visual and performing arts with a class textbook. Students completed multiple-choice practice tests, submitted written essays and completed examinations in the form of multiple-choice and short essay answers. Students also worked in peer learning teams of six students to participate in discussion forums (Karakas et al., 2008). To assess the effectiveness of the newly designed

course, faculty compared student assignment scores and student responses to course evaluations (Karakas et al., 2008). 'Since the redesign, overall course grade levels have been relatively steady in spite of much higher enrolment levels of over 400 students per course section' (Karakas et al., 2008, p. 203–204). Researchers feel that by switching to an online format students tend to demonstrate better content knowledge and application of skills. In addition, course material is being provided in a consistent manner to a large number of students, and student grades showed improvement (Karakas et al.).

The use of videoconferencing to deliver dance instruction to school-aged students in rural communities was the subject of Parrish's (2009) study. The researcher believes that videoconferencing allows for synchronous face-to-face instruction using two screens. 'At a distance, the dance teacher can watch the class perform a dance, provide coaching tips, lecture, ask questions, discuss solutions, and conduct guided improvisations' (Parrish, 2009, p. 5). Similarly, Weber et al. (2017) researched international dance collaboration using technological platforms. In their practice-led grounded theory research, the authors collected data from reflective journals, observations and interviews about their 'Project Trans(m)it' programme, aimed to aid artistic collaboration and the transmittance of embodied information, dance and movement via technology (Weber et al., 2017). After collaborating with colleagues in the USA and the UK online for over 100 hours, choreographic work was performed on stage using interactive video projection. Through their research, Weber et al. (2017) compiled a list of best practice highlighting limitations and practical concerns. Ultimately, they believe that digital technologies can enable choreographers to provide a rigorous physical and creative experience for the dancers and cultivate new collaborative ventures (Weber et al. 2017). They acknowledge, however, that dance has been slow to embrace digital technologies (Weber et al.), which is also purported by other dance researchers (deLahunta, 2002; Whatley & Varney, 2009) who believe that the practical art of dance does not always translate well to the online environment.

Altering Traditional British Higher Education Dance, Drama and Performance Courses in Response to the Global Pandemic

Whilst there are examples of performing arts courses that utilise digital technologies to deliver and enhance course content (RBC, 2020; UoSurrey, 2020), adapting British face-to-face undergraduate dance, drama and performance courses in response to COVID-19 was challenging due to the risk, complexity and uncertainly of the pandemic. British awarding bodies had to be conscious of physical environments and geographical challenges and in performing arts subjects the location and method of delivery needed to be adjusted to allow social distancing to take place. Teachers needed to assess students' work outside of normal practices for highly practical or studio-based subjects (QAA, 2020b). To support teachers delivering

British HE undergraduate performing arts courses, the QAA published 'Adapting to COVID-19: Smaller, Specialist and Newer Providers of Higher Education' (QAA, 2020b). In this supporting resource, the QAA states, 'the pivot to digital teaching and assessment and the need to bring emergency regulations in March [of 2020] affected providers from across the sector including the work of more specialist providers' (QAA, 2020b, p.1). Their document addressed a summary of the main teaching and learning issues that were unique to specialist institutions during the pandemic and it offered a series of case studies in the hopes of sharing good practice between providers.

The QAA (2020b) encouraged institutions to complete programme-specific risk assessments and to discuss timetabling, strategic planning, assessment and the feasibility of group teaching, practical work, trips, work placement and recruitment. The handbook outlined the particular challenges relevant to creative subjects and mentioned the problems with social distancing requirements for subject-specific concerns like voice projection or acting in close quarters (QAA, 2020b). They acknowledged, however, that it might be more appropriate to defer the completion of learning outcomes relevant to practical experience or develop alternative assessment. In addition, they encouraged institutions to consider the need to purchase additional equipment so that resources could be issued to students studying offsite as well as examining the safe use of onsite space in anticipation of a phased return to campus (QAA, 2020b).

Four performance arts, film and media case studies were detailed in the QAA's support resource (QAA, 2020b) with two pertinent to the undergraduate subjects of dance, drama and performance. Information about how the University of Bolton's Backstage Academy adapted their learning and teaching delivery explained how leadership team members assessed risks and then adjusted student holiday time whilst also teaching online for the remainder of the academic year. Tutors were concerned about how to test student knowledge and skills that would normally be assessed using industry standard equipment (QAA, 2020b). Consequently, they used online vivas in which students explained how they would address challenges posed by assessment scenarios. Additionally, lectures were delivered online and mobile apps with student discussion areas were designed using social media platforms. The conservatoire for dance and drama consists of six member schools based in Bristol, Leeds and London with courses validated through the University of Kent and the University of the West of England. At the onset of the pandemic, they set up a task force that met on a monthly basis to agree on a collective strategic response. They discussed how the use of screens, personal protective equipment, one-way walking systems and timetabling for group spaces allow for safe working and study settings when onsite. Student 'bubbles' and 'pods' were created based on living arrangements of students. In addition, virtual learning environments were used to deliver lecturers and for students to submit videos of independent practical work.

Reisz (2020) emphasises the fact that the pandemic poses a severe threat to the future careers of performers and this will likely impact university student enrolment. He states, 'Drama schools and conservatories could easily start to lose applicants if they are perceived as training people for jobs that are disappearing' (p. 1).

Reisz also comments that performing arts schools have had to respond to practical problems but that they are finding creative solutions. For example, public performances have been moved to 'digital spaces' to ensure audience safety. In rehearsals, performers have temperature checks at the door, wear masks and sanitiser in rehearsal spaces and air conditioning systems are switched to 'extraction mode' in large studios (Reisz, 2020). Additionally, students create social bubbles to avoid cross contamination. For example, he suggests that intimate moments should be captured through a touch, a look or a close pass by (Reisz, 2020).

University performing arts departments have compiled resources and guidance documents to help performers and students navigate uncertain times. For example, Loyola Marymount University in California produced a document entitled 'Teaching Theatre Online: A Shift in Pedagogy Amidst Coronavirus Outbreak' (Sicre, 2020) to encourage the sharing of good practice between teachers and practitioners. It suggests creating performance spaces on rooftops, in outside areas, or using video split screens to allow audiences to see the facial expressions and reactions of performers closely and at the same time. Reisz (2020) emphasises that major crises tend to generate creative responses and states that students have been involved in work that addresses the crisis, itself (Reisz, 2020). He cites initiatives like productions at London's Central School in which a series of video performances in response to living in lockdown explored refugee communities and the impact on teenagers. Reisz (2020) believes that when studies return to normal the performing arts will be stronger due to its blending of traditional skills with new technological advances. 'Flexible and adaptive artists [will be] capable of working across all platforms and those yet to emerge' (Reisz, 2020, p. 1). The effect that the pandemic has had on performing artists is also investigated in Neher's (2020) article. He suggests that practitioners will not know what live theatre performance will look like when it returns, nor who will be presenting it, nor who will attend (Neher, 2020). Neher tells of professional companies opening their archives to allow the public to access free recorded performances and of live-cast video performances, usually associated with fundraising endeavours. He adds that the need to create and communicate drives writers, designers, directors and actors but emphasises that, 'No replica, no video, no simulacrum can ever capture the power of live performance' (Neher, 2020, p. 292).

Beyond Times of Crisis: Teaching Dance, Drama and Performance Through Distance Learning

In 2020, HE institutions were forced to implement emergency education systems due to an international crisis caused by the COVID-19 global pandemic. 'HE is being pummelled by the COVID-19 pandemic. This spring's campus shutdowns led to a quick rush to remote learning, exposing the fragmented adoption of high-quality education technology and digital capabilities across thousands of colleges and universities' (Gallagher & Palmer, 2020, para.1.). In Britain, government documents

and advice (GovUK, 2020; QAA, 2020a, b; Universities UK, 2020) helped HE institutions quickly implement new methods of working that would enable students and faculty to remain safe whilst attempting to complete course schedules amidst evolving health and safety restrictions. Official statements emphasised the importance of protecting academic standards in all HE provision, however, with GovUK (2020) emphasising that providers maintain the quality of their tuition and that they also comply with registration conditions relating to quality and standards.

British HE institutions delivering face-to-face degree courses in dance, drama and performance worked hard to quickly adapt to new government guidelines in the hopes of keeping students and faculty members safe (QAA, 2020a) whilst maintaining their academically rigorous standards. Faculty in performing arts departments who had never implemented learning by technology started initiating the use of video conferencing, online discussion forums and social media group chat rooms to enable connections between learners and teachers (Neher, 2020; Reisz, 2020; Sicre, 2020). This was more easily achieved if courses were primarily 'theory'- or 'history'-based performing arts courses (Karakas et al., 2008; Philip & Nicholls, 2007), but it proved difficult to ensure the quality of 'practical' performance-based courses if adopting an entirely online context (deLahunta, 2002; Parrish, 2009; Weber et al., 2017; Whatley & Varney, 2009).

As this chapter points out, two British HE institutions, Rose Bruford College and the University of Surrey, delivered practical Dance, Drama and Performance BA degree programmes entirely through distance learning prior to the 2020 COVID-19 pandemic. Their performance-based BA Theatre Honours degree courses adhered to the QAA's Dance, Drama and Performance Benchmark Guidelines (QAA, 2019) and maintained the academic standards and quality required by the UK Quality Code for Higher Education (UKSCQA, 2018). The BA Theatre Honours graduates at these institutions demonstrated knowledge and understanding in a number of subject-specific areas as well as showcasing skills; both in general and also specifically pertinent to their practical performance disciplines (UKSCQA, 2018). The QAA's Benchmark Guidelines for Dance, Drama and Performance (QAA, 2019) acknowledge that performing arts courses of study are 'taught by a range of HE providers' and reflect 'breadth and diversity' (QAA, 2019, p. 3). Consequently, it can be assumed that performing arts courses delivered entirely through DL have the potential to demonstrate the academic standards and quality required by the UK Quality Code for Higher Education (UKSCQA, 2018) if they are well-designed and comprehensive.

It is worth noting, however, that although delivered entirely through online platforms, the Theatre Studies BA Honours degrees offered at the British HE institutions Rose Bruton College and the University of Surrey often enrol students who have already secured positions in performing arts industries. Both online degree programmes encourage practitioners who want to gain a degree whilst balancing their studies alongside their work and family commitments (RBC, 2020). In their web literature, A.D., a theatre designer, states, 'What I particularly valued was being able to apply my own knowledge and experience gained through my work as a theatre designer to the ideas, issues and assignments that arose throughout my degree'

(RBC, 2020, para 5). Thus, he/she insinuated that project work could be completed in a performing arts ensemble environment and then discussed in the online classroom. Long added, 'I'm currently employed as part of the entertainment team on a cruise ship and therefore I get the practicality of performing from my employment and the theoretical aspect through my degree' (RBC, 2020b, p. 15).

Even though these BA Honours degree courses are being taught through DL, students are able to collaborate with others in their professional practice and then reflect on their shared experiences in their college assignments. Although not technically considered to be 'hybrid' options, in which courses combine computer-guided instruction with traditional face-to-face teaching (Bowen et al., 2013), the inclusion of practical components through placement or work experience enables learners to experiment and rehearse in a practical setting with other performing arts specialists.

The autumn 2020 academic term marked a clear inflection point as British HE providers of undergraduate performing arts degree courses considered whether to continue their online or blended course provision beyond that of emergency education. Gallagher and Palmer (2020) believe that this moment will be remembered as a turning point between the 'time before when analog on-campus degree-focused learning was the default' (Gallagher & Palmer, para. 3) and the 'time after when digital, online, career focused learning became the fulcrum of competition between institutions' (Gallagher & Palmer, para.3). The Dance, Drama and Performance SBS (QAA, 2019) encourages 'live and recorded' (p. 3) modes of performance and the study of

> work which integrates a variety of modes of performance and creation… including other media, digital arts and new technologies, and interdisciplinary and intermedia performance… the boundaries of the performing arts dissolve as new practice and processes challenge existing conceptions. (QAA, 2019, 4)

The QAA (2019) believes that 'it is vital that any definition of the subject does not constrain future innovation' (QAA, p. 4). Therefore, when considering the common features that should characterise practical BA Dance, Drama or Performance degree courses (See Table 1), those taught by DL can still demonstrate 'Acquisition of practice-based knowledge through physical engagement in technical exercises to develop skills in craft and technique', 'Practical, workshop-based learning' and participation in 'rehearsal/devising processes', 'craft skills/technique development', 'production' and 'performance' (QAA, 2019, p. 5), albeit through the completion of recorded individual project work, collaborative online rehearsal meetings and the assessment of pre-recorded or live video performances (RBC, 2020a; Parrish, 2009; Sicre, 2020; Weber et al., 2017).

Whilst many British practical BA Dance, Drama or Performance degree courses employed online technology to deliver creative and innovative lessons during the global pandemic, the fact remains that physical group work is an important component of the performing arts. Even though ensemble work can still be achieved by individuals working remotely using technology, after pandemic restrictions have been lifted undergraduate course designers should consider whether they are

disadvantaging learners if students are not required to physically interact with others. Weber et al. (2017) believe that young dancers and artists have technology as a constant presence in their lives. They state that 'students' approaches to personal creative philosophies will reflect this impact [and students will] utilise the technologies they have to inform their choreographic pursuits' (Weber et al., 2017, p. 119-120). However, using technology to *enhance* performance differs from performing solely through the *use* of technology. Replacing traditional face-to-face collaboration would negatively affect both the performer and the audience.

Anderson and Risner (2008) believe that technology sparks creativity through opportunities for collaboration and this fuses technology with innovative approaches, which ultimately create a stronger performance (Anderson & Risner, 2008). Supporters of integrating technology in the learning and teaching of dance, Weber et al. (2017), disagree with this, however. They recognise limitations if learning performing arts subjects entirely in an online context. Weber et al. (2017) describes how technology can change dancers' movements and sense of embodiment.

> The art, process and effects of live performance are incredibly important in the current world of social media, digital technology and screens… being fully present with a group of tangible, living, breathing people is important to the art of acting and for the human spirit. (ASC, 2020, para.1)

Whilst it has been proven that practical performance-based British Dance, Drama and Performance undergraduate degree courses *can* be delivered solely through DL (RBC, 2018, 2020, UoSurrey, 2020), the question remains whether they *should* be delivered in this context, beyond emergency education. 'Nothing can replace sharing the same space, breathing the same air, with a group of performers' (Neher, 2020, p. 292). Rose Bruford College and the University of Surrey deliver successful practical Dance, Drama and Performance BA degree programmes entirely through distance learning, but undergraduates still have the opportunity to participate in face-to-face practical work placements to apply their skills. It is imperative that future online performing arts courses enable learners to gain practice-based knowledge, skills and understanding (QAA, 2019) through face-to-face ensemble experiences, which could then be reflected upon and discussed in the online classroom. 'Theatre is a shared experience. Audience and performers agree to suspend their disbelief and journey somewhere together. It is a temporary kind of community' (ASC, 2020, n.p). The relationship between the performer and the audience cannot be underestimated in a live performance and it is one that is not fully realised in an online context. DL offers learners the opportunity to avail of flexible and affordable undergraduate education, but students of the performing arts need to 'share spaces and experiences with artists who are performing… and with fellow audience members' (ASC, 2020, para.2). Only then can they appreciate the essential 'atmosphere' and 'energy' that is fostered through the interplay of students, teachers and other mentors within the learning space (Philip & Nicholls, 2007).

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Covid-19 and Emergency Education Strategies in University of Ghana: Students' Challenges with Emergency Remote Learning

Ernest Ampadu and John Sedofia

Introduction

Since World War II, the world has witnessed several incidents that have disrupted the education of children and adults alike. Between the years 2014 and 2018, for instance, attacks on education were recorded in 87 countries across the globe with the education of over 35 million children affected (UNESCO, 2020). Despite the many challenges such as inadequate resources, unqualified teachers, natural and artificial disasters which are associated with the provision of educational opportunities, the year 2020 will be remembered as the year that COVID-19 savaged most educational systems in the world (Trines, 2020). According to the United Nations (2020), the pandemic has 'created the largest disruption of education systems in history, affecting nearly 1.6 billion learners in more than 192 countries' (p. 2).

The global disaster led to the closure of schools and disruptions of school academic calendars and cancellation of examinations at all levels, compelling most educational institutions to take critical decisions on how to keep offering education without endangering their community (Gyampo et al., 2020). In response, most institutions moved their education delivery from the traditional face-to-face mode to online learning (Vlachopoulos, 2020) to prevent learning loss. Although COVID-19 is a global pandemic that affected the educational sector, the right to education is considered a human right; hence, it should not be curtailed. During disasters, it may be challenging to achieve all rights, but the right to education cannot be ignored because of the importance of education for individual and national development.

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Therefore, educational authorities worldwide must implement strategies to reduce the effects of this pandemic on education. Despite the adverse effects of the pandemic on our global educational system, the crisis has stimulated innovation in the educational sector where schools and educational authorities had to work hard to create a platform for providing emergency educational opportunities for learners (United Nations, 2020). The transition to non-face-to-face delivery of instruction at all levels of the education system has become a novelty in most countries, including Ghana, where virtual learning opportunities have not been fully integrated into its educational system.

Background of the Study

Nhando (2015) underscored the prevalent issue of poor Internet access/connectivity as a major challenge facing the effective implementation of e-learning modalities in Africa. According to a United Nations Broadband Commission report cited by Nhando, eight out of ten countries with the lowest levels of Internet availability in the world are found within the sub-Saharan region. This challenge, which largely has a negative effect on students' online learning experiences, is consistent with other similar findings from studies conducted in Africa and other developing nations (Aung & Khaing, 2016; Letseka et al., 2018). Batty and Hall (2020) have also identified how the shift to online teaching and learning could become a major hindrance to the learning progress for some students from poorer backgrounds, students with caring responsibilities and those with disabilities if the right frameworks are not created to help them.

In Ghana, for example, all schools were closed around 16 March 2020 because of the pandemic. After the closure, school authorities had to find alternative ways of helping students at all levels of education to complete their academic work so that those who must graduate could do so. Consequently, different forms of emergency education strategies were put into place. Online teaching and learning is one of the strategies. The University of Ghana has the Sakai Learning Management System (LMS) that it uses for teaching and learning. However, Sakai's use has not been stretched to its fullest until the University decided to embark on online teaching and learning to help complete the rest of the semester and the academic year. The University of Ghana successfully completed the semester, but we conjecture that this did not happen without challenges. To the best of our knowledge, no study was cited that dealt with students' online learning challenges at the University of Ghana. Guided by this, the present study, therefore, asked the following questions:

1. What challenges do students face in emergency remote learning?
2. How can the challenges associated with emergency remote learning be addressed?

Hopefully, this study's findings might uncover any challenges that students might have faced while learning remotely. Ultimately, the study will proffer some solutions, which, if implemented, would help to improve the experience of students in learning remotely and lead to the attainment of the global goals on quality inclusive education for all.

Theoretical Framework and Empirical Studies

The Concept of Emergency Education

Access to education is considered a basic human right. The development of a country's human capital through education has become the surest way of providing individual and national development in many countries. The concept of emergency education has been examined from different perspectives. According to Sinclair (2001), emergency education refers to education for populations affected by unforeseen situations such as armed conflict or natural disasters. As highlighted earlier, access to education is a basic human right and is linked to better lives for children and youth; hence, these rights cannot be ignored no matter the situation or condition. Education in emergencies provides immediate physical and psychosocial protection and life-saving knowledge and skills (UNESCO, 2015).

In another definition by UNESCO (1999), emergency education could be described as all forms of educational opportunities provided during a crisis created by conflicts or disasters, which have destabilised or destroyed the education system of a country or place. In addition to this, Pigozzi (1996) also defined emergency education as any form of education arranged for and with children, whose lives might have been affected by conflict, natural disasters or pandemics. Nicolia (2003) also defined emergency education as a 'set of linked project activities that enable structured learning to continue in times of acute crisis or long-term instability' (p. 11). From the above discussions, it could be concluded that emergency education encompasses all forms of ad hoc educational opportunities created for people who, because of conflict, natural disasters or pandemics, are not able to have access to and benefit from formal education.

Challenges of Online Learning

Despite the numerous advantages associated with online teaching and learning, research has shown that different contextual factors affect students' participation. For example, Kjargaard (2017) argued that it is not only the online activities in blended learning that provide new opportunities for rethinking pedagogy in higher education but also it is imperative to reconsider the face-to-face activities when part of the learning is provided online. Kjargaard was of the view that despite the advantages of using online teaching and learning, the critical role that face-to-face learning plays in the teaching–learning process cannot be underestimated. Nortvig et al. (2018) examined the factors that influence learning experiences in e-learning, online learning and blended learning. They established that many factors influence the learning experiences of students in an online learning environment and identified the following as the main factors: educator presence in online settings, interactions between students, teachers and content, and designed connections between online

and offline activities as well as between campus-related and practice-related activities.

Ja'ashan (2020) examined the challenges and prospects of using e-learning among EFL students and established that students faced academic, administrative and technical challenges. Ja'ashan explained that a common challenge reported by the students had to do with technical issues with regard to navigating through the Learning Management System, as most students had to ask for support before they joined or engaged meaningfully in the online teaching process. Kanwal and Rehman (2017) in their analysis of factors affecting e-learning adoption in developing countries established that system characteristics were significant in influencing ease of use and usefulness. Moreover, computer anxiety and organisational accessibility also emerged as major factors that had a significant influence on students' learning experiences.

The implementation of e-learning in developing countries including Ghana has always been an issue of concern for many. Differences exist between developed and developing countries in the challenges and opportunities of online learning (Adnan & Anwar, 2020; Naresh & Reddy, 2015). Tarus et al. (2015) examined the challenges of implementing e-learning in Kenya. The challenges they identified include infrastructural (inadequate ICT and e-learning infrastructure), fiscal (financial constraints, expensive and inadequate Internet bandwidth), policy (lack of operational e-learning policies), technical (lack of technical skills on e-learning and e-content development by teaching staff), human (lack of interest and commitment among the teaching staff, and a longer amount of time required to develop e-learning courses). They observed that although most of the factors were related to institutional factors, students were the ones who suffered the consequences of these inefficiencies and inadequacies. The study recommended (a) expansion of ICT and e-learning infrastructure; (b) prioritisation of ICT and e-learning in budgetary allocations; (c) formulation of appropriate and operational e-learning policies; (d) comprehensive training for lecturers; and (e) identifying a way of motivating the teaching staff to use e-learning and convert their course materials to e-content.

Similarly, Kisanga and Ireson (2015) examined the barriers and strategies in the adoption of e-learning in Tanzanian higher learning institutions and identified five main barriers: poor infrastructure; financial constraints; inadequate support; lack of e-learning knowledge and teachers' resistance to change. They, therefore, recommended the need for training for teachers and administrators, and the provision of financial, technical and managerial support geared towards the adoption of e-learning for the teaching and learning in institutions of higher learning.

Another study by Makokha and Mutisya (2016) has also established that the majority of universities lacked approved e-learning policies to guide structured implementation. A few lecturers (32%) and students (35%) used e-learning and few courses (10%) were offered online. Majority of online uploaded modules (87%) were simply lecture notes and not interactive. The results also established that, like in most African universities, universities in Kenya lacked the requisite ICT infrastructure. The study recommends that universities partner with the private sector to improve ICT infrastructure, build capacity and standardise e-learning programmes

in the country. Bagarukayo and Kalema (2015) in their evaluation of eLearning usage in South African universities established that learners had challenges with infrastructure, access, shortage of skilled instructors and instructor difficulty to create content.

Additionally, Quadri et al. (2017) analysed the barriers affecting the successful implementation of e-learning in Saudi Arabian universities. They identified three main factors: student, instructor and institutional related factors as the main barriers. The student-related factors included lack of ICT skills, lack of e-learning knowledge, lack of English language proficiency and lack of motivation. The instructor-related factors included lack of ICT skills, lack of e-learning knowledge, instructors' resistance to change, lack of time to develop e-courses and lack of motivation. On the other hand, institutional-related factors had to do with, lack of financial support, inadequate policies, lack of e-learning training and lack of instructional design. Institutional-related factors were the most common type of challenges, followed by student-related factors. They, therefore, recommended that there is the need for all institutions to pay more attention to the above factors to ensure a more successful implementation of an e-Learning. From the above discussions, it is clear that institutional factors continue to be the major challenges that educators and learners face during online learning and this happens to be the main issue of concern in most developing countries where institutional policies and resources are not readily available for easy implementation of e-learning.

From the extant literature, online learning challenges can be categorised as emotional, behavioural, technical, competency, policy and resource-related issues. The findings from the literature discussed above suggest that students and educators face a number of challenges as they try to teach or learn using the different e-learning platforms. However, a critical analysis of the literature within the context of the developing world suggests that policies and resources continue to be the major challenge. For example, studies by Aliyyah et al. (2020), Allo (2020), Bagarukayo and Kalema (2015), Ferri et al. (2020), Makokha and Mutisya (2016) and Quadri et al. (2017) all attest to the fact that students from different African countries indicated that they experienced emotional, behavioural, competencies, technical and policy- and resource-related challenges in their quest to learn online. In addition, Aguilera-Hermida (2020) showed that motivation, self-efficacy and cognitive engagement decreased after the transition. On their part, Simamora (2020) discovered that anxiety and emotional disturbances posed challenges to students who learned online during the COVID-19 closure of schools. However, as highlighted by Naresh and Reddy (2015), students' ability and readiness to learn online is highly influenced by the institutional policies and resources. Therefore, no matter the number of online learning tools that the individual student may have or may be able to acquire, there is the need for robust and viable institutional policies and resources that help in the implementation of such online learning systems. Figure 1 represents the five main categories of challenges that different students from different contexts may face.

Figure 1 summarised the online learning challenges into emotional, behavioural, technical, competency and policy- and resource-related barriers. Due to reduced human interactions, learning online can exert some emotional stress on individuals.

Fig. 1 Categories of online learning challenges

Some people may lack the necessary motivation to learn online. Others may simply fear to learn online or use new technologies to learn. Behavioural and social support are equally important. Time management and adapting to online learning are issues that can pose a challenge to people if the right behavioural support is not provided. Learning successfully online also requires some critical skills and competencies like the ability to type and edit text, surf the Internet and send and receive emails. Furthermore, appropriate and affordable IT infrastructure and an effective support staff are essential in online learning. Nevertheless, all of the above depend largely on the availability of the requisite policies and resources at the national and institutional levels. Without the necessary technical, emotional and behavioural support backed by relevant competencies and strong polices, learning online would be less beneficial.

Based on the model (Fig. 1) above and the fact that there is a difference in the challenges faced by students in developed and developing countries regarding online learning (Naresh & Reddy, 2015), we argue (see Fig. 2) that the online learning challenges in developed countries are likely to be mainly emotional and behavioural in nature. This could be attributed to the fact that the policies and resources, technical support and competency levels have already been fulfilled in developed countries. According to Naresh and Reddy (2015), the development of e-learning is the responsibility of government and concerned institutions. They added that it is for this reason that the UK government has set up a Quality Assurance Agency (QAA) board to regulate the activities of institutions involved in the provision of online education. Similarly, Nawaz and Qureshi (2010) have also shown that with the coming of different online learning platforms, learning has become flexible and provided all learners with various options, which may become a threat to the profit-oriented institutions. Conversely, developing countries are likely to be faced with competency, technical and policy- and resource-related challenges because Sub-Saharan Africa faces more fundamental challenges than developed countries. This is captured in Fig. 2.

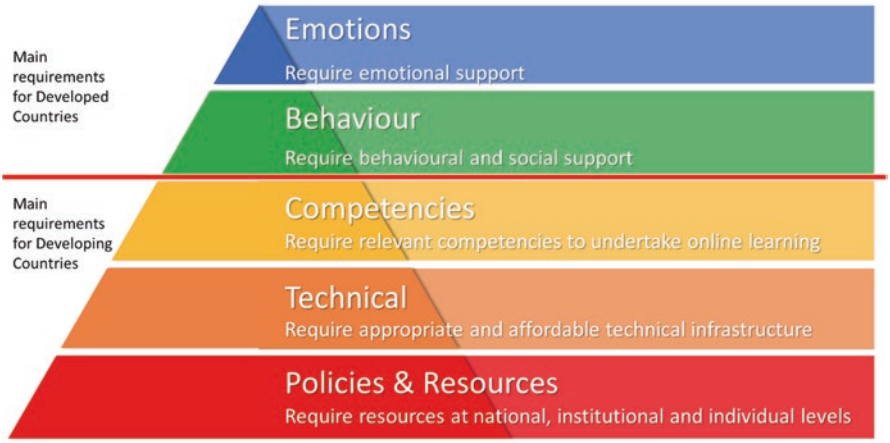

Fig. 2 Online learning challenges of developed and developing countries

Despite these challenges, governments and educational authorities have no option than to provide opportunities for all learners as a human rights requirement. Every country desires to achieve Sustainable Development Goal 4, which aims at providing inclusive and equal educational opportunities for all. Therefore, the ever-changing needs and aspirations of our society call for effective and sustainable measures for engaging all learners even during pandemics.

Methods

The primary purpose of this study was to investigate the challenges that the University of Ghana students faced in emergency remote learning during the COVID-19 pandemic. In line with this purpose, the researchers used the descriptive survey design. The researchers collected data from the University of Ghana students on the challenges they faced while learning remotely during the closure of the university and how the identified challenges could be addressed, to summarise their responses and to be able to draw inferences about the population (Fraenkel et al., 2019). A descriptive survey design was used mainly because it helped to answer the research problem, it is less expensive, and affords a rapid turnaround in data collection compared to other designs such as experiments (Creswell & Creswell, 2018).

The target population for the study was all University of Ghana students. Two hundred and sixty-five undergraduate and postgraduate students made up of 142 (53.6%) females and 123 (46.4%) males were selected through simple random sampling. The mean age of the respondents was 20–25 years.

The main instrument for data collection was a 20-item researcher-made questionnaire. Nineteen of the items on the questionnaire were closed and rated the respondents' views on a five-point scale on the challenges they faced during the

online learning period. Item 20 was open-ended and sought from the respondents what could be done to address the challenges. The instrument was developed based on the literature, especially from Sub-Saharan Africa. The Cronbach Alpha reliability estimate of the questionnaire was 0.71. The data collection process started when the university closed and directed that all teaching and learning activities should be conducted online in line with COVID-19 protocols. The questionnaire was placed in Google document forms and circulated among the respondents. In the end, 265 students completed it.

In line with the purpose and design of the study, the data gathered were analysed using descriptive statistics. For research question one, frequencies and percentages were used to determine the challenges faced by students during online learning. Again, data for research question 2 were organised into themes, and frequency counts taken for each theme.

Results

RQ. 1: What challenges do students face in learning online?

The answer to research question 1 was sought by asking respondents to use a five-point Likert scale (strongly agree, agree, neutral, disagree and strongly disagree) to rate their challenges in learning online. For ease of analysis, however, the five-point scale was disaggregated into three (agree, disagree, neutral). The results are summarised in Table 1.

The data in Table 1 show that students experience a number of challenges during emergency remote learning. The data indicate that the topmost challenges students faced are fiscal (high Internet data cost, 94.3%), technical (slow Internet connectivity, 90.6%), policies and resources (concerns about the quality of online learning, 87.2%; weak technical support for online learning, 81.9%) and emotional (students' lack of motivation to learn online, 80%). On the other hand, the data reveal that the least challenges of students regarding online learning are emotional (students' fear of using the technology to learn, 43%), policies and resources (lecturers' lack the resources to teach online, 47.6%) and behavioural (students' are not able to adapt to online learning, 48%). Additionally, they were concerned about competencies (lecturers are not comfortable teaching online, 49.5%) and policies and resources (local regulatory agencies prefer conventional education rather than online education, 49.8%). In view of the numerous challenges ascribed by the respondents regarding online learning, an independent t-test was conducted to establish whether there is any relationship between gender and the challenges that students faced. The result is displayed in Table 2.

Table 2 compared the online learning challenges of female and male students. The results show that although female students ascribed more positively to the

Table 1 Challenges students face in learning online

Categories	Challenges of online learning	Agree	Disagree	Unsure
Emotional	Students lack the self-motivation needed to learn online.	212(80%)	26(9.8%)	27(10.2%)
	Students have a fear of using technology to learn.	114(43%)	91(34.4%)	60(22.6%)
Behavioural	Students are not able to adapt/change to learn online.	170(48%)	48(18.1%)	47(17.7%)
	Students are not able to manage their time effectively when they learn online.	211(79.6%)	23(8.7%)	31(11.7%)
Competencies	Students do not have the computer literacy skills to learn online.	148(55.9%)	51(19.3%)	66(24.9%)
	Lecturers are not comfortable teaching online.	131(49.5%)	38(14.3%)	96(36.2%)
Technical	The Internet is too slow.	240(90.6%)	17(6.4%)	8(3%)
	Sessions keep on timing out.	220(83%)	30(11.4%)	15(5.7%)
	There is no easy access to the Internet.	189(71.4%)	49(18.5%)	27(10.2%)
	The University's learning management system is not user-friendly.	134(55.8%)	78(29.4%)	53(20%)
Policies and resources	Students do not have personal computers or handheld devices (smartphones).	157(59.3%)	56(21.1%)	52(19.6%)
	Lecturers lack the resources to teach online.	126(47.6%)	59(22.3%)	80(30.2%)
	There is weak technical support for both lecturers and students during online teaching and learning.	217(81.9%)	19(7.2%)	29(10.9%)
	The online infrastructure in the university is not robust enough.	201(75.8%)	16(6.1%)	48(18.1%)
	Central administration does not commit enough resources to online teaching and learning.	164(61.9%)	32(12.1%)	69(26%)
	Local regulatory agencies like the National Accreditation Board have a preference for more conventional education rather than online education.	132(49.8%)	12(4.5%)	121(45.7%)
	There is no clear-cut institutional policy on online education.	181(68.3%)	16(6%)	68(25.7%)
	There are concerns about the quality of online teaching and learning.	231(87.2%)	11(4.2%)	23(8.7%)
Fiscal	Internet data are too expensive.	250(94.3%)	14(5.3%)	1(0.4%)

Table 2 Relationship between gender and students' online learning challenges

Gender	N	Mean	SD	df	t	p
Male	142	3.80	1.02	263	–12.22	0.38
Female	123	3.90	0.94			

$P < 0.05$

statements that they encounter more challenges, there was no statistical difference between the male and female students on the challenges that they face learning remotely (M = 3.80, SD = 1.02) and (M = 3.90, SD = 0.94), [$t_{(263)} = -12.22$, $p = 0.38$]. These findings are, however, contrary to the findings from Anderson and Haddad (2005) who established that female students appeared to be are less hesitant to engage in the online environment, felt they had more control over their learning and found the mode a positive experience as compared to their male counterparts. Similarly, a study by Selwyn (2007) involving some 406 university students also suggested that despite the challenges that female students face learning online, female students were more receptive to online learning than male students.

RQ 2: How can the challenges associated with online learning be addressed?

To answer research question 2, each respondent was asked to suggest two ways in which the challenges of online learning can be addressed. The responses are summarised in Table 3.

Table 3 captures the views of 259 respondents on how to address challenges associated with emergency remote learning at the University of Ghana. The data indicate that the top three ways of addressing the online learning challenges are reducing the cost of Internet data (31.3%), allowing more time and flexibility in teaching, learning and assessment (20.5%) and improving Internet connectivity (18.5%). However, four of the respondents (1.5%) suggested that technical support should be provided for faculty and students during online learning. These revelations agree with the data in Table 1 that data cost and slow Internet connectivity are among the students' biggest challenges during the online learning period. It is also interesting to note that the respondents suggested that teaching, learning and assessment should be made more flexible and more time should be allowed for them although they did not specifically mention that as a challenge.

Table 3 How to address challenges associated with online learning

Categories	Addressing online learning challenges	Freq.	%
Policies and resources	Improve Internet connectivity.	48	18.5%
	Upgrade Sakai LMS to make it more robust.	14	5.4%
	Provide laptops, smartphones and other handheld devices.	26	10.0%
	Faculty should use other online learning platforms.	5	1.9%
	Allow more time and flexibility in teaching, learning and assessment;	53	20.5%
Training/technical support	Educate and train faculty and students in online teaching and learning.	28	10.8%
	Provide technical support for students and faculty.	4	1.5%
	Reduce data cost.	81	31.3%

Discussion

In this study, we set out to investigate the challenges that University of Ghana students encountered in emergency remote learning during the COVID-19 pandemic closure of schools and to find ways of addressing the challenges identified. The findings in Table 1 revealed that the students were confronted with a myriad of challenges in emergency remote learning. These challenges include fiscal (high data cost), technical (weak Internet connectivity), policies and resources (poor online infrastructure, absence of institutional and national level policies on online learning, some students lacking computers and smartphones, inadequate technical support for students and faculty members) and competencies (some faculty members not feeling comfortable teaching online). The greatest challenges students faced are fiscal (expensive Internet data), technical (slow Internet connectivity), policies and resources (disregard for online education, weak technical support for online learning and students' lack of motivation to learn online).

Over 90% of the respondents reported that their greatest challenge with learning online was high data costs. This finding confirms Chinembiri's (2020) assertion that in spite of lowering mobile data charges in South Africa, the cost of data was still high. It is further supported by the study of Tarus et al. (2015), which found that expensive and inadequate Internet bandwidth was among the challenges of implementing e-learning in Kenya. The cost of Internet data in Ghana, like many parts of Sub-Saharan Africa, is considered too high.

During the online learning programme, the University management provided 5 GB of Internet data to all students and faculty members on a monthly basis. However, most students complained that the data ran out quickly, forcing them to buy their own Internet data at expensive rates. The current average price of 4 GB Internet data bundle in Ghana is 20 Ghanaian Cedis (Ghc 20.00), equivalent to 3.44 US Dollars. Furthermore, a conversation between one of the researchers and the students revealed that a minimum of about 20 GB of data was needed to learn online in a month. This, for many students, imposed increased financial hardships on them and exacerbated their already precarious financial situations. As faculty members, the researchers themselves had to buy expensive Internet data to supplement the University's data bundle in order to be able to teach and work online from home. It is thus not surprising that the students rated data cost as the greatest of their challenges.

In addition, 90.6% of the respondents disclosed that slow or weak Internet connectivity posed a big challenge to them during the online learning period. A number of studies corroborate this finding (Akinlolu, 2018; Busulwa & Bbuye, 2018; Osuagwu et al., 2013; Pastor, 2020). In a developing country like Ghana, where Internet penetration is not as high as what pertains in the developed world, weak Internet connections, slow Internet speed and intermittent cuts characterise surfing online. This situation led to many of the students being logged out during synchronous sessions or during assessments. Sometimes, the students could not get back online. This finding, thus, runs counter to the contention by Kotouaa et al. (2015)

that Ghana has much better access to the Internet and other resources. It is, however, important to indicate that the connection challenges students faced might have been occasioned by heavy Internet traffic during the school closures when schools across the globe had to move their lessons online. This issue, thus, needs to be probed further.

In addition, 87.2% of the students reported that they experienced challenges with concerns about the quality of online learning. Probably because the Internet penetration level in Ghana is comparatively low, and online learning is not widespread, there is little regard for online education. Face-to-face education is more highly rated. Emergency remote learning is thus considered to be inferior. The revelation by 49.8% of the students that local regulatory agencies like the National Accreditation Board (the government agency that accredits educational programmes and institutions in Ghana) prefer conventional education gives credence to the assertions. Kyei-Blankson et al. (2019) argued that in spite of the popularity and expansion of online education, there are concerns about its quality, rigour and equivalence to conventional learning or education. Kotouaa et al. (2015) also observed that many people still do not perceive online education in a positive light. Factors like satisfaction, confirmation, user involvement, system quality, information quality, feedback and perceived benefits had some effects on technology use (Panigrahi et al., 2018).

The present study further found, in tandem with O'Doherty et al. (2018) and Zheng et al. (2018), that weak technical support for online learning (81.9%) was a challenge for students. Technology use, particularly in an online learning environment, requires adequate technical support. This is because, despite its widespread use, new technologies for teaching and learning are released every now and then. It is therefore important that technology users in education are provided with the needed technical support to help them overcome the usage challenges they face. Rasheed et al. (2020) found that one of the major challenges that students faced was how to use technology to learn.

Similarly, Ja'ashan (2020) revealed that a common challenge faced by students engaged in online learning had to do with technical issues where most of them had to seek support before they could join or engage meaningfully in online learning. As users of educational technology, the authors noticed that some of the challenges with online teaching and learning had to do with operational difficulties. Those challenges were often resolved easily with the right support from support staff or a technologically savvy person. The absence of technical support and fear of embarrassment can combine to give people online learning headaches.

'Motivation for learning is a driving force that leads the student forward, which activates the creative potentials of the student, awakens the awareness of their own power in achieving the real set, measurable goals' (Mitkovska & Popeska, 2020, p. 222). Unfortunately, students' lack of motivation to learn online was reported by 80% of the respondents as a significant challenge. In line with this finding, Kanwal and Rehman (2017) agreed that computer anxiety significantly influenced students' online learning experiences. In the present study, the reason for the students' lack of motivation is not immediately known. The authors are not sure whether the other online learning challenges students faced demotivated them. However, because the

current generation of students are more technologically inclined than their counterparts a decade ago, there is a need for further research to explore more fully the issue of motivation and online learning.

In the present study, we asked respondents to suggest ways in which the challenges associated with learning online could be addressed. Our findings (Table 2) revealed that the students believe that improving the strength of Internet connectivity; providing technical support for students and faculty; reducing Internet data cost; upgrading the Sakai LMS; providing laptops and smartphones for students could help to resolve the challenges. They also suggested that allowing more time and flexibility in teaching, learning and assessment; educating and training faculty and students on online teaching and learning; and employing other online learning platforms could help to resolve the challenges. Thus, to address the challenges associated with emergency remote learning, policies, resources, training/technical support and adequate finances are needed.

From Table 3, 31.3% of students believe that reducing the cost of Internet data would go a long way in solving the online learning challenges identified. This revelation is not surprising because, from Table 1, 94.3% of the students said that expensive Internet data were their biggest challenge. However, what is curious is that the University management provided a 5 GB free Internet data for the students. Had that not been done, the situation would have been more precarious. Since Internet data are expensive across Africa (Chinembiri, 2020; Tarus et al., 2015), the issue of expensive data has to be examined critically.

Furthermore, 20.5% of our respondents stated that in order to solve the online learning challenges, teaching, learning and assessment should be made more flexible and more time allowed for them. Some of the students complained about the fixed nature in which some faculty conducted their teaching and assessment, leaving some of the students cut off from the process. Indeed, 79.6% of the students (see Table 1) said that they were not able to manage their time effectively in learning remotely. It is not clear whether this has anything to do with the flexibility suggestion. However, as faculty, we reckon that some of our colleagues did not go about emergency education in a flexible manner. Huang et al. (2020) contend that in order to promote easy, engaged and effective learning, teaching and learning need to be flexible, not fixed. To make teaching and learning more flexible, comprehensive training for lecturers (Tarus et al., 2015) and building capacity and standardising e-learning programmes (Makokha & Mutisya, 2016) may be required.

Improving Internet connectivity was also suggested by 18.5% of the students as a way of addressing the online learning challenges. The data in Table 1 indicate that the majority of the students experienced Internet connectivity challenges (the Internet is too slow – 90.6%; sessions keep on timing out – 83.0%; there is no easy access to the Internet – 71.4%). It is, therefore, to be expected that the students are calling for the connectivity challenges to be addressed. During the school closures, the students learned from home. University of Ghana students come from different parts of the country, rural, peri-urban and urban. Some of the students did their online learning from rural Ghana where Internet connectivity is non-existent or poor. The Ghana Statistical service's (2015) projection that only 23.5% of the

Ghanaian population uses Internet supports the call by the respondents in the present study to improve Internet connectivity.

At the heart of the Internet, connectivity challenge is the issue of infrastructure. Strong Internet infrastructure is required to support nation-wide Internet connectivity. Several studies found Internet connectivity and infrastructure as major challenges facing online learning (Bagarukayo & Kalema, 2015; Makokha & Mutisya, 2016; Pastor 2020; Quadri et al., 2017; Tarus et al., 2015). As concluded by Huang et al. (2020), 'Ensuring reliable network infrastructure, which can handle millions of users simultaneously, is crucial to support smooth online learning experience without interruption' (p. 40).

Implications and Recommendations

This study revealed that students faced several challenges. The topmost challenges the students faced were expensive Internet data, slow Internet connectivity, disregard for online education, weak technical support for online learning and students' lack of motivation to learn online. The solutions include cutting Internet data cost, improving Internet connectivity and making teaching, learning and assessment more flexible. These findings have implications for policy and practice. From Fig. 1, it can be seen that the two bottom levels on the pyramid are the broadest in terms of stakeholders and many policy, resource and technical decisions are outside individual control. So, national and institutional policies and funding need to change in order to encourage online learning. Governments in Sub-Saharan Africa need to expand access to and improve the quality of Internet connectivity. This will go a long way towards consolidating efforts to digitise economies in general and education in particular. However, the further up one moves on the pyramid, control moves towards the institution and individuals. Thus, institutions need to upgrade their IT infrastructure and revise their online learning policies in order to make online teaching and learning less problematic. Institutions can also provide training to improve skills such as time management and technical competencies of their staff and students. For instructors, training can be provided in flexibility, interaction, the emotional and learning support of students.

Limitations and Future Research Directions

Similar to studies that utilise survey data, this study has certain limitations which should be acknowledged and used to guide users. Firstly, our sample size of 265 was relatively small; hence, the application of the findings should consider this. Secondly, due to the COVID-19 restrictions, we relied on the use of questionnaires to collect data on Google forms. This made it impossible to probe some of the responses that ought to have been explained. Despite the above limitations, this study can serve as

a baseline on which further studies can be conducted. Future research should, therefore, focus on other universities in Ghana. Moreover, further studies are needed to explore the phenomenon from the perspective of faculty members.

Conclusions

This study set out primarily to investigate the challenges that University of Ghana students faced in emergency remote learning during the COVID-19 pandemic closure of schools. The study also sought to find possible ways in which the challenges identified could be resolved. The findings show that students' emergency remote learning challenges can be categorised as fiscal, technical, emotional and behavioural. There were also challenges with students' competencies as well as policies and resources. The greatest of these challenges are fiscal, technical, emotional and policies and resources. The respondents suggested that addressing the policies and resources, fiscal and training/technical support challenges would be beneficial to key stakeholders. This research provides some useful insights that could shape teaching and learning in universities, particularly in emerging economy settings, even in the post-COVID era.

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Part II
Emergency Remote Teaching

All a Matter of Intelligence: Faculty Competencies for Virtual Learning

Elspeth McFadzean and Sandra Mohabir-McKinley

Introduction

The COVID-19 crisis has unleashed a new era of change on higher education. The pandemic forced universities to adapt by implementing safeguards such as campus closures and shifting the means of delivery of education from in-person teaching to online teaching. This shift has resulted in a rapid improvisation of courses to transform them from a traditional setting to online platforms. It has also required faculty who normally instruct students in the university classroom to modify their teaching pedagogy and style to the online environment. They have been obliged to develop new, interactive materials to create collaborative and meaningful learning experiences for their students.

Faculty have also found their role evolving from that of lecturer into a combination of regulator, facilitator, monitor and guide. Thus, to successfully perform these new roles and overcome the challenges of the virtual classroom, faculty need to possess, or develop, certain threshold, foundational and virtual competencies.

Academic staff who teach regularly online develop these competencies over time. However, when faculty are required to adapt quickly to online teaching, they may find themselves floundering in the unfamiliar waters of the virtual classroom. It is, therefore, essential that higher education institutions recognise the challenges that these faculty face in times of crisis and provide appropriate tools, materials and support, enabling these faculty to create collaborative and meaningful learning experiences for their students.

The aim of this chapter is to identify and discuss the competencies required by online faculty to develop and support beneficial and experiential online learning environments and to make recommendations on how these competencies could be

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inculcated. To this end, this chapter is organised as follows. The first section defines the term "competencies" and identifies three types of competencies, namely threshold, foundational and virtual competencies. Threshold competencies are the minimal competencies required for average performance and might include experience and functional knowledge. However, these competencies alone are not sufficient to ensure excellence. Thus, foundational and virtual competencies are discussed. The former includes cognitive, creative, moral, emotional and social intelligences whereas the latter encompasses didactic, technological, interactive, cultural, political and time management competencies. Finally, the last section discusses some implications and recommendations for both faculty and educational institutions.

Competencies for Online Faculty

There has been extensive research undertaken on faculty competencies (Bigatel et al., 2012; Muñoz Carril et al., 2013; Schmidt et al., 2013). Many of these articles have included one or more definitions of competence (Al-Salman, 2011; Martin et al., 2019; Pekkarinen & Hirsto, 2017). However, Emmerling and Boyatzis (2012) suggest that "the word "competency" has been defined in many different ways, which has often served to cause confusion in both research and practice" (p. 7). For instance, Ryan et al. (2009, p. 860) defined the term as "abilities related to motive and personality constructs that influence the frequency and intrinsic affective value associated with the execution of specific behaviours and cognitive-affective processes" (p. 860). In other words, they suggest that competency should include both capability and intent. Young and Dulewicz (2009), however, identify competency and competence as two different concepts. They propose that competency evaluates the individual: what he/she is like and what he/she can do, whilst competence measures his or her task, function or job activity. We would suggest that this latter is a behaviour rather than a competence because most definitions of competence in the literature imply the development of an individual's abilities (Cheetham & Chivers, 2005; Lucia & Lepsinger, 1999; Morales-Sánchez & Cabello-Medina, 2013). Nonetheless, these competencies are often measured by evaluating an individual's behaviour (Klendauer et al., 2012; Sanghi, 2007). In this chapter, we define faculty competencies as follows:

> An individual's competencies are a combination of physiological (e.g., neural pathways and hormonal patterns), personality (e.g., motivation and trait drivers) and philosophical (e.g., values and perceptions) constituents and related skills which influence the individual's intention to behave in a specific way. Competencies exhibit themselves at different levels ranging from low to high and can be measured against well-accepted standards of behavioural performance which are created by appropriate experts. Thus, competencies can be regarded as the quality of the tutor's behaviour – their performance – as well as their physiological, personality and philosophical components and related skills which are used to produce this performance.

The teaching literature presents a broad range of research on competencies. Some authors discuss specific competencies such as process facilitator, instructional designer, tutor or advisor, instructor or change agent (Aydın, 2005; Bawane & Spector, 2009; Goodyear et al., 2001; Guasch et al., 2010; McFadzean & McKenzie, 2001). Others have examined specific categories of competence. For instance, research has been undertaken on emotional intelligence (Boyatzis, 2008, 2009; Dulewicz et al., 2005; Van Genderen, 2012), social intelligence (Goleman & Boyatzis, 2008; Lee et al., 2013; Ryan et al., 2012), cognitive intelligence (Coetzer, 2015; Dilchert et al., 2007; Rana et al., 2017) and cultural intelligence (Deng & Gibson, 2009; Nafei, 2013; Wood & St. Peters, 2014). As a result of this, faculty competencies can be placed into specific intelligence categories in order to develop a more methodical and systematic typology.

Competencies vs Intelligence

There is little information in the literature on the definition of intelligences except when referring to cognitive abilities (IQ) (Flynn, 1987; Kaufman, 2000) or some form of general factor (g) (Eid et al., 2017; Roznowski et al., 2000; Sharp et al., 2015) although Sternberg (2005, p. 354) has widened his definition of intelligence to "the ability to succeed in life, given one's own conception of success, within one's sociocultural environment." Mayer et al. (1999), though, discussed three criteria that they believe are necessary in order to identify concepts as intelligences. These are:

- Conceptual criteria, which indicate that the intelligence reflects mental abilities as well as an individual's preferred way of behaving (Davis & Humphrey, 2014; Ermer et al., 2012; Mayer & Salovey, 1993).
- Correlational criteria signify that intelligence includes closely related abilities which can be measured empirically (Bar-On, 1996; Boyatzis & Sala, 2004; Dulewicz & Higgs, 1999).
- Developmental criteria which suggest that intelligence develops with age and experience and can be improved with training and practice (Blattner & Bacigalupo, 2007; Campo et al., 2016; Dulewicz & Higgs, 1999).

Boyatzis and Sala (2004), on the other hand, argue that concepts can only be defined as "intelligences" if they:

- Can be observed from an individual's behaviour (behavioural criteria).
- Are associated with life and job outcomes (results criteria).
- Are suitably different from other intelligence constructs so that they add value for understanding, measuring, and developing them (distinctive criteria).
- Can be measured in a robust manner showing convergent and discriminant validity; (Boyatzis, 2016; Elfenbein et al., 2015; Hellwig et al., 2020) (validity criteria), and

- Can be associated with an individual's anatomical and physiological functioning (Bar-On et al., 2003; Pascual et al., 2013; Schirmann, 2013; Young & Dungan, 2012) (biological criteria).

The above criteria, however, do not portray specific differences between "intelligence" and "competence." Most of these criteria could apply to both. Thus, we suggest that intelligence reflects phrenic abilities that are linked to an individual's biology and will include specific competency constructs that can be developed and improved over time and will influence an individual's outcomes and levels of well-being.

The competencies are, therefore, related to their appropriate intelligence. For example, Goleman (1998) defines emotional competence as, "a learned capability based on emotional intelligence that results in outstanding performance at work…At the heart of this competence are two abilities: empathy, which involves reading the feelings of others, and social skills, which allow handling those feelings artfully" (p. 10). Thus, Goleman suggests that two emotional competencies – empathy and social skills – are included within emotional intelligence and can influence job performance.

Moreover, Boyatzis (2011) argues that competencies are exhibited as behavioural manifestations. In other words, behaviours transform competencies and are used to execute processes (Rowley & Paul, 2008; Siguaw et al., 2006). For instance, the ability to communicate verbally can manifest itself at different levels ranging from poor communication to excellent communication. Consequently, this could lead to a specific level of behaviour such as proficient verbal dissemination of information, which might be used to support the process of the management of conflict. As the literature tends to present processes as competencies, it might be concluded that it is more realistic to measure competencies by assessing behaviour.

Threshold Competencies

Competencies need to be measured and developed in order to improve individual and corporate performance. Boyatzis (2011) suggests that high performance occurs when an individual's ability or talent – values, vision, personal philosophy, knowledge, competencies, life and career stage interests and style – matches the requirements of the demands of the job – i.e. the roles, responsibilities and tasks needed to be undertaken – and the organisation's environment, including culture, climate, structure, systems and leadership styles (Arifin et al., 2020; Boyatzis, 1982; Škrinjarić & Domadenik, 2020).

In this chapter, we define three types of competencies, namely threshold, foundational and virtual competencies. The threshold competencies are the minimum skills and abilities required to undertake a specific task (Thorpe, 2016). If individuals do not exhibit these minimal competencies, then they would not be considered capable of carrying out the task effectively (Shippmann et al., 2000; Stewart, 2006).

Threshold competencies, therefore, are crucial for average performance but they are not, on their own, sufficient for high performance (Boyatzis et al., 2017). Boyatzis (2011) proposes that these threshold competencies include experience, expertise, declarative, procedural, functional and meta-cognitive knowledge and basic cognitive competencies such as remembering and understanding.

The foundational competencies extend and build upon these threshold competencies and could be used to differentiate between an average worker and a highly competent worker. These are:

- Cognitive intelligence, which includes applying, analysing and evaluating information, systems thinking, developing objectives and understanding past and current situations
- Creative intelligence such as nonconforming, recognising patterns in ambiguous data, combining information, developing ideas and imagining novel futures
- Moral intelligence, which includes ethical self-awareness such as fairness and self-control and social integrity such as compassion, respect and kindness
- Emotional intelligence such as affective self-awareness and self-management including self-control, optimism and adaptability
- Social Intelligence, which includes self-awareness such as empathy, and relationship management such as influencing, teamwork, communication and conflict management

In the context of remote faculty, many of the elements of face-to-face interaction are not available. Likewise, it is necessary for remote academic staff to develop knowledge of learning applications, systems and platforms. Thus, online faculty also require virtual competencies, which include didactic, technological, interactive, cultural, political and time management skills. Consequently, virtual instructors require a synthesis of threshold, foundational and virtual competencies (see Fig. 1). These competencies manifest themselves as clusters, which are defined as a group of similar competencies that influence a specific behaviour. For instance, one identified cluster – nonconformance – includes risk-taking, rule breaking, unorthodox thinking and being assertive, when necessary.

Foundational Competencies and Clusters

Our definition of competencies could be used to identify and develop our multiple intelligence model. This includes the foundational competencies such as cognitive, creative, moral, emotional and social intelligence.

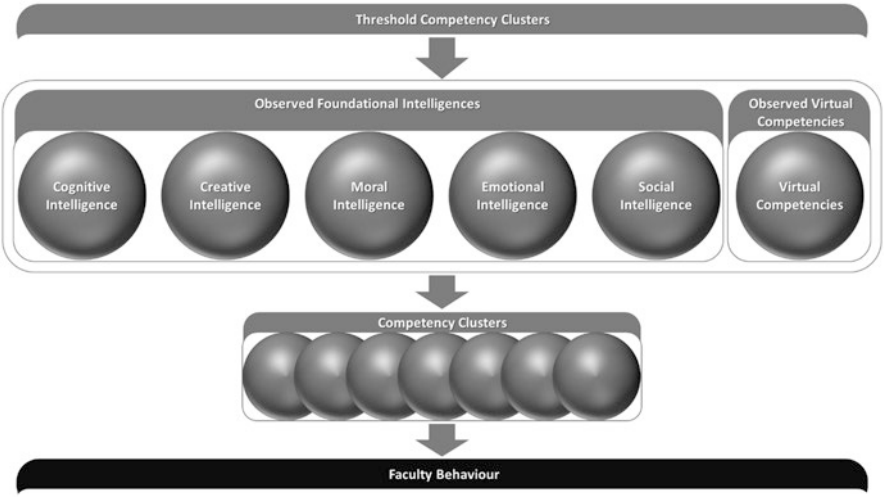

Fig. 1 Competencies for Online Faculty

Cognitive Intelligence

Cognition, cognitive ability and cognitive intelligence have been highly researched over the past century. However, in all that time, there has been no agreement on the definition of cognitive intelligence. In essence, though, cognitive intelligence is seen as the display of specific cognitive abilities such as verbal, numerical, spatial-mechanical, perceptual and memory (Salgado et al., 2003).

A variety of meta-analyses have been undertaken on the relationship between cognitive intelligence and work performance. For example, Kuncel et al. (2004) undertook a meta-analysis on cognitive ability and academic performance and found that cognition could be used to predict academic and vocational performance and career potential. Other theorists have undertaken meta-analyses on the link between cognitive abilities and job performance in different countries. Some have focused on specific countries such as the United States (Schmidt & Hunter, 2004) or the United Kingdom (Bertua et al., 2005) whilst others have examined broader geographical areas such as the European Union (Salgado et al., 2003). Despite the cultural disparities and the different tests that were administered, however, the results are similar and show that cognitive ability tests predict job performance. Moreover, cognitive abilities were found to be important for individuals undertaking complex and cognitively demanding roles (Ackerman & Rolfhus, 1999; Drasgow, 2003; Gottfredson, 1997). The cognitive intelligence constructs are presented in Table 1 (Sternberg, 2003).

Cognitive abilities enable faculty to develop course materials and activities, assess students and provide appropriate feedback against set standards. Many faculty behaviours and processes relate to both face-to-face and online teaching. For example, both sets of faculty will require knowledge about intellectual property and

Table 1 Cognitive Intelligence Clusters

Cluster	Competence	Definition
Problem-Solving Ability Cluster Refers to how individuals solve problems.	Goal Setting	The ability to set and accomplish attainable goals.
	Discernment	The ability to differentiate between suitable and flawed solutions.
	Flexibility	The ability to change direction, if necessary.
	Intellectual	The ability to reason and apply knowledge.
Verbal Ability Cluster Refers to how individuals communicate verbal and written information.	Language	The ability to use broad vocabulary.
	Succinctness	The ability to communicate concisely.
	Interaction	The ability to converse on many topics.
	Learning	The ability to exhibit breadth of knowledge.
	Communication	The ability to have a good command of written and verbal language.
Goal Orientation & Attainment Cluster Refers to how individuals develop and achieve objectives.	Exploring	The ability to seek out information for specific purposes.
	Innovating	The ability to identify opportunities and take them.
	Drive	The ability to be motivated by goals.
Contextual Intelligence Cluster Refers to how individuals explore and understand past and current situations.	Understanding	The ability to learn from past mistakes.
	Scanning	The ability to understand and interpret the environment.
	Recognising	The ability to identify and understand world events.
	Remembering	The ability to memorise or recall information.

Source: Adapted from Sternberg (2003)

regulations; applying appropriate rules for academic reporting; student privacy and confidentiality; and demonstrating knowledge of a specific content area (Varvel, 2007).

Online faculty, however, will need to utilise specific knowledge and problem-solving skills that are unique to the virtual environment. For example, they will need technical abilities that will enable them to develop new materials; use multimedia and communication applications; and planning, regulating, monitoring and assessing student tasks, communication and behaviour (Guasch et al., 2010). Moreover, online faculty often need to make decisions regarding their students' processes, activities and assignments. In order to make these decisions, faculty require appropriate information, which could be difficult to obtain unless it is presented as explicit knowledge on the Universities' intranet. Experienced online faculty may use their own tacit knowledge to make decisions, which would not be available for less

experienced staff. Faculty who normally work with their students in a face-to-face environment may struggle because they lack this tacit knowledge. According to Rana et al. (2017), poor decision-making could escalate when existing tacit knowledge is disregarded. As such, new online faculty would need to refer to explicit knowledge – such as policies and procedures – provided by their organisation.

Creative Intelligence

Creativity requires two elements, namely originality and effectiveness (Runco & Jaeger, 2012) although individuals will judge these elements differently (Kaufman & Baer, 2012). Creative thinking can be encouraged by the forced association of unrelated stimuli and the use of different forms of expressions such as verbal, written, drawing, role playing and so on (McFadzean, 1999, 2000). There are a number of creative intelligence clusters (see Table 2), which include 15 competencies (Caroff & Lubart, 2012; Runco & Acar, 2012; Sternberg, 2003).

Creative intelligence is important for faculty so that they could create stimulating course materials, activities and assignments (Troop, 2017). It is also helpful for teaching, feedback and finding creative ways to help students learn. An online setting can provide challenges. For example, stimulating students can be difficult and, therefore, online faculty must be able to create materials and activities that are motivating, thought-provoking and energising. Students might, for instance, find a video of a lecture monotonous and uninspiring especially if there are no social interactions with the lecturer and/or classmates.

Utilising different pedagogies such as problem-based learning or socioculturalism might be useful (Borge et al., 2020; Liu & Schwen, 2006; Nargundkar et al., 2014). For example, creating simulations, journal writing exercises, student-constructed cases and self-assessment may improve motivation and learning (Katirci & Satici, 2010; Korgel, 2002; Riordan et al., 2003). Other, more creative forms of learning have been used such as game-based learning or using virtual worlds such as Second Life or Minecraft (Callaghan, 2016; Liu et al., 2020; Nebel et al., 2016; Orhan & Karaman, 2014; Sharma & Nazir, 2018; Woo, 2014).

Moreover, providing feedback for a high number of students may be tedious for lecturers especially if the students are undertaking a large number of assignments per week for a specific course. Creative methods for providing feedback may be useful. For example, faculty could provide audio feedback or record comments as a short PowerPoint presentation (Lewis & Abdul-Hamid, 2006). Asking students to evaluate their own work before it is graded by their lecturer may also help encourage student learning and engagement (Moreno & Valdez, 2005).

Table 2 Creative Intelligence Clusters

Cluster	Competence	Definition
Assessment Ability Cluster Refers to how individuals evaluate or judge information.	Decision Making	The ability to decide by weighing pros and cons.
	Evaluating	The ability to recognise similarities and differences and identify strengths and weaknesses.
	Ambiguity	The ability to critically analyse and grasp complex, unstructured information.
	Judging	The ability to attach importance to ideas.
Non-conformance Cluster Refers to how individuals view prevailing standards, attitudes, practices and information.	Risk Taking	The ability to take chances or try the impossible.
	Unconventional	The ability to break rules or to think in an unorthodox fashion.
	Asserting	The ability to take a stand when necessary.
Imaginative Ability Cluster Refers to how individuals conceptualise, fantasise or perceive information.	Integrating	The ability to make connections between disparate information.
	Abstracting	The ability to understand intangible, theoretical or conceptual ideas.
	Combining	The ability to synthesise information.
	Imagining	The ability to form novel mental images or concepts.
	Expressing	The ability to convey information through verbal and non-verbal means such as fantasising, drawing, acting etc.
Inquiring Ability Cluster Refers to how individuals challenge assumptions or question norms.	Perspicacity	The ability to question assumptions, truisms and social norms.
	Inquisitiveness	The ability to ask questions; to be curious/interested.
	Intuitive	The ability to be perceptive, sensitive, instinctive.

Source: Adapted from Sternberg (2003) and McFadzean (2000)

Moral Intelligence

In his seminal book, Gardner (1993), presented eight types of intelligences, namely Logical/Mathematical, Linguistic, Musical, Spatial, Bodily-Kinaesthetic, Naturalist, Interpersonal and Intrapersonal. However, in later work, Gardner (1999, p. 67), states "When I developed the original list of intelligences, I did not seriously consider the possibility of moral intelligence…I adhered to the long-standing disjunction between description and prescription and, therefore, regarded intelligences as decidedly "moral neutral" or "value free"" (p.67). In addition, Gardner suggests that morality is a part of culture and as culture differs, so does morality. Nonetheless, morality – or the lack of morality – has been shown to have a major impact on organisations and countries (Moore, 2008; Studlar & Cagossi, 2018). In addition, morality is grounded in neurobiology although a great deal more research is required

to link different aspects of the brain to moral and ethical thinking (Pascual et al., 2013; Schirmann, 2013; Young & Dungan, 2012).

Moral intelligence can be defined as the mental capacity to respect human dignity, understand right from wrong, care about the welfare of others, integrate individual interests and social responsibilities, seek peaceful resolution of conflict, reflect on moral choices, exhibit strong ethical convictions and to act on them in order to behave with integrity, and determine how ethical principles should be applied to personal values, goals, and actions (Borba, 2002; Lennick et al., 2011). The moral intelligence constructs are presented in Table 3.

Freeman (2000) questions what teachers do when they are faced with ethical dilemmas especially when their current morality proves to be inadequate for supporting students in their classroom. Ethical dilemmas may include, for example, divulging his or her own views on a topic to the students versus providing unbiased discussion of theories (Jones, 2012), or what constitutes plagiarism and whether this is intentional or unintentional or whether international students obtain an unfair advantage by using writing centre tutors, friends, faculty mentors, online sources such as Google translate or proofreading and editorial services in order to develop more suitable assignments or dissertations (Bruton & Childers, 2016; Kim & LaBianca, 2018).

Moreover, a teacher is responsible for not only developing fair and accurate assessments but also providing ethical feedback and grades (Ashraf et al., 2018). Here, ethical dilemmas might include, for example, inflating a grade because the teacher acknowledges that the student has had a tough week at home or deflating a grade because assignments could never be perfect (Green et al., 2007).

Table 3 Moral Intelligence Clusters

Cluster	Competence	Definition
Self-Awareness Cluster Refers to how individuals comprehend, understand and exhibit their own moral abilities.	Self-control	The ability to regulate and manage one's thoughts against internal or external pressure.
	Patience	The ability to suppress annoyance towards people who are disagreeable.
	Fairness	The ability to behave in a way that is free from bias, dishonesty or injustice.
Social Integrity Cluster Refers to how individuals present their own moral abilities to other people.	Morality	The ability to act in an ethical manner.
	Dependability	The ability to exhibit consistent communication and behaviour.
	Compassion	The ability to feel sympathy towards others who are troubled and to have a strong desire to alleviate their suffering.
	Consciousness	The ability to recognise the appropriate way to behave and to behave in that manner.
	Respect	The ability to support and value other people.
	Kindness	The ability to consider others' needs and emotions.

Online faculty also require strong moral intelligence because of the lack of non-verbal cues presented by asynchronous communication. E-mails and classroom communication might appear to be problematical due to cultural or social differences, but this is not necessarily the case (Pauleen & Yoong, 2001; Xiao & Huang, 2016). Thus, faculty need to ensure that they suppress any immediate frustration or annoyance and exhibit consistent communication, free from bias, prejudice or favouritism.

Other issues such as lack of time, conflicts with colleagues or students, coercive hierarchy or an absence of organisational support, bullying, minimal autonomy, poor institutional policies and lack of interest among students can all cause faculty to experience moral distress (de Barros et al., 2019). In a virtual setting, this moral distress may be amplified because of isolation or a poor support mechanism at home or at work.

Emotional Intelligence

Gardner (1993) first conceptualised access to emotions as "one's range of affects or emotions: the capacity instantly to effect discriminations among these feelings, and, eventually, to label them, to enmesh them in symbolic codes, to draw upon them as a means of understanding and guiding one's behavior" (p. 240). Emotional intelligence comprises intrapersonal abilities; to be self-aware and to be able to understand and express one's own feelings and emotions in an appropriate manner (Bar-On et al., 2000). The emotional intelligence constructs are presented in Table 4.

Emotional intelligence (EI) is important for faculty because it is vital for their own well-being. For instance, events at work could cause positive or negative emotional reactions, which, depending on temperament and personality, might influence the intensity of both short-term and long-term behaviour and the person's state of mind (Brief & Weiss, 2002; Grandey et al., 2002). As an example, individuals with high emotional intelligence could tolerate higher stress levels (Lopes et al., 2006), which results in improved psychological and physical health (Chan, 2006; Slaski & Cartwright, 2002; Stough et al., 2009). Further, Perry and Ball (2007) found that faculty with high emotional intelligence had a more effective response to negatively charged situations than those with low EI.

Emotional intelligence is also essential for effectively performing teaching and interaction processes, especially when supporting the socio-emotional development of students (Sutton & Wheatley, 2003). In addition, studies have found that emotional intelligence influences people's attachment to their place of work, colleagues and students and, as a result, enhances classroom engagement (Abiodullah et al., 2020). The level of emotional intelligence also has a significant impact on the turnover intentions of faculty members. Jeswani and Dave (2012) found that faculty with poor self-motivation were more likely to leave.

In the online setting, student engagement is critical (Dale & Lane, 2007; Foster et al., 2018; Muir et al., 2020). Students will only engage, however, if they experience a positive learning environment where they feel comfortable and can develop

Table 4 Emotional Intelligence Clusters

Cluster	Competence	Definition
Self-Awareness Cluster Refers to recognising one's internal states, preferences, resources and intuitions.	Emotional Self-Awareness	Recognising one's emotions and their effects.
	Emotional Strengths	Identifying valuing and utilising one's own strengths.
Self-Management Cluster Refers to managing ones' internal states, impulses and resources.	Emotional Self-Control	Keeping disruptive emotions and impulses in check.
	Adaptability	Flexibility in handling change.
	Achievement Orientation	Striving to improve or meeting a standard of excellence.
	Positive Outlook	Seeing the positive aspects of things and the future.
Self-Motivation Cluster Refers to managing one's own motives, impulses and passions.	Composed	The ability to be effective and calm under pressure.
	Interest	The ability to use one's initiative; to be focused or driven towards an explicit goal.
	Gratification	The ability to delay pleasure or fulfilment when necessary.

Source: Adapted from Boyatzis and Goleman (1999); Boyatzis et al. (2007); Cooper and Sawaf (1997); Gardner (1993); Salovey and Mayer (1990)

a sense of rapport with their tutors and classmates (Barkley, 2010). Research has shown that highly motivated faculty are more effective at engaging students in the classroom (Pintrich, 2003), especially those who exhibit healthier coping strategies because they are adaptive and more effective at relating to students (Austin et al., 2005; Emmer & Stough, 2001; Libbey, 2004). As Perry and Ball (2005) stated, "good teaching practice does reflect the exercise of emotional intelligence" (p. 187).

Social Intelligence

Rahim (2012) defines social intelligence as "the ability to be aware of relevant social situational contexts; to deal with the contexts or challenges effectively; to understand others 'concerns, feelings, and emotional states; and to build and maintain positive relationships with others" (p. 41). This definition includes the two clusters shown in Table 5, namely social awareness and relationship management.

Social awareness is associated with how individuals handle relationships and how attentive they are of others' feelings, needs and concerns. This includes empathy, which enables individuals to identify other people's feelings, perspectives and interests, and to take an active interest in their concerns. Relationship management refers to the skill or adeptness at inducing desirable responses in others. These clusters are closely related to cognitive intelligence – used to understand other people's moods, feelings and thinking – in order to communicate and build relationships with them more effectively. Additionally, social intelligence is linked to moral

Table 5 Social Intelligence Clusters

Cluster	Competence	Definition
Social Awareness Cluster Refers to how people handle relationships and awareness of others' feelings, needs and concerns.	Empathy	The ability to identify other people's feelings, perspectives and interests, and to take an active interest in their concerns.
	Organisational Awareness	The ability to interpret a group's emotional currents and power relationships.
Relationship Management Cluster Refers to the skill or adeptness at inducing desirable responses in others.	Coach and Mentor	The ability to sense others' development needs and bolster their abilities.
	Inspirational Leadership	The ability to inspire and guide individuals and groups.
	Influence	The ability to wield effective tactics for persuasion.
	Conflict Management	The ability to negotiate and resolve disagreements.
	Teamwork	The ability to work with others toward shared goals and to create group synergy in pursuing collective goals.

Source: Boyatzis (2011); Boyatzis and Goleman (1999); Boyatzis et al. (2007)

intelligence because the latter is concerned with concepts such as welfare, harm, fairness and rights or identifying the differences between right and wrong. These can be applied in a social setting with either positive or negative implications (Kuwabara et al., 2018; Stellar & Wilier, 2018). Moreover, Kihlstrom and Cantor (2011) suggest that ethical decisions are initiated by unconscious, intuitive processes that are constructed more on emotion than reason. Thus, social, moral and emotional intelligence are linked and may influence each other (Fedáková & Jeleňová, 2004; Neçare & Şehitoğlu, 2018; Seal et al., 2006).

Social intelligence is important for online faculty because much of their work involves interacting with students and colleagues. Coordinating and communicating with students – including providing feedback – are essential and must be undertaken in a constructive and encouraging manner. In addition, facilitating student learning and collaboration is a major part of virtual tutors' roles. Thus, they need to show empathy and have the ability to develop appropriate relationships.

Social abilities, in particular communication competencies, have also been shown to influence intercultural sensitivity, the development of social networks and the management of conflict (Bosuwon, 2017; Gerardi, 2015; Gunduz, 2017). Furthermore, studies have indicated that social intelligence can influence creative behaviour and could be used to predict loneliness (Kriemeen & Hajaia, 2017; Rahim, 2012; Silman & Dogan, 2013).

Faculty working in cyberspace could experience new challenges such as dealing with trolls – individuals who intentionally distress others on the Internet by posting inflammatory, inconsequential, unnecessary or superfluous messages in a virtual community with the intent of provoking participants into displaying – usually

negative – emotional responses and normalising irrelevant discussions for amusement or other specific advantage – and cyberbullying, which is defined as "a type of aggressive and intentional behavior that repeats frequently over time through the use, by an individual or group, of electronic devices, on a victim who cannot easily defend him/herself" (Smith et al., 2008, p. 376). Indeed, Martínez-Monteagudo et al. (2019) found that individuals were more likely to be victims or aggressors of cyberbullying if they did not pay attention to their own social or emotional behaviours and less likely if they have the ability to understand, identify and label their social and emotional behaviour and to regulate them.

Virtual Competencies and Clusters

As stated previously, the above five foundational intelligences may be used by both face-to-face and virtual faculty. The latter, however, also require virtual competencies in order to teach and support students online. We define virtual competencies as the ability to recognise, direct and maintain all threshold and foundational intelligence resources in a virtual work environment.

Faculty with high virtual competencies recognise that the online context is different from the face-to-face classroom (Baba et al., 2004; Reyt & Wiesenfeld, 2015; Wilson et al., 2013). Online faculty need to filter out distractions, ignore irrelevant information and focus on important issues (Durnell Cramton & Hinds, 2004; Wilson et al., 2013; Zakaria et al., 2004). According to Makarius & Larson (2017),

> Effective virtual work requires attention to the likelihood of higher-level construals, decreased social inhibitions, increased self-disclosure, and subgroups that may form among employees, among other phenomena. Set-shifting, also known as task-shifting or cognitive flexibility, includes the ability to move attention from one task to another. Studies have indicated that this skill is valuable in changing contexts such as work and life and recognizing the need to shift attention is likely to be relevant in virtual work as well. (p. 168)

Construal refers to the means in which individuals perceive, interpret and understand the world around them. This is essential because, by making sense of the world, individuals can make judgements and determine their own behaviours and actions (Thomas et al., 1993). Research has shown that individuals working in a virtual environment who have a more abstract construal of their virtual colleagues and students are more effective at planning actions that are suitable to the virtual environment (Reyt & Wiesenfeld, 2015; Wilson et al., 2013). Virtual competencies include didactic, technological, interactive, cultural, political and time management competencies (see Table 6).

Didactic competencies refer to the ability to instruct, teach or lecture in a virtual environment. This includes reflecting upon, planning and developing course materials and activities (Dooley et al., 2019; Kumar et al., 2019; Mohr & Shelton, 2017). Both reflecting and planning enable online faculty to consider the objectives of the course, how the course should be presented and how their students should undertake each step (Kearns, 2016). Furthermore, online faculty could employ both their

Table 6 Virtual Clusters and Competencies

Virtual Competencies The ability to recognise, direct, and maintain all intelligent resources in a virtual work environment.		
Cluster	Competence	Definition
Didactic Competencies Refers to the ability to instruct, teach or lecture in a virtual environment.	Instructional design	The ability to design and structure content in a virtual setting, which is focused on practical application and adapted to the students' cognitive characteristics and interests.
	Assessment	The ability to continuously evaluate student learning in a virtual setting and to provide specific constructive feedback and grades, which measure the assimilation of the course content by the students.
Technological Competencies Refers to the ability to understand and use technology – such as a virtual learning environment – in an appropriate manner, developing and posting content, setting up the classroom, posting feedback and grades etc.	Virtual classroom	The knowledge and ability to appropriate the digital tools provided in the classroom and to use them in a suitable manner for presenting content and activities.
	Digital tools	The knowledge and ability to use suitable digital resources to develop, construct and present multimedia materials and activities in order to promote learning.
Interactive Competencies Refers to the ability to connect and interact with colleagues and students.	Communication	The ability to communicate both synchronously and asynchronously in a clear and pleasant manner.
	Collaboration	The ability to promote active participation, teamwork and cooperation amongst students in a virtual environment.
	Relationships	The ability to develop relationships with colleagues and students.
Cultural Competencies Refers to the ability to adapt effectively to new cultural contexts.	Language	The ability to communicate with native English speakers and non-native English speakers in a polite, direct and inoffensive manner and to encourage interaction between individuals from different cultures especially if they are reserved or shy.
	Safe environment	The ability to develop and maintain a strong virtual learning culture which emphasises the acceptance of differences, openness to new ideas and the potential for mistakes and opposes disrespect, discourtesy and aggression.

(continued)

Table 6 (continued)

Political Competencies Refers to the ability to use formal and informal power in the organisation to accomplish objectives and to understand how to use this power prudently, judiciously and artfully in the institution.	Identification	The ability to identify the principal power holders and agents of political influence and determine the power bases of each power holder.
	Consideration	The ability to assess the position of each power holder in relation to certain decisions and strategies in terms of resistance or support.
	Examination	The ability to evaluate the strength of potential or emerging coalitions and ways to develop relationships to negotiate or arrange for trade-offs to gain support or decrease opposition.
Time Management Skills Refers to the ability to organise and plan the appropriate time required to undertake specific activities and to act at the relevant moment.	Connecting	The ability to schedule time to communicate with every student in the class.
	Scheduling	The ability to organise an appropriate routine so that work is undertaken in an orderly and timely manner and that distractions are kept to a minimum.
	Information	The ability to provide information to colleagues and students that do not overload them, causing them to ignore the information or use precious time resources to read, listen or watch the materials.

creative and cognitive intelligences to use unrelated stimuli, connect unique concepts or utilise novel procedures to develop innovative materials and activities or solve specific problems (McFadzean, 1999; McFadzean et al., 1998; Wang & Nickerson, 2019). Planning appropriate aims, objectives, ground rules, materials and activities help to establish social norms in the classroom (Carte et al., 2006; Cascio & Shurygailo, 2003), coordinate information and processes (Cogliser et al., 2013; Goh & Wasko, 2012; Kanawattanachai & Yoo, 2007; McLarnon et al., 2019), establish appropriate forms of communication (Bull Schaefer & Erskine, 2012; Maruping & Agarwal, 2004) and build interpersonal trust (Breuer et al., 2020; Jaakson et al., 2019; Romeike et al., 2016).

Didactic competencies include the ability to evaluate student learning in a virtual setting and to provide specific constructive feedback and grades, which measure the assimilation of the course content by the students. Evaluation includes monitoring students and critically appraising their work (Bernstein & Isaac, 2018; Perera-Diltz & Moe, 2014). As a result, online faculty need to synthesise, integrate and organise information and to transfer this knowledge to their students in the form of feedback (Bonnel & Boehm, 2011; Reyt & Wiesenfeld, 2015). Indeed, previous research has found that maintaining and managing information is essential for success in virtual work (Bjørn & Ngwenyama, 2009; Cramton, 2001; Iorio & Taylor, 2014).

Technological competencies refer to the ability to understand and use technology – such as the virtual learning environment – in an appropriate manner. Developing, posting and maintaining course content and accuracy, setting up the classroom, posting feedback and grades and so on are essential skills for online faculty (Al-Salman, 2011; Darabi et al., 2006). Moreover, faculty require knowledge on how to use synchronous platforms such as Microsoft Teams or Zoom (Oliver et al., 2009). Technology is constantly changing or upgrading and, therefore, faculty need to keep up-to-date with these changes. Online faculty may also require some troubleshooting skills in case they experience technical problems.

Interactive competencies refer to the ability to connect and interact with colleagues and students and are linked to didactic and technical competencies as well as social intelligence. Whereas social intelligence includes face-to-face interaction and the development of social relationships, online faculty require additional interactive competencies in order to work with colleagues and students in the virtual environment. For example, they need to be able to provide guidance to students working on their activities and/or assignments (Aydın, 2005). This is especially the case where students are working in groups and require a facilitative leader to support them (McFadzean & McKenzie, 2001). Online faculty need to be able to develop relationships with their students – and colleagues – quickly by asking questions, setting up short synchronous sessions or developing communal learning groups (Woodley & Parra, 2019). Indeed, Lundberg and Sheridan (2015) found that faculty interaction and support of students was the strongest predictor of learning.

Cultural competencies are essential for online faculty and refer to "the behavioral expression of knowledge, beliefs, and values that recognize the importance of racial and cultural diversity in learning" (Gay, 2010, p. 31). To date, there has been little research undertaken on the cultural competencies of online faculty (Goldstein Hode et al., 2018). Instead, studies have examined faculty perceptions, sensitivities and behaviour when issues of race or diversity were discussed in the classroom (Sue et al., 2010; Sue et al., 2011; D. W. Sue et al., 2009a, b). Derald Wing Sue et al. (2009a, b) also provided information on how faculty should facilitate such conversations. Moreover, studies have been undertaken on the predictive quality of multicultural education and its influence on multicultural teaching competencies. For example, faculty who were open and willing to learn about inclusivity, the value of diversity, other cultures and the differences in multicultural environments were more likely to cultivate their multicultural teaching competencies (Goldstein Hode et al., 2018; Mena & Rogers, 2017). Developing discussion groups so that faculty could share stories about their experiences and beliefs also helps them to identify and understand their social privileges, unintentional microaggressions and unconscious biases, and facilitates a change in behaviour (Hutchins & Goldstein Hode, 2019).

Political competencies refer to the ability to use formal and informal power in the organisation to accomplish objectives and to understand how to use this power prudently, judiciously, and artfully in the institution. Generally, political behaviour is viewed from a negative perspective. For example, Rosen et al. (2009) define politics as "activities that are illegitimate, self-serving, and often harmful to the

organization or its members"(p. 203). However, employees' perceptions of organisational politics could influence the way they respond to their leaders. For instance, leaders' use of positional power is related to poorer levels of job satisfaction and contextual performance – that is, an individual's discretionary tasks and responsibilities beyond his/her specified professional role – amongst employees (Dirik & Eryılmaz, 2018). Nonetheless, if managers are to be effective, they need to be able to exercise power and influence their staff so that they could coordinate them in order to fulfil the organisation's goals (Harrell & Simpson, 2016; James et al., 2019). This is a greater challenge in an online environment where communication could be problematical due to the lack of non-verbal cues, different time zones and cultural variations. Even so, it is essential that leaders develop high-quality relationships with their staff. According to leader-member exchange (LMX) theory, low-quality exchanges are established through impersonal and/or contractual interactions whereas high-quality exchanges are founded on respect, trust, emotional support and obligation between the two parties (Graen et al., 2006; Graen & Uhl-Bien, 1995). Thus, in an online environment, leaders and faculty must make a greater effort to communicate with each other. Furthermore, educational institutions must ensure that leaders are ethical and exhibit high standards of integrity. Indeed, Fatima et al. (2020) suggest:

> Maintaining fairness is also essential for the manager as it can be directly related to how employees perceive politics in organizations. Our results indicate that employees' perceptions of organizational politics and the leader's integrity play a critical role in affecting how committed and well-settled employees are and how well they perform and innovate. Managing through transparent policies, fair promotional opportunities, two-way communication channels, developing formal mechanisms for giving and receiving feedback, and efficient processes to handle grievances can possibly minimize the negative effects of low-quality LMX. (p. 327)

Additionally, leaders need to communicate with their staff in such a way that they feel part of the in-group (Molenberghs et al., 2015; Platow et al., 2015). This will encourage faculty to develop a positive perception about both their leaders and their organisation, which, in turn, will influence their commitment, performance and creativity (Fatima et al., 2020).

Increased autonomy and pressure at work has led to "time famine", meaning that there is too much work and not enough time (Perlow, 1999). Virtual workers, though, may also suffer from procrastination and distractions (Van Eerde, 2003). Both procrastination and any form of distractions could be seen as avoidance behaviours especially if the individual undertakes more pleasant activities. Lack of supervision might also increase procrastination. As a result, it is essential that virtual faculty develop their time management skills. These are the ability to organise and plan the appropriate time required to undertake specific activities and to act at the relevant moment.

Covey (2020) developed a time management matrix divided into four quadrants, namely not urgent and not important (e.g., pleasant activities, trivial work), not urgent but important (e.g., planning, relationship building), urgent but not important (e.g., some meetings, some e-mails or telephone calls) and urgent and important

(e.g., deadline-driven projects, critical problems). Individuals who are constantly dealing with urgent and important activities tend to be crisis managers. This could be stressful and could drive crisis managers into procrastination in order to take their minds off more urgent problems. Thus, they may spend time dealing with activities that are non-urgent and not important. Moreover, the perception of urgency or importance of these activities might be based on the priorities or expectations of others. This is especially the case for some forms of communication such as e-mails, meetings or telephone calls.

Discussion

COVID-19 has forced traditional face-to-face teaching online resulting in new forms of interaction and delivery methods. However, research has shown that teaching and learning online is different from traditional on-campus education and needs to be treated as such (Davey et al., 2019; Thai et al., 2020). For example, it is much easier to develop a sense of community and interaction in a traditional classroom because individuals can perceive non-verbal cues and are collaborating in a same time/same place setting. Online faculty and students, however, do not have that luxury even if they communicate synchronously because synchronous communication in large groups could be problematical due to technical, language or cultural issues. It is essential, therefore, to develop a sense of community in the classroom (Faulconer et al., 2018) by developing appropriate activities that encourage collaboration amongst the students (Cundell & Sheepy, 2018) and providing materials that the students perceive will positively influence their performance and outcomes (Murray et al., 2012).

The complexities of virtual teaching dictate that online faculty require high levels of competencies in order to be effective. Their levels of competencies influence their behaviours and processes, which, in turn, influence their students' learning experiences. It is, therefore, important that online faculty assess and monitor their competencies and, if required, develop them further so that they could keep abreast of appropriate pedagogies and the changing nature of technology, communication and active learning.

As noted previously, factors which influence job performance or competencies have been the focus of significant research, seeking to better understand proficient faculty members, to measure and categorise these competencies and to use that knowledge to improve institutional and faculty performance using targeted training and experience. However, the outbreak of COVID-19 has forced many more faculty to teach online. According to a survey undertaken by the National Union of Students (2020) in the UK, 35% of students did not feel that their online course was of a sufficient standard to promote effective learning. Moreover, many students are feeling isolated because they have little interaction with their tutors or classmates. Indeed, one of the limitations of online learning is the students' inability to contact a tutor for questions or clarifications immediately.

In order to improve the learning experiences of online students, therefore, faculty must improve both their competencies and the processes they undertake to support their students in the virtual environment.

Implications for Faculty

In an emergency such as the COVID-19 pandemic, learning institutions and academic staff need to develop online courses quickly. Nonetheless, they still need to support these programmes with suitable pedagogical foundations. Academics teaching in a traditional classroom tend to use an objective pedagogy. In other words, the practice of instruction – usually information and knowledge – is provided by the tutor through lectures, handouts and books. By attending these lectures and reading the handouts and books, the students turn the presented materials into their own tacit knowledge. Face-to-face lectures and tutorials also offer students an opportunity to communicate and interact with the tutor and fellow classmates.

Online courses, however, tend to utilise social constructivist, socio-cultural and/or problem-based pedagogies (Anh & Marginson, 2013; Gould et al., 2015; Nilsen & Purao, 2005). This is because these pedagogies encourage students to interact with, and learn from, one another and apply their learning to real situations. Indeed, it is imperative that faculty and students develop a sense of community, where members feel that they belong, that they matter and that they are committed to meeting each other's learning needs (Rovai & Jordan, 2004). Consequently, moving a course from the traditional classroom setting to a virtual setting is not as simple as recording a few lectures and posting them online. However, few traditional academics would have undertaken a design phase in advance of an emergency situation – such as a pandemic – that would effectively guide students through their learning processes in the absence of a face-to-face classroom structure (Branch & Dousay, 2015; Schultz & DeMers, 2020).

Developing online materials and interactive activities for students requires faculty to design appropriate learning and collaborative methods, setting an applicable curriculum, establishing suitable schedules and time parameters, determining proper netiquette and utilising different media effectively (Costley et al., 2017; Morris et al., 2005; Rao & Tanners, 2011). Thus, both emergency remote faculty and traditional virtual faculty need to plan their courses and activities to encourage greater collaboration and cooperation amongst their online students. In order to achieve this, academic staff require appropriate competencies, knowledge and support. Accordingly, we suggest the following recommendations to enhance students' online learning experiences.

Recommendations for Faculty

- Develop discussion groups so that faculty can share stories about their experiences, beliefs and problems. Not only does this help to lessen isolation, but it also allows faculty to gain an understanding through interacting with colleagues on how their own attitudes might influence their interactions with students.
- Foster high-quality relationships with colleagues and leaders. Such relationships, based on mutual respect and trust, are even more important during times of crises when faculty can turn to each other for support and to leadership for guidance.
- Focus on mission-critical activities that have an impact on customers. Faculty should spend their time on essential activities such as teaching, developing materials and activities for students or assessing assignments.
- Develop and demonstrate appropriate pedagogical styles for online learning such as social constructivism, problem-based learning and socio-culturalism so that instructors guide their students through their learning journey. This encourages greater responsibilities by the students to explore their topics by asking questions and undertaking problem-solving activities that stimulate deep learning. As a result, online faculty move the focus away from themselves, as the fount of knowledge, towards the students. The students can be encouraged to structure their own learning experience, within an appropriate schedule, with the instructor acting as a facilitator or guide.
- Cultivate an online presence in order to support the students. Students can feel isolated, experience difficulties in contacting their tutors or feel helpless when struggling with coursework. Thus, being present online assures students that there is support especially when they have problems or need to ask questions. Indeed, Schultz and DeMers (2020, p. 145) suggest:

- Communication is vital to students as to their progress, responding to their inquiries, and promoting confidence on the part of the learner that their efforts will be successful and that they will experience a deep level of concentrated learning in an online setting thus promoting the establishment of a robust learning community. (p. 145)

- The above may be difficult for lecturers who have taught in a traditional classroom throughout their careers and are used to employing objectivist pedagogies. Moving to different online pedagogies that encourage an atypical teaching philosophy and employing diverse technological tools is impossible in a short space of time. However, these skills are essential if educational institutions continue with their online education and/or are preparing for the next crisis.

Recommendations for Educational Organisations

- Offer training and development for faculty to improve their online competencies including knowledge of pedagogies, technological tools, instructional design and creativity.
- Develop an up-to-date organisational knowledge base. Such a repository could comprise policy documents, manuals and procedural schema, and even analogous scripts tabulating examples of how to deal with similar situations.
- Ensure technical experts and/or help desks are available to both faculty and students. It is important to offer online educators some basic technical skills training so that they are able to deal with simple issues without having to contact the technical support services every time.
- Mentor, support and supervise faculty. Having leaders who behave ethically and with integrity as role models in educational institutions is important. This is especially the case when new faculty are adjusting to the social and performance activities of their online environment and need to develop the appropriate knowledge, skills, behaviours and attitudes required to perform effectively.
- Improve organisational/leader-faculty exchange. Institutions can achieve this through transparent policies, clear communications, establishing feedback channels and providing professional development opportunities. Leaders need to maintain relationships with their staff by regularly communicating with them, providing appropriate appraisals and feedback, and encouraging them to become involved in decision-making activities.

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How Prepared Are We for Emergency Remote Education? Case of Ukraine

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Introduction

The traditional face-to-face learning has been challenged during the COVID-19 pandemic. Face-to-face teaching became irrelevant and not valid during the worldwide quarantine. The universities, their staff and students had to switch to emergency remote teaching in short order. They had to implement new distant forms and methods of teaching and learning. In March 2020, they seemed to be temporary measures, but in a couple of months people started discussing whether this was "the new reality" and "the new normal" (WEF, 2020; KPMG, 2020). This "new normal" required new approaches to be implemented by the universities' management, higher education quality assurance, teaching techniques, organization of classes and individual assignments, students' skills and self-education. Therefore, the question is how well were the universities, their teachers and students prepared for emergency remote teaching and learning.

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Background to the Study

Ukrainian Higher Education Landscape

For a better understanding of the Ukrainian higher education landscape, there are some key figures characterizing the system. The total number of higher education institutions of all types is 1268 (Inforesusrs, 2020). This is a huge number; however, according to the Ukrainian legislation, this number includes all colleges, technical schools, subdivisions, branches etc. In this study, the researcher considers only universities and academies as HEIs and their number in 2019 was 282, which is still quite high, but is more realistic in terms of the scope of the higher educational system. There were some significant changes in the number of Ukrainian HEIs during the last two decades (Table 1): starting with 149 in 1991, a peak number of 353 in 2009, and a gradual downward movement in subsequent years due to the war conflict in Ukraine and occupation of some Ukrainian territories (NAQA, 2020, p. 5). The number of HEIs' students has also been changing starting with 881,000 in 1991, reaching the peak in 2007–2008 (2,372,500 people) and being about 1,320,000 in 2019 (NAQA, 2020, p.14). In addition to the Ukrainian students, according to the Ukrainian State Center for International Education (2020), 80,470 foreign students from 158 countries study in Ukraine.

Before 2020, there were some e-learning initiatives and projects in Ukraine; however, there are no 100% online bachelor or master study programmes conducted. All Ukrainian e-learning initiatives are mainly certificate courses. Among such projects, the most successful is platform Prometheus that provides certificate online courses based on video lecturing, interactive testing and forums for participants' communication. International projects such as Coursera or Udacity are also quite popular in the Ukrainian academic landscape. As for university education, the traditional methods of teaching and learning were mainly used. Some Ukrainian universities report availability of online courses, but it is the exception rather than the rule.

Chronology of Pandemic Restrictions in Ukrainian Education

Pandemic restrictions in the educational sector were started on 12 March 2020 when nursery schools, general secondary schools, colleges, out-of-school educational institutions, universities, institutions of undergraduate, graduate and postgraduate

Table 1 Number of higher educational institutions in Ukraine and their students (1991–2019)

	1991	1995	2000	2005	2010	2015	2019
Number of HEIs	149	232	313	347	350	277	282
Number of HEIs' students (in thousands)	881	888	1285	2027	2245	1438	1320

Source: NAQA, 2020

learning were closed for quarantine in Ukraine. It was the starting point when education in the country moved to distant teaching and learning modes. There were government decisions to prolong the quarantine. Consequently, the 2019–2020 academic year was completed via emergency remote teaching and learning. In August 2020, it was announced that the Universities' management could decide how to start and in what mode to conduct 2020–2021 academic year. Therefore, different approaches were applied in September 2020 – some universities decided on fully remote teaching and learning mode and others implemented hybrid models. For instance, first year students attended face-to-face classes and the students in other years attended classes via emergency remote teaching and learning. As an alternative approach, lectures are delivered remotely and seminars/practical classes are delivered via face-to-face classes. From 15 October 2020, the Ministry of Education and Science of Ukraine has recommended that all HEIs move to fully emergency remote teaching and learning.

Literature Review

Some recently published studies are devoted to the higher education preparedness to quarantine restriction and universities' strategies as a response to pandemic challenges (Chandasiri, 2020; Odriozola-González et al., 2020; Sahu, 2020). The actualization of this topic is caused by the fact that almost 90% of the universities stopped or seriously constrained their teaching activities. The figures on higher education institutions' (HEIs) response on global pandemic confirm that only 1% of HEIs is open as usual with no special COVID-19 measures in place and 10% more are open, but relevant measures are taken to avoid the spread of COVID-19. About 30% of the universities are partially open with major disruptions and 59% of the universities stopped all on-campus activities and moved to online format (Marinoni et al., 2020).

Therefore, such a situation caused academic debates on higher education issues during an emergency and the effects of COVID-19 on quality of education, mental health of students, university staff and lecturers. The pandemic not only caused personal and short-term operational challenges but also affected demographic and technological trends in the education sector such as changes in the student population, redeployment of human, financial and reputational capital (TIAA, 2020). Beyond the financial repercussions and the long-term implications of continuous emergency remote learning, the new more inclusive hybrid model that does not completely eliminate in-person social interaction is suggested to be implemented (Amoakohene, 2020). Some positive implications such as promotion of innovations and modernization in higher education and training students to work in uncertain conditions and in changing environments are identified (Malik, 2020).

Malik (2020) also argues that the problems faced by the universities are more or less the same all over the world, but they were addressed in different, sometimes

chaotic, ways. The strategies of the universities during the COVID-19 pandemic are classified as follows:

> '1. The universities which embedded their heads in the sand and behaved as if, nothing was wrong; 2. The universities that waited for 'Godot' who never arrived to take them out of the trouble; and 3. The universities that proactively engaged with the new reality.' (Malik, 2020, para. 2)

There is also evidence that, in many cases, the educators had no substantial experience of emergency remote teaching. However, educators managed to adjust their activities quickly (Stukalo & Simakhova, 2020). Furthermore, the most recently published studies on the issue discussed the effects and consequences of the pandemic, positive and negative effects at different levels – individual, institutional, systemic and societal. This study mainly considers institutional level, but examines the problem from the other side – how well the universities were prepared for an emergency and how they reacted to it.

It is obvious that those universities and educational systems which had relevant experience in online education and promoted online study programmes were less affected by "new normal" conditions. However, there are countries where online education is not developed properly and not legitimized, where 100% online study programmes are not conducted and universities did not use e-learning techniques widely before COVID-19 pandemic. For instance, in Ukraine, there are some elements of emergency remote teaching implemented at the universities. However, this is not systemic, and there is no consistent and coherent policy in this regard either at national or at institutional level. Once the nationwide quarantine was announced, each university developed its own approach to the organization of the study process and used different tools to facilitate emergency remote teaching.

Research Questions

In such a situation, some questions raised are: What were the first reaction and actions of the universities to respond to nationwide quarantine challenges? How were the staff, teachers and students prepared for the quick shift from face-to-face to distant classes? How did they respond to this call? How effective is videoconference lecturing? How is it considered for future use? Based on a review of literature and current practices, it is obvious that emergency remote teaching provides a number of benefits. However, there are also several negative implications. Thus, another objective is to discuss the pros and cons and identify the ways in which they could be addressed and considered in national and institutional policy. With this in mind, this chapter seeks responses to the aforementioned questions. It also examines transformations and new trends in higher education in Ukraine at national, institutional and individual levels in response to the challenges caused by the COVID-19 pandemic.

Methodology

This qualitative research is based on the case study, in-depth interview and questionnaire methods. The case study is a proven useful research method for education field of study which contributes not only to theoretical understanding of the research problem but also to improving practice. This research method allows the researcher to explain the outcomes of the particular case, to add descriptive richness, to formulate concepts and to generate theory (Yin, 2014). The case study is also one of the most appropriate research methods when the practice is ahead of theory like in the Ukraine, which is among the countries where online education was not widely used and implemented before the pandemic. In addition to this particular case, some publicly available reports and materials on the same experience in the other countries are also reviewed, compared and contrasted. Participants were selected randomly from the different Ukrainian universities' top management (mostly rectors and vice-rectors). There were 54 participants from 32 states and private Ukrainian universities.

Primary Data

Questionnaires were distributed among the Ukrainian educators recruited via social media resources and emails. Six hundred and fifty-two responses (HEIs' representatives of different ages, from different study fields and various regions of Ukraine) were collected. The sample inclusion criteria are representative of the Ukrainian higher educational institution.

Primary Data Analysis

A repeated process of critically reading, interpreting and reaching shared understandings of the data was completed to analyse primary data. It included some steps. Afterwards, the data were recorded, memos were prepared, labelled, archived and the demographic data were analyzed. Then, interview transcripts and field notes were read through several times in order to identify the key patterns, to code different themes and to organize the data into relevant categories (the universities' first reaction to quarantine restrictions, teachers' preparedness and reaction to the lockdown, students' preparedness and reaction to the lockdown). After that, the results obtained were compared with expectations and research questions, interpreted and summarized.

Secondary Data

This study also uses secondary data including the results of the survey conducted by the Ukrainian State Inspectorate of Quality (USIQ) in May 2020. These data are considered for benchmarking the outcomes and results obtained through the interview and questionnaires suggested by this study. Twenty-eight thousand, three hundred and ninety-one respondents (including 22,367 students and 6,024 teachers from all types of HEIs and subject areas) have participated in this USIQ's survey.

Secondary Data Analysis

In order to triangulate the data sources, cross check the results of this research, and to validate findings, the secondary data analysis was conducted. The primary data collected through interviews and questionnaires were checked against the data and findings presented in the report on the result of the survey conducted by USIQ. The secondary data were also organized into the same categories as the primary data and compared and contrasted to them. Additionally, at the final stage, the conclusions were made.

Context

The data set is sufficient, as the participants are representatives of the 32 out of 282 Universities. They are of diverse specializations (classical, polytechnic, economic, pedagogical and agricultural) and located in various regions in Ukraine including the key higher education centres of Ukraine Kyiv, Lviv, Kharkiv, Dnipro, Odessa. Among them, 28 state universities and 4 private universities; 21 classical, 3 economic, 3 polytechnic, 2 agricultural, 3 pedagogical universities; 14 universities with up to 5000 students, 15 – from 5000 to 10,000 students, 3 – more than 10,000 students (Table 2).

Limitation

The limitation of this qualitative study is that it is focused on one country's (Ukraine) experience of the COVID-19 pandemic. Therefore, further research in the other countries could be beneficial. Another limitation is the fact that participants recruited for the questionnaire represent opinions only of those Ukrainian educators who are active on social media and in IT-use. It is important to note that this questionnaire was distributed via social media platforms and open lists of emails, so it reached

Table 2 Data on the universities involved in the research

Total number of universities involved in the research – 32				
University specialization				
Classical	Polytechnic	Economic	Pedagogical	Agricultural
21	3	3	3	2
University ownership				
State		Private		
28		4		
University size				
Up to 5,000 students	5,000 to 10,000 students		More than 10,000 students	
14	15		3	

only those participants who are quite active in e-communication. Therefore, it is presumed that real figures reflecting lack of online teaching experience are even less.

The Ukrainian Universities' Preparedness and Reaction to Quarantine Restrictions

Online Education in the Universities' Strategies and Priorities Before the Pandemic

The in-depth open-ended interviews with rectors and vice-rectors of the Ukrainian universities demonstrated that universities implemented very few elements of online education before 2020 and were partly ready for the remote teaching in pandemic times. The interviewees mentioned, "There was no need to teach online," "We didn't consider that distant teaching could replace the face-to-face teaching," "There were just two or three online courses introduced at our University before the pandemic," "Moodle platform was used to support face-to-face learning, we didn't have 100% distant courses."

In most cases, it confirmed that universities started to develop a digital corporate culture. For instance, Dnipro Politech University is forming a digital corporate culture and started to implement it a few years before the pandemic. "Our teachers and students value the availability of all digital sources, use online learning platforms, also, we implemented information technologies into the University management and communication," the Vice-Rector of the University said. Such strategies highlighted the importance of digitalization and information technologies implementation in the study's process. However, in most Ukrainian universities, online education was not identified as a priority and there were no comprehensive and systematic approach to its development.

This point is also confirmed by the USIQ's survey that 83% of universities do not consider distant technologies development as a strategic priority (State Inspectorate of Quality, 2020). Some of the key reasons for such a situation include the lack of

demand or need to implement online study courses, and there were no technologies and facilities.

Having said this, it is important to note that those universities, which had impetus or social request (such as the need to educate juvenile convicts, to teach students with disabilities or students from the occupied territories), demonstrated more progress in this regard. Due to the ongoing war conflict in the Eastern part of Ukraine, a category of displaced universities has appeared which includes a number of universities that moved from war zone to the peaceful territories of Ukraine. For instance, displaced Vasyl Stus Donetzk National University was moved from Donetzk to Vynnitsya (841 km. away) due to war conflict. With the help of international donors and educational projects, this university implemented a number of online courses for students who could not move from the occupied territories. Additionally, the university delivers a series of preparatory online courses for schoolchildren who still stay in occupied territories and who are going to be admitted to Ukrainian universities. The Vice-Rector of this University mentioned, "We see it as mission of our University to support young people who can't move from occupied territories and can't get good-quality school education in zone of war conflict. We help them to get prepared for the external exams to be admitted to the Ukrainian Universities."

Another example of social request to e-learning is online study programmes for juvenile convicts conducted by Mykola Hohol Niszhin State University. "There are online study programmes for those students who can't come to our classes in our University. For instance, we have special study programmes for juvenile convicts. Out teachers believe it is very important to support such students with quality education." The Rector of Mykola Hohol Niszhin State University mentioned this.

Private universities trying to diversify their study programmes also have some robust practices such as the online part of the double diploma programme of the Alfred Nobel University with the University of Wales Trinity Saint David.

There are also some examples of e-learning initiatives to address needs of inclusive students, students with disabilities and for those students who are working; however, these attempts are not systemic in nature. Common practices of Ukrainian universities are usage of platforms such as Moodle, Office 365, in few cases attempting to develop their own platforms, creating repositories and digital content.

The Stakeholders' Preparedness to the Lockdown and Pandemic Challenges

Another question discussed with the participants during the in-depth interview was how the different stakeholders such as university administration, management team, teachers and students were prepared for the lockdown and what were the first reactions and steps to address new challenges. Most of the respondents estimated that there was partial readiness. They mentioned that there was panic and uncertainty during the first weeks of the nationwide quarantine. For instance, one of the

respondents (representative of the University administration) mentioned, "When the quarantine was announced, we didn't know what to do, we were shocked. It was on Thursday, March 12, students and teachers stayed at home, and we didn't know how to approach the distant teaching." People believed that the quarantine would finish within a few weeks and did not expect it would last for months and become a new reality. Another participant said:

> Our University administration has issued a temporary regulation on distant education in March. Initially, we have postponed all practical classes to the late April. In mid-March, we believed we would be able to return to the offices and classes in late April.

After the initial shock, almost all universities adjusted their activities and study progressed to emergency remote teaching and learning within 2–3 weeks.

Secondary data confirms that 90.5% of the teachers and 89.4% of students consider that universities have managed to organize emergency remote teaching processes properly (State Inspectorate of Quality, 2020). The process was less stressful in cases where the universities were well-equipped, had professional technical support, IT centres and electronic document management systems. For example, the National University of Water and Environmental Engineering created and maintains COVID-19 quarantine e-platform for all activities and processes, studying, documents and procedures. Each student, teacher and staff member has been provided with an individual e-office which includes all information needed for effective online communication and distant learning – e-schedule and calendar, links to the virtual classes, gradebook, documents requiring attention and templates of the documents to be submitted, e-learning resources, access to e-library and many other useful tools. Furthermore, a relevant mobile application was developed and widely used by all students, teachers and staff. Such practices ensured a smooth transition from face-to-face to emergency remote teaching and learning in pandemic times. The representatives of the National University of Water and Environmental Engineering mentioned:

> We didn't face significant challenges when moving from face-to-face to remote mode of teaching. We just added links to the classrooms in our e-schedule, so both students and teachers could simply click on these links and get to their classrooms even from smartphones. Besides our system integrates e-documents sub-system and staff and students can easily submit their requests, applications, other documents using it.

The Institutional Approaches to Emergency Remote Teaching

In most universities, there is a decentralized approach to courses delivered in emergency remote mode. It means that different departments, faculties and even teachers within one university could use different distant lecturing tools – Zoom, Google Teams and Classroom, Skype, BigBlueButton etc., which are available for free. The interview participants mentioned the following, "It was decided to allow teachers to use the tool which they consider to be the most appropriate – some of them have

chosen Zoom, the others Skype or Team," "Each department of the University was able to choose the platform to teach in remote mode. The University's administration didn't require the same tool usage." There are some advantages of such an approach for the universities as the teachers could use the tools they are used to, the universities did not need to find extra money in their budgets in order to buy and implement the unified tool, train teachers and students. It has appeared to be the most easy-going and cost-saving approach for those universities which were not institutionally ready for emergency remote teaching. Conversely, it was quite a challenging task for teachers, as in most cases, they had to approach all challenges on their own not being properly supported with trainings, money, technical support and IT tools.

Initially, most teachers were not prepared to teach remotely under such conditions. However, they quickly shifted and learnt how to use the video conferencing tools. This could be partly explained by the fact that 86% of Ukrainian teachers had no substantial experience. However, 80% of teachers considered themselves to be ready for emergency remote teaching as they have digital competencies and experience of adapting to new situations (Stukalo & Simakhova, 2020). Quite a few teachers faced challenges in adjusting their lectures to teaching from home. They mentioned lack of skills and experience of video lecturing as well as lack of online teaching techniques, absence of personal computers, lack of high speed Internet, psychological and communicational issues. For example, some participants complained, "I'm living outside the city in the area where Internet connection is quite weak and doesn't allow for good quality videoconferencing," "There is just one computer in our family and we had to decide who and when will use it," "It was challenging from the technical side to teach in remote mode without my assistant."

Moreover, in Ukrainian higher educational institutions, there is quite a high percentage of working retirees (due to experts' estimation from 30 to 44% depending on the University and region), and they needed additional support to switch from face-to-face to emergency remote teaching. Only few universities managed to support such teachers. For example, there are cases where the universities delivered laptops to their lecturers' homes, covered the cost of the high speed Internet and licensed Zoom accounts. Participants explained, "We have been compensated for the Internet cost on a monthly basis," "Our University has provided laptops for those teachers who didn't have them ," "I have access to the University's licensed Zoom account with unlimited time for lecturing in large groups." Additionally, there are some cases where the universities provided relevant trainings and seminars to develop their lecturers' technological skill sets. The interviewees confirmed, "The training conducted by the University IT support team was helpful and provided me with relevant guidelines and skills to use modern video lecturing tools," "our University is planning to conduct a series of seminars for the teachers to equip them with new skills of remote teaching and using the online platforms."

However, analysis of data collected through interviews and questionnaire demonstrate that these efforts are mainly chaotic, non-systemic and not sufficient, they were not supported or regulated at national level and universities and their teachers are left to fend for themselves in funding shortages in pandemic times. Moreover,

some interviews and publications on social media by the Ministry officials demonstrate that there is a lack of understanding of the level of Internet accessibility for students and teachers. Moreover, switching to emergency remote teaching is costly and requires serious technical and methodological input as well as additional funding and relevant support from the Ministry of Education and Science of Ukraine (mind.ua, 2020).

Students' Readiness for Remote Learning

There is evidence that students are more adaptive to the changes, new technologies and open for innovations in education; however, it only relates to the technical aspect. The questionnaire participants confirmed, "most students use modern gadgets and use them to learn," "the students have quickly adopted the remote mode of teaching and learning," "most students didn't face any challenges to join remote classes and video lecturing." Ninety percent of respondents have concerns about students' psychological and communicative readiness to embrace emergency remote learning. For instance, students do not like to identify themselves in the classrooms (they use nicknames, tend not to use cameras) and have some other issues regarding ethics and culture of virtual communication (for instance, use chats and messengers 24/7). The teachers mentioned, "I feel really frustrated when talking to students using nicknames and avatars," "I have to make a lot of efforts to get my students to switch on their cameras," "Sometimes I can't identify if my students are in the classroom as they are nicknamed", "It's very concerning to get messages from my students in the late evening or during weekends," "Some students send me urgent notes and messages at night which is not appropriate at all."

Therefore, students are ready to use new technologies and are opened to innovations in the study process; however, they need to be motivated and supported in terms of psychological and communicative readiness. This could be addressed by applying the next-generation pedagogy framework IDEAS (Intelligent, Distributed, Engaging, Agile and Situated). These five guideposts reflect an innovative approach in teaching. First, intelligent pedagogy means teaching with technology to enhance the learning experience. Second, distributed pedagogy refers to engagement of different stakeholders who add different elements of the learning journey. Third, engaging pedagogy means that learners should actively participate in the learning process and such an approach should be supported by curriculum design and delivery. Fourth, agile pedagogy means flexibility and customization of the curriculum, personalized learning pathways and individualized support for learners, recognition of non-formal learning achievements, responsiveness to learners' needs and support for virtual mobility of students and internationalization of the curriculum. Fifth, situated pedagogy reflects contextualization of learning and its real-world relevance increases work-related learning opportunities for students (UOC, 2016).

Learner engagement, innovative approaches, effective learning, formative assessment, coherence, consistency and transparency are among core pedagogic

principles for e-leaning which create its quality framework (Anderson & McCormick, 2005). Effective remote teaching should equip students with relevant competencies and skills in pedagogical and andrologogical teaching models (Adebisi & Oyeleke, 2018). However, it is important to note that not only pedagogical and andrologogical but also heutagogical and cybergogical principles should be implemented. Students should feel supported; however, they should be proactive and motivated to study in remote mode and to become independent learners. Effective e-leaning is also based on the principle of digitalization and innovations in education and could be demonstrated via personalization, evidence-based approach, encouraging metacognitive thinking and authentic learning (Anderson & McCormick, 2005).

As the pandemic has become the new reality, it is the most opportune moment to transition from traditional pedagogic and andragogic models to heutagogy (Hase & Kenyon, 2013) and cybergogy approaches (Wang & Kang, 2006). Heutagogy is considered to be "a student-centric learning strategy where learning is determined by the learner" and encourages self-directed learning (Schroeder, 2018, p. 10). Rupendra (2018) states that the key differential factor of heutagogy is the idea of "double-loop learning" which is the act of challenging the theories in use, values and the assumptions and results in action and generates new knowledge in teaching and learning activities. In double-loop learning, students/learners are both psychologically and behaviourally engaged. They not only reflect on what they have learned, but also the way in which the new knowledge has influenced their values and belief system. Heutagogy learning consists of exploring, creating, collaborating, connecting, sharing and reflecting. Thus, learners have the opportunity to investigate different ways and approaches to obtain knowledge. The freedom to create is an important design element of heutagogy (Rupendra, 2018). On the one hand, it is quite challenging because each individual learner is different and requires personalized approach from instructor's side, but on the other hand, it is also enjoyable as it motivates individuals to improve and progress and encourages life-long learning.

Accessibility: Students

There are challenges related to communication with students from some villages and other remote areas of Ukraine where 38% of students indicated that they experienced accessibility issues and lack of access to high speed Internet (State Inspectorate of Quality, 2020). According to the data of Ukrtelecom (the biggest fixed line operator in Ukraine), 6.3 millions of Ukrainians (15% of population) live in the area of the digital divide not covered by any Internet providers (Ukrtelecom, 2020). It is important to note that it mainly relates to rural population – according to the Ministry of Digitalization, 65% of villages and 2% of towns (17310 Ukrainian settlements) do not have access to broadband internet. Additionally, income level also affects the ability to access Internet. According to CEDOS (2020), only 42% of people from 10% of the lowest-income households sometimes use Internet. Conversely, 92% of people form the 10% highest-income Ukrainian households use

Internet at home and at work on a daily basis. In addition, there are even rare problems with electricity. Three interviewees mentioned, "A couple of times my students complained that they can't access classes because of unstable electricity in the area," "I have a student who faces some challenges to join the online meeting because of power outage," "There are many students from rural areas in our University and they have Internet access problems." Therefore, it means that there is a difference in Internet accessibility between students from rural versus urban areas and it causes digital inequality. Furthermore, it is important to note that students from low-income families do not have modern computers and gadgets. There are no available exact data on computers availability for higher education students, but the questionnaire conducted by the Education Ombudsman of Ukraine (2020) demonstrates that 12% of secondary school students do not have sufficient equipment to study in remote mode and 20% are partly equipped with computers/notebooks. With this in mind, digital inequality caused by place of living and income level has an effect on the access to learning materials and online classes, tasks completion and grading process, meeting learning objectives and the overall quality of learning.

Students' Engagement/Satisfaction

According to the State Inspectorate of Quality (2020), only 50% of teachers have confirmed 70–100% of students' engagement during emergency remote classes which is definitely quite concerning. There are universities' best practices for monitoring students' satisfaction with emergency remote learning, and the results of their anonymous surveys show that 60–70% of the students are essentially satisfied, but note some difficulties and problems such as technical issues, unstable Internet connection and teachers not being prepared for emergency remote teaching. In fact, more than 30% of students are concerned with the issues related to fairness of marking during distant learning (State Inspectorate of Quality, 2020). About 20–25% of the students are not satisfied with emergency remote learning. There are examples discussed in the previous study by Stukalo and Simakhova (2020), for instance, students' satisfaction surveys conducted by National Aviation University, Bohdan Khmelnitskiy Cherkasy National University, Dnipro Politechnics. These figures are also confirmed by the State Inspectorate of Quality (2020) survey – 70% of students are satisfied and 19.2% are not satisfied by the distant learning technologies implementation during pandemic.

Potential Health Risk

In addition to all these challenges, interviewees mentioned potential health issues as both students and teachers use computers for too many hours per day for learning, preparing to the classes, working meetings and many other activities. There is no separate research focused on the health risks of students and teachers because of remote learning and teaching during pandemic yet, but some participants,

mentioned health issues such as eye strain, back pain, nervous tension, high fatigue. "I should also note that teachers complained about higher fatigue and nervous tension when working in remote mode as compared to face-to-face teaching," "I personally feel like my eyesight has deteriorated," "every day I spend hours sitting in front of my computer and I suffer from backache," "The teachers spend twice more time working with computers and report high load on the nervous system." CEDOS report (2020) includes some discussion of the mental health issues during remote teaching and learning and refers investigation of psycho-emotional state of Ukrainians during quarantine (ratinggroup.ua, 2020). This investigation demonstrates that there are some signs of anxiety, fatigue and sleep disorders; however, there is no serious increase in depressions and panic attacks among Ukrainians, and so negative emotional dynamics during quarantine is not concerning, yet. On the other hand, young people of 18–29 (Ukrainian students mainly belong the18–29 age group) and 30–39 age groups demonstrate the highest increase of negative emotional states in comparison to the other age groups (raitinggroup.ua, 2020). Thus, there are some signs that emergency remote mode of learning causes some potential health risks, which should be further investigated.

Teachers' Preparedness or Lack Thereof

In addition to in-depth interviews, we also surveyed HEIs representatives and more than 600 respondents replied. Three percent of respondents confirmed they were ready and prepared for emergency remote teaching and learning, and 19% were not properly prepared for emergency remote work. Despite this fact and the lack of relevant experience, teachers demonstrated adaptability and moved their classes into remote mode on various online platforms. They used online conferences, debates, discussions, lectures and seminars as a part of their classes. The results of the survey also showed that 61% of respondents used remote teaching tools from time to time before the pandemic. State Inspectorate of Quality (2020) reports that 44.8% of teachers and students had experience of regular distant technologies usage before quarantine and 39.5% used them from time to time. Therefore, 84.3% of respondents had experience. The gap in the results of surveys (61% vs. 84.3%) could be explained by differences in understanding of remote teaching tools and distant technologies as well as the fact that State Inspectorate of Quality surveyed both teachers and students. More than 23% had no experience of remote or online teaching. Only 14% had experience of regular online teaching.

Proposed Plans

All respondents confirmed that after the pandemic, their universities would proceed with remote teaching practices and would develop online education and e-management in addition to traditional classes. Sixty-two percent of teachers and

59% of students consider remote teaching flexibility regarding time and place to be the key advantage of distant education (State Inspectorate of Quality, 2020). There is evidence that education would never be the same. Universities have also reported some ambitious plans and projects. For instance, project "Interuniversity Lecture Hall" is proposed by Ternopil National Pedagogic University and Ivan Franko Prykarpatskiy National University. This project would allow students from different universities to listen to the lectures provided by different universities. Another project is "Open University" providing public video recordings of the best lectures (Zaporiszhszha National University). There are also some ideas to conduct trainings on online teaching skills and to develop online courses and programmes for those students who do not want to travel from other regions of Ukraine or abroad. As an alternative to traditional study programmes, Universities have started developing hybrid including a blend of remote and traditional classes, online and offline format of teaching and learning.

Conclusions

Firstly, the majority of the universities in Ukraine did not consider online education development as a strategic goal and priority before the pandemic. There is no clear understanding at the institutional and ministerial levels of the crucial role of innovative information and online technologies as a key factor in modern education. Secondly, in the beginning of 2020 before the quarantine, HEIs were not properly prepared for emergency remote teaching and learning. Only those universities which had impetus or specific social request (such as education for juvenile convicts or teaching at displaced universities) were more or less ready to work in distant format. Additionally, those universities that used new technologies, followed innovations in educations, addressed learning needs of disabled students and diversified their programmes and other educational services were better prepared. Furthermore, the transition process went quickly and smoothly for their staff, teachers and students.

Thirdly, despite the initial "shock" caused by unexpected nationwide quarantine, Ukrainian universities responded to the challenges and quite quickly organized the process of emergency remote teaching. Ukrainian universities' staff and teachers had no substantial experience of online education techniques usage. However, they swiftly adapted to the remote mode effectively using video conferencing tools. Fourthly, quarantine restrictions became a stimulus to develop e-management and e-learning technologies in the universities. Interviews with rectors and vice-rectors of Ukrainian universities demonstrated that pandemic restrictions gave impetus for transformations in the higher education system of Ukraine and promoted an understanding of the strategic importance of the online education. Fifthly, there is a lack of understanding of the principles and nature of online education in the academic society in Ukraine, and there are no relevant supporting trainings in online education techniques and methodologies.

Therefore, it is important to revise the emergency remote teaching approach to cater to students' needs and expectations in order to transition from emergency remote teaching to online education. Education should motivate and engage students and they should feel supported, encouraged and motivated. As the pandemic has become the new reality, it is the most opportune moment to transition from traditional pedagogic and andragogic models to heutagogy (Hase & Kenyon, 2013) and cybergogy approaches (Wang & Kang, 2006). This would have been an interesting angle to move the discussion along and add to the limited extant literature. The HE landscape is changing in Ukraine. It is expected that those universities which managed to use the COVID-19 pandemic as an impetus to development and new approach would demonstrate positive development dynamics in post-pandemic times and become leading universities.

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Part III
Emergency Remote Leadership

Perceived Effectiveness of School Leadership in Emergency Remote Learning During the Coronavirus Pandemic

Cynthia Onyefulu

Introduction

In 2020, countries of the world experienced the coronavirus pandemic (World Health Organization [WHO], 2020a). This emergency event, whether man-made or natural, disrupted lives, work, and education and training. In March 2020, Dr. Tedros Adhanom Ghebreyesus, the Director-General of WHO, cautiously declared the coronavirus (COVID-19) a pandemic (WHO, 2020b). Soon after this declaration, all public and private sectors, including institutions of learning in different countries of the world, had to close for some time to reduce the risk of infection due to COVID-19. This mandatory closure of schools disrupted the lives of students and staff. The effect of this disruption on the education systems was reported as the "largest" in history, because it affected "nearly 1.6 billion learners in more than 190 countries and all continents" (United Nations [UN] Policy Brief Report, August 2020, p. 2).

Learning had to be offered in different ways such as remote, screen-based, and online with teacher support (Harris & Jones, 2020). According to Vegas (2020), less than 25% of low-income countries provided any type of emergency remote learning, those that did used a combination of online, television, and radio broadcast, while approximately 90% of high-income countries offered remote learning via the online platform.

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The capability of any country to navigate during and after an emergency situation such as a pandemic depends on a number of factors such as leadership and infrastructure (crisis management plan, access to technology, and the internet, among others). The Caribbean was one of the regions that used a combination of teaching modalities during the pandemic (Vegas, 2020). Consequently, in the education sector, particularly in a developing country such as Jamaica, many school leaders were faced with the challenge of how to provide remote learning opportunities to students during the pandemic. This move was to address the disruption of classes that affected a total of 31,656 teachers (9,384 in pre-school, 7,233 in primary, 11,798 in high school and 3,241 in tertiary education, and about 627,000 students in Jamaica) (United Nations Educational, Scientific & Cultural Organization [UNESCO], Cluster Office of the Caribbean (n.d.). To address students' basic learning needs, which were identified by UNESCO Institute and the International Bureau of Education (IBE)-UNESCO as:

> Needs which comprise both essential learning tools (such as literacy, oral expression, numeracy, and problem-solving) and the basic learning content (such as knowledge, skills, values, and attitudes) required by human beings to be able to survive, to develop their full capacities, to live and work in dignity, to participate fully in the development, to improve the quality of their lives, to make informed decisions, and to continue learning.

In a blog written by Yanique Dobson (2020), a high school teacher in Jamaica, and published by UNICEF, she stated that some of her students in the rural areas did not have steady internet and, as a result, could not access Google Classroom. According to Dobson, some of her students "already had a gap to overcome" (n. p.). The pandemic made the situation worse for these students, who already needed more academic support from their teachers. Eyles et al. (2020) noted that the shutdown of schools because of COVID-19 could affect the educational achievements of disadvantaged students. A similar view was expressed by Janetius et al. (2020), who stated that students' learning was affected in India due to the pandemic.

Apart from Dobson's students, other students are also affected. According to the UNESCO, Cluster Office of the Caribbean (n.d.), about 627,000 students were affected by the closure of schools in Jamaica because of the outbreak of COVID-19. This office estimated that the group of students badly affected are those in the primary and high schools. These are the students who are preparing for standardised examinations such as the primary exit profile (PEP) examination, the Caribbean Secondary Examination Certificate (CSEC), the City and Guilds, the Caribbean Vocational Qualification (CVQ) and the National Vocational Qualification of Jamaica (NVQJ), and do not have access to the internet or the right device.

Despite these challenges, the declaration of education as a right by the Convention on Human Rights and the Convention on the Right of the Child during the 1990 Education for All (EFA) conference in Jomtien is very important and applies to the COVID-19 pandemic. This declaration is designed to ensure that emergency situations such as the COVID-19 pandemic do not disrupt access to education significantly. In order to ensure the continuity of learning and to engage students, school

leaders, through their ministries of education, had to immediately integrate emergency remote learning in their schools.

The review of the existing literature on COVID-19 shows that most academic studies on how school leadership is responding to and managing emergency remote learning are limited in Jamaica. Several studies are written on different countries. For instance, Harris and Jones (2020) and Darling-Hammond and Hyler (2020), using the United States as an example, both highlighted difficulties of accessing digital devices, the internet, and other technologies during COVID-19. Azorín (2020) examined educational responses in Spain, and Fogarty (2020) studied leading at the early childhood level in England. A few studies conducted in developing countries include Moyi (2020) who investigated out of classroom learning in Kenya and Iyiomo (2020) who looked at the costs of online teaching in a free secondary education programme during the COVID-19 pandemic in Nigeria. Therefore, there is a gap in the academic literature to examine how school leadership integrated emergency remote learning in schools in Jamaica during the COVID-19 pandemic.

In this chapter, the main aim is to examine the experiences and views of teachers across different learning institutions (early childhood, primary, and secondary schools) in Jamaica on how their school leaders managed emergency remote learning during COVID-19. Consequently, the epistemological principle of empiricism (quantitative approach) was used.

The research questions to be addressed in this chapter are as follows:

1. What type of leadership style do school leaders exhibit in response to COVID-19?
2. How did principals lead their teachers in emergency remote learning during COVID-19 pandemic?
3. What are the benefits and challenges of integrating emergency remote learning in schools in response to COVID-19 pandemic?

The results of this study will add to the academic literature that seems to be lacking on the topic in a developing country such as Jamaica. The study will provide a platform for educators and policymakers, in general, and ministry of education staff to discuss lessons learned from emerging challenges and benefits of emergency remote learning, as experienced by school principals and teachers across different levels of learning. The results will also be useful in exemplifying how principals are prepared for a crisis such as the pandemic.

Literature Review

Databases such as EBSCO, Emerald, and Google Scholar were used during the review of the literature. The study was limited to articles and reports published in the English Language. The review centred around four main themes: leadership and management, leadership styles, emergency remote learning, and school leadership during emergency.

Leadership and Management

There are several definitions of leadership; as such, there is a lack of consensus on the definition of leadership, especially in the field of educational leadership (Day et al., 2000; Leithwood et al., 1999). As far back as in the late 1980s, Cuban (1988) stated that "there are more than 350 definitions of leadership but no clear and unequivocal understanding as to what distinguishes leaders from non-leaders" (p. 190). According to Yukl (2002), this lack of agreement is because "the definition of leadership is arbitrary and very subjective." Yukl added, "some definitions are more useful than others, but there is no 'correct' definition" (p. 4). However, Bush and Glover (2003) defined leadership as the people who bend others' motivation and actions to achieve specific goals, which implies taking initiatives and risks.

On the other hand, Leithwood et al. (1999) and Yukl (2002) believed that the fundamental element in the several definitions is that leadership involves influence. To Leithwood et al. (1999), "influence… seems to be a necessary part of most conceptions of leadership" (p. 6), while to Yukl (2002), leadership "involves a social influence process whereby intentional influence is exerted by one person [or group] over other people [or groups] to structure the activities and relationships in a group or organization" (p. 3). Seeing leadership as a process of influence was also expressed by Cuban (1988), who stated that "Leadership, then refers to people who bend the motivations and actions of others to achieving certain goals; it implies taking initiatives and risks" (p. 193). Fidler (1997) shared a similar point of view by claiming that in leadership, "followers are influenced towards goal achievement" (p 25).

Others have linked the process of influence to a specific leadership style. For instance, Leithwood (2001) and Harris (2001) promoted the concept of distributed leadership, while Stoll and Fink (1996) saw it as "invitational" leadership because "Leadership is about communicating invitational messages to individuals and groups with whom leaders interact in order to build and act on a shared and evolving vision of enhanced educational experiences for pupils" (Stoll & Fink, 1996, p.109). I agree with the process of influence in leadership because, during a pandemic or any major crisis that would affect schools, the principals as leaders would intentionally influence their staff to achieve certain school vision and or goals. Although the terms leadership and management do overlap, it is important to make the distinction because some principals, in fact, do perform management functions. According to Cuban (1988), leadership is linked with change, while Dimmock (1999) viewed management as a maintenance activity (as cited in Bush & Glover, 2003).

To this end, the definitions of leadership and management, as stated by Bush and Glover (2003), are adopted in this study. They defined leadership as a "process of influence, leading to the achievement of desired purposes. It involves inspiring and supporting others towards the achievement of a vision for the school which is based on clear personal and professional values" (p. 10). They also defined management as the "implementation of school policies and the efficient and effective

maintenance of the school's current activities. Both leadership and management are required if schools are to be successful" (p. 10). Both terms are central to this study.

The COVID-19 has resulted in more attention being given to leadership during a pandemic or crisis although it is not a new area in the literature. Ahern and Loh (2020) stated that leadership during crises exist in the areas of military and emergency management. They added that it is important for the leader to (1) create trust through action by preparing and planning, seeking relevant and reliable information, and being adaptive at all times due to the fact that the situation changes; and (2) sustain trust through connectedness by taking responsibility and being transparent, and showing actability, and being authentic and ethic through value-based practices as long as they have a shared sense of purpose with their followers.

Leadership Styles

Leadership style is seen as "the broad way a leader relates with his or her juniors to achieve the desired objectives sequentially" (Otieno & Njoroge, 2019, p. 116). There are different and competing leadership styles and theories evident in the existing literature. These include managerial leadership, transformational leadership, transactional leadership, moral leadership, participative leadership, distributed leadership, teacher leadership, post-modern leadership, and contingent leadership (Bush, 2008). For the purpose of this research, three leadership styles are examined. These are distributed leadership, transformational leadership, and transactional leadership.

Distributed Leadership

Several authors have defined distributed leadership in different ways. For instance, Halverson (2007) described it as collective work and learning. Malloy (2012) saw it as distributing leadership practices, while Spillane (2006) viewed it as a leadership style that involves interaction between the leader and followers. According to Iandoli and Zollo (2008), distributed leaders are likely to influence organisational change positively. In terms of having distributed leadership in learning institutions, Harris (2012) was of the view that schools need to have multiple leaders instead of individual leaders if they are to achieve their institutional goals.

Characteristics of distributed leadership have been summarised by several authors, including Harris (2014) and Göksoy (2015). According to Harris (2014), the main characteristics of distributed leadership are as follows.

- All actions have their central focus on enhancing students' educational experiences.
- There is interdependence between learners, followers, and their situation.
- Each member is valued and supported in his/her professional practice.

- Leadership occurs through interaction, influence practices, and organisational routines.
- There is a recognition that leadership does not reside solely with the principal and deputy.
- A sense of community prevails.
- Ongoing learning is considered to be the norm for teachers as well as learners.
- There is a recognition that each person contributes to the overall good of the organisation.
- Relevant expertise is recognised and rewarded.
- Appropriate structures are formed and re-formed to provide opportunities for collaborative and participative decision-making.
- A climate of trust exists among teachers.
- Leadership may be exercised through formal positions, as well as informal roles and actions.
- There are cooperation and participative leadership throughout the school organisation in a manner, which ensures that people work together to improve teaching and learning.
- There is a totality of leaders' work that adds up to more than the sum of the parts, and that there are high levels of interdependence among those providing leadership (Shava & Tlou, 2018).

Transformational Leadership

The term transformational leadership has been defined by several authors such as Minja (2010), Leithwood et al. (1999), and Otieno and Njoroge (2019), to name a few. Although each of their definitions is slightly different, the common themes are personal value, supportive, obligation to achieving goals, and encouragement of members. For instance, Minja (2010) defined the transformational leadership approach as "a leadership behaviour that tend to change and to inspire followers hence making their performance way above expectations while exceeding self-interest for the benefit of the organisation" (as cited in Otieno & Njoroge, 2019, p. 117). Otieno and Njoroge (2019) added that "[t]ransformational leadership implants faith and pride in the followers, communicates personal respect, expedites followers to think creatively and in the process, inspires the followers to accept challenging goals and the current and future mission and objectives of the organisation willingly" (Otieno & Njoroge, 2019, p. 119). On the other hand, Leithwood et al. (1999) described a transformational leader as one who:

> assumes that the central focus of leadership ought to be the commitments and capacities of organisational members. Higher levels of personal commitment to organisational goals and greater capacities for accomplishing those goals are assumed to result in extra effort and greater productivity. (p. 9)

The characteristics of a transformational leader include idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration

(Tharnpas & Boon-itt, 2015). In terms of school leadership, Leithwood (1994) described transformational leadership under eight dimensions, namely, building school vision, establishing school goals, providing intellectual stimulation, offering individualised support, modelling best practices and important organisational values, demonstrating high-performance expectations, creating a productive school culture, and developing structures to foster participation in school decisions (as cited in Bush, 2008). Additionally, Price-Dowd (2020) described the transformational leader as an individual who "serves to enhance the motivation, morale, satisfaction and performance of followers, but also sees the leader role model compassionate and inclusive behaviours, which are valued" (p. 166).

Transactional Leadership

Avolioi et al. (2009) described transactional leadership as "largely based on the exchange of rewards contingent on performance" (as cited in Khan, 2017, p. 427). This view was shared by Khan, who indicated that a person who is considered a transactional leader "focuses on the leader-follower relationship. It is commonly used in education in the relationship between instructors and students" (p. 179). Kabeyi (2018) described transactional leaders as persons ready to give his or her followers something in return. A similar view was expressed by Munirat and Yusuf (2017), who stated that transactional leaders give rewards or punishments in exchange depending on job performance (as cited in Otieno & Njoroge, 2019, p. 117).

A comparable view was also expressed by Miller and Miller (2001), who stated that transactional leaders in schools have relationships with teachers that are based upon exchange for some valued resource (as cited in Bush, 2008). Kabeyi (2018) added that this type of leader demonstrates charismatic traits and tends to emphasise supervisory role, organisation, and group performance. In a study conducted by Day et al. (2001), they suggested that successful principals are both transactional, "ensuring that systems were maintained and met and that their schools ran smoothly" and transformative, "building on esteem, competence, autonomy and achievement" (as cited in Bush & Glover, 2003, p. 13). At times, the shift from transactional to transformational could be attributed to what is happening in the environment. This view was made by Goldring (1992), who noted the shift from transactional to transformational leadership in Israeli schools and attributed this to systemic changes in the requirements imposed on schools and their leaders (as cited in Bush & Glover, 2003, p. 13).

Other Leadership Styles

As school leaders, principals could also exhibit other leadership practices such as adaptive and ecological leadership styles because they are expected to be problem solvers (Nelson & Squires, 2017), especially during a pandemic. Yukl and Mahsud

(2010) described adaptive leadership as flexible and "involves changing behaviour in appropriate ways as the situation changes" (as cited in Nelson & Squires, 2017, p.1).

Harms and Leise (2011) summarised four common functions of an ecological leader as "counseling, mentoring, consulting, and coaching" (p. 35), while Wielkiewicz and Steizner (2005) described the four features of ecological leadership as:

> (a) Effective leadership processes involve temporary resolutions of a tension between the traditional industrial approach and the neglected ecological approach; (b) specific leaders are less important than they appear because the ecological context is more important than what leaders decide to do; (c) organizations are more adaptive when there is a diversity of genuine input into decision-making processes; and (d) leadership itself is an emergent process arising from the human interactions that make up the organization. (p. 326)

Emergency Remote Learning

In non-traditional teaching and learning delivery approach, many terms are used in the educational technology and instructional design literature. These include blended learning, distributed learning, emergency remote learning, distance learning, mobile learning, and online learning. It is important to point out that, at times, teaching is used with the aforementioned terms instead of learning. For instance, Hodges et al. (2020) and Mohmmed et al. (2020) chose to use teaching when they discussed emergency remote learning. This, they said, was due to the type of "type of instruction being delivered" during the COVID-19 pandemic (n. p.). Nonetheless, researchers in both fields have made the distinctions among these terms because of the method of design used in the development and implementation of each delivery method (Hodges et al., 2020). In this chapter, emergency remote learning is used, and it is defined as "a temporary shift of instructional delivery to an alternate delivery more due to crisis circumstances" (Hodges et al., 2020, n. p). Millman (2020) preferred to use the term pandemic pedagogy or emergency remote teaching and learning.

For remote learning to take place, there has to be web-based technology such as the learning management system (LMS). Turnbull et al. (2019) defined LMS as "web-based software platforms that provide an interactive online learning environment and automate the administration, organization, delivery and reporting of educational content and learner outcomes" (p. 1). The popular LMS are Moodle, Blackboard, and Desire2Learn (Raza et al., 2020; Turnbull et al., 2019). According to Ali (2020), during the pandemic, the move to online and remote learning and their implementation depends on the stakeholders' acceptance and compliance.

In a technical report by Di Pietro et al. (2020), it was stated that due to COVID-19, Microsoft and Google made available their remote education tools, for teachers to use during the pandemic. Furthermore, Ali (2020) noted that for online and remote

learning in some higher education institutes in the United States and China, video-conferencing platforms such as Zoom and Moodle were adapted.

Concerning training in the use of technologies, Ndahi (2020) investigated the effect of the COVID-19 pandemic on the delivery of TVET in CARICOM Member States. Ndahi noted that 48% of the teachers in the Caribbean have had training in the use of some types of information and communication technologies and online resources such as Blackboard, Moodle, Zoom, G Suite, and Google Classroom. This is also the case in Jamaica.

School Leadership During Emergency

Harris (2020) described school leadership before COVID-19 as "traditional" (p. 321). According to Harris, "The core purpose of the head teacher or principal was fundamentally to run the school and ensure learning and teaching was most productive" (p. 321). The traditional leadership style previously used by principals had to quickly change due to the pandemic. School leaders now had to use technology-based platform which Harris (2020) referred to as "a two-dimensional space" such as "Teams, Zoom or Google Meet" in their practice of leadership (p. 321). This shift in school leadership, although new for some, was necessary despite its challenges, in order to continue the teaching and learning process. According to Netolicky (2020), "In a time of crisis, leaders must act swiftly and with foresight but also with careful consideration of options, consequences and side effects of actions taken" (p. 2). Harris (2020) cautioned that mistakes will be made when leading through a crisis but the focus should be on getting the job done during challenging times.

According to Harris (2020), due to the pandemic, "distributed leadership has become the only way to operate" (p. 324). Harris defined distributed leadership as "concerned with leadership interactions rather than actions which reflect the new reality facing all those who lead, not just school leaders" (p. 324). Azorin (2020) added that for distributed leadership to succeed, the school leaders should focus on the capacity building of their staff and relying on the staff to lead through collective action in order to have joint practice (Azorin, 2020; Harris, 2020).

However, prior to the current pandemic, Kapucu and Van Wart in 2006 and 2008 investigated the nature of leadership during an emergency. Their study revealed that transactional and transformational leadership were vital in emergency events (as cited in Karaca et al., 2013). Furthermore, Karaca et al. (2013) described the features of transactional leadership by stating that:

> Transactional characteristics of leadership are important in the efficient execution of response because of the criticality of time, the spike in demand, and the inability to learn on the job. Leaders and followers must respond with alacrity to the vast number of situations that require immediate attention. (p. 21)

They also described transformational leaders as having the characteristics that require "leaders to creatively fix major process lapses …." (Karaca et al., 2013, p. 21). Against this differentiation, they argued that during emergency management situations, transactional leadership is preferred. Karaca et al. (2013) stated that the necessity to "reduce the need for transformational leadership [is] because of the criticality of time and increased likelihood of mistakes" (p. 21). In their study, they found that the transformational element as the "difference between good and great leaders" (p. 21), and stated that "The best leaders could maintain transactional processes and standard support, but inspire in difficult circumstances, stay level-headed under pressure, and be willing to intervene quickly when system failures occurred" (Karaca et al., 2013, p. 21). Netolicky (2020) echoed the importance of acting swiftly and pointed out the need for school leaders to not only take a speedy action but also reflect carefully about their actions and their consequences.

Method

A cross-sectional survey research design was used for this study. Teachers (n=150) from across different school levels (early childhood, primary, and secondary) were purposefully selected to participate in the study in order to compare their perceptions. The numbers were not sufficient to enable a power calculation to be conducted.

An e-questionnaire was used to collect data from the participants. The e-questionnaire contained two sections. Section A contained five demographic items that allowed for the description of the participants. Section B contained 16 Likert-type items on transformational leadership style. These items contained a four-option response format of strongly disagree (SD) with the value of 1 to strongly agree (SA) with a value of 4. All 16 items were positively framed.

Cronbach's alpha method was used in estimating the reliability of the 16 Likert type-items in Section B of the e-questionnaire. This method was used because the e-questionnaire was administered once. Content validity was achieved by ensuring that the items in the e-questionnaire answered the research questions. Data collected from the e-questionnaire were imported into the SPSS programme and analysed using descriptive statistics (frequency, mean, and standard deviation), and non-parametric (Pearson chi-square) and parametric statistics (ANOVA) based on the research questions. The parametric statistics were conducted at the 0.05 level of significance (p value).

Ethical issues as outlined by Leedy and Ormrod (2012) were observed while conducting the study. The reason for the study, the purpose of the study and its importance, and the rights to withdraw at any time without prejudice were fully explained to the participants via an email. Those who consented to participate completed the e-questionnaire. The participants' rights to privacy were respected. During the analyses stage, a code was assigned to each participant in order to maintain confidentiality.

Results and Discussion

Characteristics of the Respondents

To describe the teachers who participated, demographic items that measure gender, age range, qualification, teaching experience, and school type were collected. As shown in Table 1, there were approximately 22% males and 78% females who participated in the study. A majority of the respondents were above 40 years. With respect to teaching experiences, most of the respondents (40%) had above 15 years, while over half of the teachers had a bachelor's degree. At the time of this study, most of the teachers taught at the secondary school level.

Research Question 1: What Type of Leadership Style Do School Leaders Exhibit in Response to COVID-19?

The participants were asked to identify the leadership practised by their principal during the pandemic. The results showed that 64 (46%) respondents indicated distributed leadership, 54 (39%) transformational, and 22 (16%) transactional (see Table 2). Of the 64 respondents, 17 (12%) were early childhood teachers, 20 (14%) were primary, and 27 (19%) were at the secondary school level. In a study conducted by Abu-Tineh et al. (2008), they found that the basic school teachers identified their principals as more transformational as compared to those from the high school.

Table 1 Demographic characteristics of respondents

Characteristic		Frequency	Percent
Gender	Male	31	22.1
	Female	109	77.9
Age range	30 years & less	29	20.7
	31–40 years	47	33.6
	Above 40 years	64	45.7
Teaching experience	5 years & less	32	22.9
	6–15 years	52	37.1
	Above 15 years	56	40.0
Qualification	Non-degree	30	21.4
	Bachelor's degree	80	57.1
	Master's degree	30	21.4
School type	Early childhood	36	25.7
	Primary	38	27.1
	Secondary	66	47.1

Table 2 Leadership style by school type

School type	Leadership style			Total
	Distributed	Transformational	Transactional	
Early childhood	17 (12.1%)	14 (10.0%)	5 (3.6%)	36 (25.7%)
Primary	20 (14.3%)	13 (9.3%)	5 (3.6%)	38 (27.1%)
Secondary	27 (19.3%)	27 (19.3%)	12 (8.6%)	66 (47.1%)
Total	64 (45.7%)	54 (38.6%)	22 (15.7%)	140 (100.0%)

As shown in Table 2, more respondents were of the opinion that their principals exhibited distributed leadership style during the pandemic. This finding is in line with the view expressed by Harris and Jones (2020), who noted that as a necessity to survive, distributed leadership is the "default leadership" style during this pandemic. However, Blanchard (1997) was of the view that leaders tend to apply "one preferred leadership style regardless of the situation" (as cited in Price-Dowd, 2020, p. 166). Price-Dowd noted that situations such as the COVID-19, "calls for leadership skills and behaviours that can move between each required activity with seemingly effortless ease and without loss of effectiveness" (p. 166).

Additional analysis was done using the Pearson chi-square test (X^2), *t*-test for independent samples with gender, younger and older teachers, and ANOVA with teaching experience and qualifications. The chi-square test did not show any significant difference, X^2 (3, n = 140) = .844, p =.400. There was no association between the leadership style of the principals during the pandemic and school type. No significant differences were found for the t-test, gender t (138) = −1.037, p= 0.302, and younger and older teachers t (138) = 0.652, p = 0.515. For the ANOVA tests, there were no significant differences for teaching experience, F (2, 137) = 0.056, p = 0.945), and teaching experience, F (2, 137) = 0.250, p = 0.779). Abu-Tineh et al. (2008) also did not find any significant differences in the three levels of teaching experiences among the teachers they studied.

Research Question 2: How Did Principals Lead Their Teachers in Emergency Remote Learning During COVID-19 Pandemic?

The *e*-questionnaire with 16 Likert-type items with a 4-point response format was used to capture the respondents' perceptions of how their principals led the teachers in emergency remote learning during COVID-19 pandemic. See Table 3 for the results.

With a minimum value of 1 and a maximum of 4, as shown in Table 3, for the 16 items, the mean values ranged from 2.53 to 2.90, showing that the respondents' perceptions of how their principals led the teachers in emergency remote learning during COVID-19 pandemic were mostly between disagree and agree. The standard deviation values were from 0.825 to 0.991, indicating that the respondents' level of agreement did not vary considerably.

Table 3 Teachers' perceptions of their principals' leadership during emergency remote learning

My school leaders		Mean	SD
1	Made me feel good when I am around them.	2.74	.895
2	Made me have complete faith in their leadership.	2.71	.941
3	Made me feel proud to be associated with the school.	2.80	.991
4	Displayed charisma that allows me to buy into the school vision.	2.68	.892
5	Had a clear set of values that I can emulate.	2.69	.922
6	Solicited my suggestions in putting together the school vision.	2.70	.895
7	Provided an opportunity for me to connect with the school's vision/plan.	2.95	.842
8	Allowed me the freedom to be creative in overcoming challenges faced by the school.	2.79	.844
9	Allowed me time to reflect on their vision/mission before it was implemented.	2.53	.869
10	Allowed me the opportunity to use innovative ways to address school challenges.	2.76	.839
11	Encouraged me to solve problems by applying previous approaches to the new situation.	2.72	.832
12	Had persuasive ways of communicating their plans to me.	2.70	.846
13	Informed me of what I should be doing to achieve the school plan.	2.79	.838
14	Helped me to find meaning in the work I did in my school.	2.65	.881
15	Gave me information about what is to be done in the school.	2.90	.825
16	Communicated their school's vision in an appealing manner.	2.68	.923

Table 4 ANOVA results

Groups	Sum of squares	*df*	Mean squares	*F*	Sig.
Between	832.420	2	416.210	3.498	.033
Within	16302.266	137	118.995		
Total	17134.686	139			

Based on the research of the behaviours of effective leaders, Storey and Holti (2013) listed nine domains as "Inspiring shared purpose: leading with care: evaluating information: connecting our service: sharing the vision: engaging the team: holding to account: developing capability and influencing for results" (as cited in Price-Dowd, 2020, p. 166). Some of the domains are represented on the questionnaire items. These include but are not limited to item one: leading with care (#1), sharing vision (#s 6–7), and developing capability (#14). Price-Dowd noted that the essential part of being a leader is to collaborate and be creative.

Additionally, one-way analysis of variance test was done using age range, qualification, teaching experience, and school type and the summated perception score. There were no differences in the teachers' perceptions with qualification, F (2, 137) = 0.647, p = 0.525), teaching experience F (2, 137) = 0.957, p = 0.387), and school type F (2, 137) = 2.133, p = 0.122). However, there was a statistically significant

difference with age range, F (2, 137) = 3.498, p = 0.033). See Table 4. The Tukey HSD showed that the mean difference was significant at the 0.05 level for teachers who are below the age of 30 years and above 40 years. No study was found to support this finding.

Research Question 3: What Are the Benefits and Challenges of Integrating Emergency Remote Learning in Schools in Response to COVID-19 Pandemic?

Benefits

The teachers were asked to indicate benefits of integrating emergency remote learning in schools in response to COVID-19 pandemic. As shown in Table 5, a vast majority (89%) of the respondents indicated "safe from getting COVID-19," and least number (49%) of respondents stated that emergency remote learning "provides a different format from chalkboard."

As shown in Table 5, safety and commuting were the main benefits identified by the teachers in Jamaica for emergency remote learning. In the study conducted by Coman et al. (2020) in Romania, they reviewed a number of articles on the benefits of online learning. Among other things, they identified flexibility as one of the advantages. In another study by Nurce Arifiatib et al. (2020) in Indonesia, their participants identified a reduction in travelling time and transportation costs as benefits of online learning.

Ionescu et al. (2020), in a study conducted in Romania, found that a number of teachers identified flexibility in the work schedule as one of the advantages of e-education learning. Specific studies on emergency remote learning benefits were limited and could not be added to support the findings of this study.

Table 5 Benefits of emergency remote learning in response to COVID-19 pandemic

Benefits	Freq.	(%)
Safe from getting COVID-19.	125	89.3
Cuts off commuting.	109	77.9
Cuts down on paper-based format.	95	67.9
Flexibility.	89	63.6
Teaching from the comfort of your home.	85	60.7
Enables the use of internet-based resources.	81	57.9
Provides a different format from chalkboard.	68	48.6

Challenges

The teachers were asked to indicate the challenges of integrating emergency remote learning in schools in response to COVID-19 pandemic. As shown in Table 6, a vast majority (91%) of the respondents indicated "lack of collaborative planning"; followed by (86%) "not being a part of the decision-making process," and least number (49%) of respondents stated that emergency remote learning has "social challenges" from the home environment.

The preliminary report by UNICEF and CAPRI (2020) found technological constraints as a barrier. This report revealed that only 46% of the students in pre/basic school, 53% of those in the primary school, and 59% of high school students in Jamaica had a computer for educational purposes. From the literature, Ferri et al. (2020) also noted that technological challenges such as access to educational technologies and the internet; pedagogical challenges including motivating students; and social challenges such as home environment and lack of parental support, as the main obstacles. Ferri, Grifoni, and Guzzo pointed out that some of the obstacles

Table 6 Challenges of emergency remote learning in response to COVID-19 pandemic

Challenges	Freq.	(%)
Lack of collaborative planning.	127	90.7
Not being a part of the decision-making process.	121	86.4
Lack of clear expectations on how to work together.	118	84.3
Lack of student accessibility to technology.	105	75.0
Overload of information within a short time.	101	72.1
Technological/technical problems.	101	72.1
Continuous revision of lessons.	99	70.7
Feeling overwhelmed.	98	70.0
Feeling frustrated.	95	67.9
Lack of support from school/MOE.	91	65.0
Continuous revision of school schedule.	88	62.9
Poor attendance to classes.	83	59.3
Lack of parental support.	67	47.9
Problems in engaging students during lessons.	64	45.7
Lack of staff readiness for remote teaching.	25	17.9
Classroom management issues.	21	15.0
Pedagogical challenges.	19	13.6
Lack of infrastructure to support remote teaching.	15	10.7
Social challenges (home environment).	13	9.29

being experienced in remote learning were existing before the pandemic. In the European Commission report, Di Pietro et al. (2020) warned that less time spent in learning due to the pandemic would have far more lasting implications on human capital development.

Conclusions

The coronavirus disrupted lives, more specifically teaching and learning across the world. To address this problem, many learning institutions began using emergency remote learning modality to teach learners during the pandemic, especially in schools without adequate online provision. Consequently, many teachers, under the leadership of their principals, began using emergency remote learning. This study aimed to investigate the teachers' perceptions of the effectiveness of school leadership in emergency remote learning during the coronavirus pandemic in Jamaica. The study analysed the responses of 140 teachers from early childhood, primary, and secondary schools across the island. The results revealed that distributed leadership was the dominant leadership style, followed by transformational and transactional leadership. A majority of the teachers believed that their principals provided them with an opportunity to connect with the school's vision/plan, made them feel proud to be associated with the school, and gave them information about what was to be done in their school during emergency remote learning. The teachers indicated that they felt safe from getting the virus by using emergency remote learning and that they did not have to commute to their places of work frequently. However, the teachers also identified some challenges with emergency remote learning. The top challenges were lack of collaborative planning, not being a part of the decision-making process, and lack of clear expectations on how to work together.

Limitations and Future Research

The current study has a few limitations that could be addressed in future research. First, although the sample size did not adequately represent the number of teachers in Jamaica, the study was designed to provide an insight into how teachers perceive the effectiveness of their school leadership in emergency remote learning during the coronavirus pandemic. As a result, the findings cannot be generalised. For future research, a larger sample size should be considered. Second, an *e*-questionnaire was used due to the rising cases of COVID-19 on the island. This may have contributed to the low participation rate. Given this, it is important to consider other data collection methods.

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Leading Remotely During the COVID-19 Pandemic: Implications for Faculty Activities and Teamwork

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Background Information and Research Context

The COVID-19 pandemic has had a negative and challenging effect on multiple spheres of human life. While the most affected industry remains health care that undergoes a significant shortage of resources, and the lockdowns of most of the world's countries disrupted conventional economic processes and induced a global crisis, the educational field has been influenced to a similar extent. Indeed, the implementation of quarantine measures, promotion of social distancing, self-isolation, and avoiding public places to minimize the speed of epidemic spreading have disrupted the traditional classroom-based learning processes. First of all, students, as the most numerous participants of the academic sphere, have been exposed to the challenges of remote technologically supported learning. However, all the stakeholders involved in the organization, management, and provision of educational services have been challenged to alter their conventional means of performing their duties to the ones called for by the pandemic.

Indeed, academic leaders, support staff, and faculty members encounter significant difficulties as per the development of realistic curricula, team management, digital learning, access to online learning and communicational platforms, as well as effective collaborative and business-related efforts. The teaching–learning process implementation under the burden of COVID-19 has provided multiple opportunities for utilization of e-learning strategies and online communication platforms, but at the same time, it has stated new tasks and requirements that stakeholders have to accomplish to maintain a functional educational and business process of their institutions. Many educators lacking digital skills and e-teaching knowledge are

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forced to acquire them promptly, which is facilitated by online platform use training and e-learning teams' support of employees (Hodges et al., 2020). To minimize the psychological burden and the lack of professional support of the employees during quarantine, educational institutions initiate specific online meetings with peers and collaborative teams (Li et al., 2020). Thus, there is a need to improve remote teams' cooperation and communication, the performance of the employees acquiring e-learning, monitoring methods of staff productivity, and the procedures for remote employment from developing countries (Dwivedi et al., 2020).

Given the variety of problems and challenges academic institutions are facing due to the COVID-19 pandemic and the necessity to find effective and functional solutions, comprehensive research is required. The research question that the current research paper is aimed to answer is:

General Research Question How remote working and leading remotely can influence the faculty's activities and teams' work while delivering online business programs in times of emergency?

This general research question will be answered in the result of addressing three specific research questions pertaining to the issues associated with the necessity to shift to the remote leading of education.

Specific research question 1: What changes in leadership, faculty activities, and teamwork at higher educational facilities are observed under the influence of the COVID-19 pandemic-related remote learning?

Specific research question 2: What challenges do the stakeholders involved in leadership, faculty activities, and teamwork at higher educational facilities face under the influence of the COVID-19 pandemic-related remote learning?

Specific research question 3: What solutions deem to be effective in overcoming the challenges faced by stakeholders involved in leadership, faculty activities, and teamwork at higher educational facilities under the influence of the COVID-19 pandemic-related remote learning?

The research problem concerning remote working of the educational faculty and team's work is validated by several observations. Firstly, given the short history of the issue and the ongoing character of the current crisis situation impacting the world, there has not been produced enough literature on the solutions. Secondly, the majority of literature is concentrated on particular issues related to narrow fields of learning or geographical locations (Ahmed et al., 2020; Assuncao Flores & Gago, 2020; Kogan et al., 2020; Toquero, 2020). Thirdly, many studies focus on the learners' experiences and academic outcomes due to the Coronavirus paying less attention to the experiences of leadership and faculty (Elhadary et al., 2020; Gonzalez et al., 2020). Therefore, the literature gap that is identified related to the researched topic is that the scholarly domain lacks comprehensive and integrative analysis of the effectiveness of organizational-level challenges and strategies to resolve them.

The insufficient amount and quality of studies focusing on leadership, faculty, and teamwork as the stepping-stones of educational organization working remotely necessitates a more heterogeneous research study to fill this gap.

Finally, the issues related to education are of crucial importance at such uncertain times like the COVID-19 emergency. Being a leading constituent in developing professional skills and knowledge of the next generations, the academic field must be sustainably managed to ensure consistency, high quality, and continuance of the learning process for students. Therefore, the present study aims at filling the identified gap to provide an integrative analysis of the three most influential areas of remote working, including faculty activities, leadership strategies, and teamwork.

When considering the perspective of academic employees, including leaders, faculty members, and supporting staff, the burden of responsibility for the delivery of an uninterrupted education, they lack proper theoretical guidance and practical means of addressing the challenges. The leadership of the educational institutions providing undergraduate and postgraduate programs, the faculty activities, and team performance significantly change due to the implementation of remote learning (Crawford et al., 2020; Daniel, 2020; Stoller, 2020). However, there is insufficient understanding of the occurring and expected changes, the challenges, and methods of resolving them. Without the well-organized and managed collaboration of educational professionals at times of emergency, the overall educational system is subject to disruption, which is why it is essential to investigate the work of educational institutions as academic and business entities in a remote mode. Therefore, this research paper will provide a literature review of the currently available academic sources presenting data on the problem manifestations and their solutions to identify the most common changes faculty teams are facing under the influence of COVID-19, key challenges associated with the crisis, and most effective solutions.

Literature Review

The issues related to workplace management, teamwork establishment, and employee cooperation alterations while shifting to a work from home mode of performance have been addressed for various spheres of activities and organizations. In terms of educational institutions, especially those offering undergraduate and postgraduate programs, the suspension of on-campus instruction and transitioning to remote teaching–learning processes and staff management procedures. Such a call for action imposed significant challenges to decision-makers and faculty members. This literature review provides a comprehensive overview of the publications contributing to the scope of information on how the conventional face-to-face and office-based work related to educational management has changed under the influence of the Coronavirus pandemic-related restrictions.

The Influence of the Coronavirus Pandemic on Academic Leadership

Educational leaders include the individuals involved in the primary organizational business management processes and institutional decision-making. According to Gedminiene and Kaminskiene (2016), "leadership that is required in higher education is referred to as academic leadership" (p. 93). However, despite the type of leadership, either it is economic, social, or academic, leaders are expected to implement necessary changes in response to the influential factors (Strielkowski & Wang, 2020). Despite the mode in which an educational institution performs, the leadership at an entrepreneurial university includes both academic-and business-related responsibilities. They commonly include financial management of the organization, collaboration and communication management, mentoring for building new leaders, change management, strategic planning, and workforce empowerment (Eastwood, 2020). These elements of leadership play a pivotal role in the effectiveness of organizational performance and its sustainable development. The necessity to maintain an adequate management level within each of these areas of performance at the times of a global crisis forces leaders to find and disseminate new approaches.

Much has changed in the way higher education institutions are managed under the influence of the Coronavirus pandemic. The Coronavirus crisis shaped a new pattern in academic leadership and pushed forward the development of e-learning at a pace never experienced before. Indeed, as stated by several researchers, the crisis response initiated by universities and colleges during the pandemic has forced academic professionals to seek unconventional and innovative solutions by means of rapid decision-making (Bakator & Radosav, 2020; Harris & Jones, 2020; Strielkowski & Wang, 2020). The choices and strategic planning decisions made by leaders predetermine the ability of organizations to survive the crisis and sustain their business endurance after the emergency when the rehabilitation and stabilization of conventional operations occur. To achieve such a goal and implement effective leadership in hectic times, "leaders need to establish and sustain a collaborative culture involving the use of connected networks among people" (Harris, 2020, p. 324). Competent and flexible managers are needed to lead the organizations through the uncertain times of the emergency.

As identified by Bakator and Radosav (2020), the difficulties of managing education during the pandemic must provide significant lessons to the leadership of academic institutions, including higher educational ones. In particular, the authors emphasize the need to build resilience in the organizations and implement transformative leadership strategies to ensure timely and effective emergency response in the future (Bakator & Radosav, 2020). According to Obrenovic et al. (2020), "companies that respond and adapt quickly to unpredictable threats are characterized by networked structure, flexible and straightforward guidelines, distributed workforce and leadership, and less interdependence" (p. 5). Indeed, as identified in pre- and post-pandemic publications, the traditional leadership approaches in the academic

circles have been transitional and transactional ones that allowed for adequate organizational management under normal circumstances (Gedminiene & Kaminskiene, 2016; Harris & Jones, 2020). However, the emergency requires a swift shift toward more efficient methods of business practice management.

The changes in the environment within which a higher educational institution functions are addressed by educational leaders and reflected on the organization of the operations of the whole entity. Such a dramatic and global crisis as COVID-19 has imposed numerous challenges for academic leaders. Firstly, without the ability to establish a conventional face-to-face interaction with the subordinates, communication and collaboration management is in need of modification. According to the findings of Harris and Jones (2020), educational leadership has been challenged to change the approach to the management of employees and the teaching–learning process arrangement. A top-down hierarchal approach is ineffective in a time of crisis when the leader cannot properly conduct his or her responsibilities alone (Fernandez & Shaw, 2020). Therefore, there are difficulties in establishing functional communication with subordinates and the overall organization of the teaching and leading processes as well as faculty members' performance.

Secondly, in connection with the previously identified challenge, productivity and performance monitoring measures, policies, and tools that have been used in live campus-based work do not apply to remote working (Clark et al., 2020; Dwivedi et al., 2020; Hodges et al., 2020; Mickey et al., 2020). Due to the inability of managers to control the working process of the employees and oversee their performance and productivity, remote working requires establishing several strategies for monitoring, "including daily reports, clocking in/out via applications such as DingTalk, and being required to have a camera on whilst working" (Wang et al., 2020, p. 14). Thirdly, talent management and successful professionals' retention are also a crucial concern for educational organizations' leadership since in a time of crisis, the uncertainty and financial burdens might impose losses of human resources (Gedminiene & Kaminskiene, 2016). Therefore, leaders of entrepreneurial universities are facing the task of developing encouragement and retention programs and policies to guarantee adequate benefits and support for the most successful and valuable employees. It has the potential of significantly contributing to the future of the organization's rehabilitation after the emergency.

Fourthly, information systems management, and the provision of employees' equal access to digital means of learning constitute a very serious challenge to leaders and faculty members (Dwivedi et al., 2020). An important concern related to the implementation of digital learning throughout the different population groups of learners and faculty members is associated with socioeconomic disparities that predetermine the overall access to computers and the internet, not even taking into consideration the quality and efficiency of using the proposed e-learning tools. Indeed, as emphasized by Joaquin et al. (2020), "students in far-flung areas in the country do not even have roads or electricity, let alone access to computers and the internet" (p. 2). Therefore, an emerging inequality might be addressed by individual support of the vulnerable employees, as well as the recruitment of remote international teams for better opportunities for the organization.

Some of the particular solutions include transitioning to a servant style of leadership. It allows leaders to facilitate "empowerment, involvement, and collaboration," overcome the uncertainty, and "assess their current reality in which students, faculty, and staff are experiencing genuine difficulties in their everyday life" (Fernandez & Shaw, 2020, p. 42). Similarly, Harris (2020) argues that a shift from conventional leadership styles to "distributed, collaborative, and networked leadership" allows for effective problem-solving, timely decision-making, and sustainability during the hectic times of the crisis (p. 324). Thus, the implementation of new leadership strategies that involve continuous collaboration and task delegation is an effective method of adequate response to an emergency within the context of academic organizational performance.

Furthermore, since the leaders cannot resolve the emergency-related issues alone, there must be appropriate collaborative measures in place to ensure interdisciplinary decision-making. Thus, academic leaders "should delegate leadership responsibilities to a network of multidisciplinary teams or task forces that will have a significant role in the implementation of the crisis management strategy" (Fernandez & Shaw, 2020, p. 43). Structural changes might be an effective way of addressing the necessity of leadership delegation, which allows for modifying the departments of a higher educational institution toward the needs and goals of the organization during crisis times (Mickey et al., 2020). Importantly, such an approach allows for establishing functional communication with all stakeholders, including the underrepresented and vulnerable populations, timely identification of their concerns, and appropriate response.

Finally, another crucial method of effective leadership during the time of crisis is clear communication with all involved stakeholders to ensure aligned and updated performance according to the rapidly changing policies and strategies. As identified by Fernandez and Shaw (2020), to establish continuous and effective communication with the employees, "leaders should consider the live streaming of updates or messages of encouragement to stakeholders" (p. 43). Importantly, multiple communication channels should be selected based on stakeholder preferences and reliability, which will ensure the success of information exchange, policy updates, and performance reporting (Clark et al., 2020; Dwivedi et al., 2020; Fernandez & Shaw, 2020). Text messages, video calls, e-mails, online platform messaging, and other means of remote communication might be used for the purposes of updating and supporting staff, faculty members, and students (Dwivedi et al., 2020; Wang et al., 2020). Overall, the influence of COVID-19 on academic leadership is sufficiently covered in the scholarly literature. However, in addition to educational leaders, faculty members and their teaching-related activities have also been significantly modified under the disruptive influence of the COVID-19 crisis.

Faculty Activities During Emergency Remote Learning

Faculty, as the most powerful and substantial entity of the educational institution, is responsible for delivering educational services and is at the forefront of all the issues related to e-learning and remote working. Among the changes that have occurred within the realm of faculty activities during 2020, there is the elimination of live on-campus instruction, modification of grading policies, alteration of instructional approaches, and the postponing or canceling of research activities (Elhadary et al., 2020; Mickey et al., 2020; Rapanta et al., 2020). The challenges that are associated with these changes and requirements of the new era in education include multiple examples.

The lack of digital skills or insufficient pedagogical preparedness of educators who have little or no experience in online instruction is one of the most challenging issues for universities shifting to remote education (Assuncao Flores & Gago, 2020; Rapanta et al., 2020). Indeed, among the technical, there is "the lack of sufficient experience in recording and uploading lectures on the university website, besides, the use of live online platform" (Elhadary et al., 2020, p. 1749). Similarly, the classroom-based teaching techniques that have been effective during on-campus instruction have become dysfunctional due to the difference in the social context of the teaching–learning process and educator–student interaction. Moreover, insufficient online instruction methods require updating, innovative solutions, and continuous digital learning of the faculty members (Assuncao Flores & Gago, 2020).

Due to the lockdowns and the imposed social isolation, many faculty activities have become difficult or even impossible to accomplish. Indeed, research-related travel and lab work cancelation are the challenges that many faculty members encounter (Clark et al., 2020; Mickey et al., 2020). Another issue related to educational activities is the lack of hands-on practice delivery to students. While medical education based on fieldwork is partially implemented through the admission of students to health care units to work with patients, the majority of other educational fields are deprived of the ability of live learning and practical skills development (Kogan et al., 2020). The organization of virtual practicums, as reported by the Portuguese educators, have been a partially sufficient way out of the difficult situation that allowed for skills training in students under the conditions of remote education (Assuncao Flores & Gago, 2020).

To eliminate these challenges, several solution options have been introduced and tried by some institutions to prove their effectiveness. The solutions are innovative, inclusive evaluation procedures that have demonstrated their effectiveness in many countries of the world where digital teaching has been promptly introduced to faculty (Crawford et al., 2020). Some universities cancel end-of-year examinations; however, by "clarifying learning objectives and content that teachers making a sudden transition to remote operation should consider adopting" with corresponding student evaluation might be a functional solution (Daniel, 2020, p. 94). As for the research and scientific work of faculty, one of the solutions is tenure delays (Clark

et al., 2020). Adjusted research project schedules and the adoption of alternative, remote methods of scientific work are possible to mitigate the challenge.

Moreover, to eliminate the problem of insufficient teaching strategies for remote learning, the update of grading and teaching policies has been introduced (Clark et al., 2020; Mickey et al., 2020). Nowadays we are starting the 4th generation of universities which can be called "online and digital university" the utilization of university websites, online learning platforms, communicational media, and digital collaborative spaces is an effective way of adopting new teaching approaches (Strielkowski & Wang, 2020, p. 2–3). In addition, curricular adjustment might be a sufficient way to utilize the potential of online learning databases and platforms. Curricula and learning programs and plans "have to be in-sync with social distancing measures in a manner that will not have a detrimental effect on the quality of education" (Bakator & Radosav, 2020, p. 3). The dissemination of the information on schedules, programs, and learning materials through communication channels that allow for synchronized access provides an opportunity for a sustainable teaching–learning process in times of emergency.

Another vital aspect of faculty activities is the interaction with the students through influencing their learning practices. According to Daniel et al. (2020), educators should prioritize two perspectives in their work with students. Firstly, they should "continue to orient students' learning to the classroom curriculum and the assessments/examinations for which they were preparing" (Daniel, 2020, p. 94). Secondly, the teachers should encourage learners to study by maintaining their interest in learning and provide multiple self-study materials for the students' disposal. Moreover, "higher education institutions should integrate environmental and health courses in the curriculum" to ensure its responsiveness "to the needs of the world at the present times" (Toquero, 2020, p. 2). Indeed, the dissemination of health-related information for self-protection and prevention of the virus has also become one of the responsibilities of the faculty members.

Finally, the promotion of digital learning among employees will enable the elimination of the lack of knowledge and skills gap in digital tools and online teaching methods utilization (Assuncao Flores & Gago, 2020). Since the leadership's key challenge is the difficulty in identifying employees' needs, the importance of supporting faculty members is crucial for sustainable remote working. As identified by Johnson et al. (2020), the results of their study of teachers' performance during COVID-19 indicated, "the availability of the selected technologies and their ease of use positively influenced the use of e-learning tools" (p. 7). Overall, apart from the impact of COVID-19 on faculty activities, the conventional approaches to team management have also been noticed.

Teamwork Management Strategies

The work in teams within faculties and departments has been an inherent aspect of conventional educational organization functioning. The pedagogical teams work interdependently to exchange experience, improve the quality of instruction and students' learning, as well as ensure the alignment of teaching processes with the schedule, plan, and faculty activities. According to de Prada Creo et al. (2020), "teamwork skills are a set of behaviors, knowledge, and attitudes that contribute toward a team's efforts to achieve specific common objectives" (p. 2). With the emergence of the COVID-19 crisis, the educational teams have faced significant changes in the ways they approach peers' performance monitoring, feedback obtaining and delivery, interpersonal communication, and action coordination (de Prada Creo et al., 2020). Several challenges have occurred in relation to the changes in the ways educational teams now work. Similar to the previously identified issues with the digital divide, the lack of access and digital skills in using online platforms for teamwork has been a significant challenge for university teams (Assuncao Flores & Gago, 2020). Additionally, the psychological difficulties associated with social isolation during quarantine obstruct the team's agility and inclusion in the working process.

The solutions that have demonstrated their effectiveness in multiple institutions include the approaches aimed at eliminating the identified challenges. Indeed, the extensive digitalization of higher education "allows streaming lectures on Zoom, Google Meet, or WebEx" that encourage teams to conduct virtual meetings for more close cooperation (Strielkowski & Wang, 2020, p. 2–3). According to George et al. (2020), "collaboration and communication drive innovation behavior," which is why educational organizations should promote easy to use and functional online platforms for teamwork (p. 1755). Moreover, it has been identified that "working virtually can enhance satisfaction and productivity," which is particularly relevant to online teamwork during the pandemic and the implied psychological burden of isolation (Stoller, 2020, p. 3). Moreover, as the experience of agile remote software teams demonstrates, the most effective strategies to achieve productivity, creativity, and high-quality performance might be achieved through the provision of mutual support and working process coordination (Lindsjorn et al., 2016). Overall, technologically facilitated exchange of information is the foundation for solving the issues related to remote teamwork in the educational setting.

Methodology

The research design chosen for the current research study is influenced by the study's goals, research question particularities, the availability of data, and the procedural opportunities available for the researcher. The design of secondary qualitative analysis is used to conduct the research and collect data from online resources.

While a study providing the primary data would have afforded more academic novelty and rigor, the remote studying imposed by the constraints related to the COVID-19 pandemic has put the researcher in conditions of inability to conduct live research with participants. However, the preference for secondary qualitative data for research presents several significant advantages.

Firstly, the availability of currently published studies and literature sources on online academic platforms contributes to the features of efficiency of research procedures, minimizes financial costs and working hours (Dufour et al., 2019). Secondly, such a research design "makes it possible to determine the validity, credibility, or generalizability of previous studies" and "support primary data collection" (Dufour et al., 2019, p. 2). The priority of a qualitative inquiry over the quantitative one is influenced by the qualitative nature of the study subject and the research questions that imply a descriptive, exploratory, and analytical investigation of the topic. Therefore, the choice of the secondary qualitative analysis design is an informed decision based on the rationale provided above.

The online academic database Google Scholar was used as the source of scholarly articles. These scholarly publications' digital platform is one of the largest pools of academic articles, which validates the relevance of the utilization of it for the purposes of the study. The majority of the articles used in the study were published in 2020, given the time of the COVID-19 pandemic occurrence and development. The articles were located using such keywords as 'COVID-19 and education,' faculty activities during COVID-19,' 'remote learning strategies and Coronavirus,' 'educational leadership changes,' and other synonymic formulations. The articles have been selected based on the relevance of their content to the investigated topic upon title reading or abstract reading. The findings from the articles were included in the literature review, where the data were categorized depending on the issues related to the topic.

The data analysis and interpretation of results are performed using the general inductive analysis approach. According to Dufour et al. (2019), the goal of the "general inductive approach for qualitative data analysis" is to "condense the raw data, make connections between the research objectives and categories emerging from the raw data analysis, and provide a theory based on these emerging categories" (p. 4). Commonly, this approach is used to categorize and divide the collected data into themes that allow for answering the research question. In the case of the current research study, the method of general inductive analysis was applied to identify "data that are common, recurring, dominant, or significant" (Dufour et al., 2019, p. 4). The information pertaining to each of the three categories, including changes in higher educational institutions' performance, challenges faced by academic stakeholders, and possible effective solutions, was categorized accordingly. The utilization of such methods of data collection and analysis provided an opportunity for a detailed investigation of the influence of remote education under the conditions of the COVID-19 crisis by synthesizing the secondary data.

Data Analysis

The data collected during the study is presented in Tables 1, 2, and 3 that incorporate the identified changes in organizational performance, challenges faced by main stakeholders, and solutions capable of effectively addressing the common challenges. The findings retrieved in the course of integrative literature review have been subject to the analysis procedure in the form of thematic categorization. The findings have been categorized depending on the area of academic organizational performance, in which the changes, challenges, and solutions occur. Thus, the constructed table represents the categories of the leadership, teamwork, and faculty performance of higher educational institutions.

The findings retrieved as the result of an extensive literature review have been analyzed according to their characteristics and relevance to either of the three categories and the three aspects of the influence of the COVID-19 crisis on the educational processes. Ultimately, nine groups of factors/informational items have been identified and presented. The interpretation of the results of the research study is provided in the following section of the paper.

Discussions

The current secondary data qualitative study was aimed at answering the following general research question: How working and leading remotely can influence the faculty's activities and teams' work while delivering online business programs in times of emergency? To ensure the structural approach to the investigation of the selected multifaceted and complex topic, the researcher divided the general research question into three specific research questions.

Firstly, what changes in leadership, faculty activities, and teamwork at higher educational facilities are observed under the influence of the COVID-19 pandemic-related remote learning? Secondly, what challenges do the stakeholders involved in

Table 1 Changes in higher educational intitutions' perfromance

Leadership	Teamwork	Faculty
• Elimination of live on-campus instruction. • New patterns in leadership distribution. • Fast decision-making. • The emergence of a so-called 'digital university'.	• Remote location of team members. • Adoption of new communicative tools. • Online work alignment with peers and leaders. • New action coordination methods.	• Elimination of live on-campus instruction. • Modification of grading policies. • Alteration of instruction approaches. • Research activities postponed.

Table 2 Challenges faced by acaddemic stakeholders

Leadership	Teamwork	Faculty
• Weakness of communication and collaboration management. • The lack of productivity and performance monitoring measures, policies, and tools. • Difficulty in talent management and successful professionals' retention. • Information systems management and the provision of employees' equal access to digital means of learning. • Ineffectiveness of top-down hierarchical management approach. • Difficulty in identifying employees' needs.	• Inability of continuous peers' performance monitoring. • The lack of access to the internet. • The lack of digital skills. • Social isolation effect on psychological containment.	• The lack of digital skills. • Insufficient online instruction methods. • Digital divide and disparities in students' and educators' access to online learning modalities. • Dysfunctional classroom-based teaching techniques. • The inappropriateness of conventional academic outcomes evaluation. • Research-related travel and lab work cancelation.

Table 3 Possible effective solutions

Leadership	Teamwork	Faculty
• Building resilience in the organization. • Implementation of servant leadership strategies. • Leadership responsibilities distribution. • Enhanced task delegation. • Distributed, collaborative, and networked leadership. • Crisis-informed recruitment. • Structural changes.	• Promotion of easy to use and functional online platforms for teamwork. • Facilitated and supported information exchange. • The provision of mutual support and working process coordination.	• Promotion of digital learning among employees. • Innovative, inclusive evaluation procedures. • Tenure delays. • Update of grading and teaching policies.

leadership, faculty activities, and teamwork at higher educational facilities face under the influence of the COVID-19 pandemic-related remote learning? Thirdly, what solutions deem to be effective in overcoming the challenges faced by stakeholders involved in leadership, faculty activities, and teamwork at higher educational facilities under the influence of the COVID-19 pandemic-related remote learning? In the course of the extensive literature review, the data were collected and further analyzed to be represented in a table with appropriate categorization relevant to the selected data analysis approach (the general inductive analysis approach).

The results of the data analysis procedure indicate that despite the overall similarity of leadership, faculty, and teamwork performance under the conditions of the COVID-19 crisis, each of these spheres is affected differently and have various response patterns. However, the necessity to promote digital skills and eliminate the digital divide has been identified as a task of pivotal importance. Furthermore, effective communication and collaboration using online platforms were identified as being similarly important for a successful remote working environment within all three aspects of the educational organization's operations (leadership, faculty activities, and teams' work).

The first specific research question is answered through the discussion of the identified changes in academic leadership, faculty activities, and teamwork management.

Changes in Academic Leadership

The most significant alterations to the conventional approaches to leading higher educational institutions include the elimination of live on-campus instruction approaches and the emergence of new patterns in leadership distribution and delegation of responsibilities. In addition, the shift to fast decision-making as a response to the demands of the crisis and the emergence of a so-called 'digital university' as a new phenomenon in education have been noted as commonly observed changes.

Changes in Faculty Activities

Faculty activities have been altered most significantly since the delivery of educational services has been completely transferred to a virtual online-based environment. The most significant changes include the elimination of live on-campus instruction, modification of grading policies, alteration of instructional approaches, and the cancelation or postponing of research activities and scientific investigations.

Changes in Teamwork Management

Teamwork management modifications have been the most challenging to identify since they occur naturally and implicitly in the live face-to-face working setting at an institution. However, the changes that were possible to identify include the remote location of team members, the adoption of new communicative tools, online work alignment with peers and leaders, and sew action coordination methods.

The second specific research question is answered through the discussion of the challenges that the literature review and collected data analysis have shown.

Challenges in Academic Leadership

The most significant and disrupting issues are associated with the weakness of communication and collaboration management, information systems management, and the provision of employees' equal access to digital means of learning. Similarly, the lack of productivity and performance monitoring approaches calls for the development or implementation of new ones that require teachers' learning promotion. Finally, the challenges in talent management and employee retention, the ineffectiveness of top-down hierarchical leadership, and the difficulty in identifying employees' needs under the conditions of remote working are significant problems that academic leadership faces.

Challenges in Faculty Activities

While leadership-associated challenges might be facilitated using sufficient resources and are of a short-term nature regarding the solution search, faculty activities-related issues are of a more complex character and might require a long-term problem-solving approach. In this regard, the most difficult is the issue of the digital divide and disparities in students' and educators' access to online learning means. Other challenges include insufficient online instruction methods, dysfunctional classroom-based teaching techniques, irrelevant conventional academic outcomes evaluation, and research-related travel and lab work cancelation.

Challenges in Teamwork Management

The challenges associated with teamwork management are similar to those identified for faculty activities and derive from the experiences and opportunities implied by remote working. The issues are the inability of continuous peers' performance monitoring, the lack of access to the internet, the lack of digital skills, and social isolation's impact on psychological containment.

Most importantly, the third specific research question is related to the solutions that are either introduced by scholars and educators or have been successfully implemented by higher educational institutions in times of emergency remote working.

Solutions in Academic Leadership

The issues in academic leadership might be most effectively resolved by building resilience in the organization, transitioning to servant leadership strategies, and distributed, collaborative, and networked leadership. In addition, enhanced task delegation, crisis-informed recruitment, leadership responsibilities distribution, and structural change are potentially beneficial practices for the enhanced remote leading of education.

Solutions in Faculty Activities

As for the problem-solving within the realm of faculty activities, the promotion of digital learning among employees, innovative, inclusive evaluation procedures, tenure delays, and updates of grading and teaching policies have been determined.

Solutions in Teamwork Management

Teamwork management problems might be resolved using similar methods. They include the promotion of easy to use and functional online platforms for teamwork, facilitated and supported information exchange, and the provision of mutual support and working process coordination.

The findings of the research study significantly contribute to the scope of scholarly literature on the topic of COVID-19's influence on academic operations. It provides a new perspective on the problem by filling the gap in the literature related to the lack of studies investigating the complex organizational performance of higher education as a whole, while providing a detailed and specific analysis of the particularities in remote operations. When placed in the context of the already published scholarly literature covering the problem, this study's findings related to the identified challenges associated with remote working match the results of research conducted by Dwivedi et al. (2020), George et al. (2020), and Obrenovic et al. (2020). Consistent with these existing publications, the current study provides a comprehensive analysis of key changes and challenges in organizational performance. However, the novelty of this research is in focus on higher educational organizations functioning as business entities, not the business environment as a whole. Unlike Dwivedi et al.'s (2020) and Obrenovic et al.'s (2020) findings that include education as one of the many fields impacted by COVID-19, the current research project's results limit thescope on academia which allows for obtaining more in-depth insights.

On the other hand, unlike such existing studies as Gonzalez et al. (2020) and Elhadary et al. (2020), which investigate students' experience and performance

under the influence of COVID-19, the current study introduces a new perspective that shifts focus on academic leaders and faculty members. When comparing this study with Rapanta et al. (2020), which concentrates on the particularities of student–teacher interaction in online learning, this study provides a more heterogeneous analysis of three pivotal aspects of university operations that are not limited to teaching only. Thus, the study's novelty is in its broadening of the scholarly attention to leadership and teamwork in academia in addition to faculty activities.

The importance of the findings is validated by the enhancement of the academic understanding of the range of changes, problems, and solutions COVID-19 has brought to the educational field. The implications of the study's findings include the utilization of the information by educators, academic leaders, faculties, and teams to address the challenges and employ the most effective coping strategies. Moreover, the study might be used as the basis for further investigation of the problem of COVID-19's influence on education. Case studies based on particular countries or universities might be conducted to verify the effectiveness of the identified solutions. In addition, a more in-depth quantitative analysis of the issues within each of the three areas of educational performance might be initiated based on the study's findings.

Conclusions

As the results of the conducted qualitative research study demonstrate, the leadership, faculty activities, and teamwork management are being significantly changed under the influence of the Coronavirus pandemic. Given the broad and complex nature of the topic at hand, the choice of qualitative inquiry was made to meet the requirements of a descriptive, exploratory, and analytical study. Using the secondary qualitative analysis design and applying the general inductive analysis approach for the interpretation of the data collected during an extensive scholarly literature review, the implications of the global pandemic were identified for three main areas of educational operations. They include academic leadership, faculty activities, and teamwork management. Within each of these areas, the findings were categorized into three indicators of influence, including observed changes to practices, most common challenges, and possible effective solutions capable of eliminating the challenges.

In the context of existing scholarly literature, the current study matches the findings related to academic challenges in the times of the pandemic of Dwivedi et al. (2020), George et al. (2020), and Obrenovic et al. (2020). However, it limits its scope to the educational business sector for more in-depth analysis. The research findings contribute new insights on leadership and faculty members' experiences as compared to Gonzalez et al. (2020), Elhadary et al. (2020), and Rapanta et al. (2020), who focus on students' experiences and teacher–student interactions exclusively.

The study's findings demonstrate that the extent of experienced changes is similar across all three areas, which have been significantly impacted due to the prompt and complete shift toward remote working. The challenges that were commonly faced by leadership include remote communication and collaboration management, productivity and performance monitoring, and the ineffectiveness of conventional academic leadership styles. For faculty activities and teamwork, the majority of challenges are very similar. They include insufficient digital skills, inequality in technology access, and disruption of conventional instruction methods. The solutions found to be effective to mitigate the problems across the three areas might be summarized in shifting to delegating and servant leadership, promotion of digital learning, the establishment of multiple channels of online communication between all stakeholders, and the facilitation of collaboration by means of online platforms.

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Instructional Leadership During Crisis: Jamaican School Leaders' Response

Carmel Roofe

Introduction

School leaders and teachers are first responders in providing emergency education during crisis. The closure of physical school buildings in Jamaica on March 14, 2020, because of COVID-19, gave rise to emergency remote teaching and learning in various formats. Teaching and learning took the form of utilizing the internet, television, radio and community drop boxes with worksheets for students. A press release by the Caribbean Policy Research Institute (CAPRI) and the United Nations International Children's Emergency Fund (UNICEF) (Sep. 8, 2020, Press release) indicated that parents and guardians in Jamaica were satisfied with the available remote learning options, with the highest satisfaction at primary/prep (70%) followed by pre/basic (60%) and the lowest at high school (56%). The press release also noted that some students' levels of engagement were low, with the main reasons ranging from lack of facilities, not having a suitable device and lacking access to the Internet. Additionally, COVID-19 has elevated pre-existing disparities and heightened social inequities evident in Jamaica's schooling (National Education Inspectorate, 2015).

While the school leader cannot neglect other everyday duties, in situations of crisis, the school leader must manage his/her personal and professional situations. He/she must ensure that students remain successful and that teaching and learning are prioritized. Based on anecdotal evidence broadcast through the daily news sources in Jamaica during the pandemic, school leaders have been responding. However, research is needed to provide evidence on how they have been leading particularly in the area of providing instructional leadership.

Instructional leadership focuses on the principal's role in leading curriculum and pedagogy as areas that directly affect student achievement (Stronge et al., 2008).

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This involves leading learning through developing and selling an instructional vision, building a culture of trust, collaboration and academic freedom amongst teachers, obtaining and distributing resources, supporting teacher growth and development, monitoring and evaluating instruction, and creating an enabling environment for student and teacher success (Hoerr, 2015; Spillane et al., 2004). Consequently, instructional leadership seeks to ensure that both teachers and students are adequately equipped to respond to the challenges that have been heightened by COVID-19. This may result in various pressure points, not least of which is the emphasis on the use of technology to fill the void left by the lack of face-to-face teaching and learning. Moreover during times of crisis, students' and teachers' abilities are compromised, teachers, students and leaders do and say things they would not normally say or do, and variables such as personal history, personality, proximity of the event and level of social support will influence how response occurs (An International Network for Education in Emergencies, 2020).

While some school leaders may be fully equipped to handle the various demands of their work and personal life, some may not have the skills and competencies to manage both adequately and effectively. According to Smith and Riley (2012), leadership attributes and skills required of school leaders in times of crisis are different from those required during normal schooling. Additionally, research indicates gaps in teacher preparedness to engage with the use of digital technology as a pedagogical strategy in their practice and suggests that efforts in Jamaica to improve teacher integration of information and communications technology (ICT) across the curriculum have not influenced teachers' activities (Gaible, 2009; Salmon-Ferguson & Barrett, 2018).

This study, therefore, sought to understand Jamaican school leaders' (principals' and vice principals') instructional leadership practices during a period of crisis and how they respond to issues related to the digital skills and competencies of those they lead. The study sought to answer two main research questions: (1) What are the instructional practices of Jamaican school leaders during the COVID-19 pandemic? (2) In what ways do school leaders respond to the digital gaps presented by teachers? Embedded in the goal of this research is a recognition that leadership and the continuation of learning are critical aspects of any response during a crisis. Consequently, the findings from the study are theorized and used to provide key ingredients that should frame instructional leadership response during crises.

Literature Review

School Leadership During Crisis

According to Harris (2020), the messiness, frustration and unpredictability of leading through a pandemic indicate that there are no fixed certainties. Amidst these uncertainties, school leaders are called upon to act swiftly and to respond to

immediate needs with much foresight (Netolicky, 2020). What is required of school leaders is a proactive, inclusive and transparent approach that will build trust and inspire hope (Kerrissey & Edmonson, 2020). Principals need to have the right tools for the task and recognize the importance of context in their actions and decision-making. Consequently, Drago-Severson and Blum-DeStefano (2018) recommend collaborative problem-solving, continual learning and adaptation, and the leveraging of multiple perspectives and shared leadership responsibilities as key adaptive leadership practices during a crisis.

School leaders need to understand that every crisis is different, and every context is different. Therefore, an approach that seeks to be responsive to the contextual peculiarities rather than being dictated by the context will lead to effectiveness (Leithwood et al., 2020). Successful school leaders will, therefore, combine various practices in different ways and across different phases of the leadership journey to lead effectively, since there is neither blueprint nor predetermined road map during a crisis (Day et al., 2016; Harris, 2020). Nonetheless, Smith and Riley (2012) recommend the 3Ts as a phased approach to school leadership. The authors recommend that these can be used to guide reflections and actions, during and after a crisis. The 3Ts are triage, transition and transform. These non-linear phases can be used to understand the types of challenges leaders might face at each stage of a crisis.

Triage is the onset and the initial stage of the crisis. At this stage, there are many immediate practical issues with which to contend. School leadership is likely to be dictatorial focusing on physical and psychological safety for everyone who is immediately affected. The staff needs to feel safe to ask questions, raise concerns and propose ideas, so that they could understand the full picture. Therefore, there should be clear, transparent and open communication about what the leadership knows, what the leadership does not know and what the leadership is doing to learn more (Edmonson, 2020).

Transition occurs once safety is secured. School leadership needs to create stability and reduce uncertainty amongst staff, students and their families, and the communities they serve. This may involve adopting new ways of working and functioning whether it be for the short- or long-term. Drawing on the groups' collective wisdom, skills, talents and expertise are critical, as no one person possesses all the required skill sets (Jensen et al., 2017). Shared leadership may include establishing a crisis management team, identifying and using talent within the school community, and identifying easy-to-use technology platforms for communication. D'Auria and De Smet (2020) postulate that while working through crisis, school leaders can mobilize their team through setting clear priorities for the response and empowering others to discover and implement solutions aligned with the established priorities.

The ***transform*** stage provides the opportunity for school leadership to try new ideas, re-energize the staff, refocus, restore and revitalize the school community. The needs of those affected by the event should take precedence over activities regarding returning to normal routine or business as usual as quickly as possible. Leadership needs to give attention to emotional and social recovery as a means of minimizing longer-term health-related issues. This requires a delicate balancing act

as the tendency is to focus on catering to the missed learning for students. This period allows leaders to reflect and experiment with what they have learnt from the crisis. Transforming requires determining the successful practices that need to be kept and those that need to be cut.

Mayors (2013) notes that when crisis occurs, school leaders play critical roles in the management of the crisis and the aftermath. Therefore, how school leaders perceive the event will influence the effect it has on them and on those whom they lead. Rowe and Guerro (2013) argue that school leaders influence followers directly and indirectly and, therefore, serve as an example for motivating and inspiring others. They are master teachers and leaders of learning, as they strive to achieve instructional mastery (Miller, 2016).

Instructional Leadership

According to Hoerr (2015), the principal's role has evolved from being the lead knower as in the principal teacher to include leading instruction and being the educational visionary, offering direction and expertise to ensure that students learn. Robust instructional leadership is considered critical to a school's success (Hallinger, 2005; Miller, 2016; Reimer, 2012). Linked to the effective school movement of the 1970s and 1980s, principals as instructional leaders are viewed as strong, directive leaders who foster high expectations amongst teachers and students in turning schools around (Horng & Loeb, 2010). There are various models of instructional leadership that have evolved out of research and these models have placed the principal at the centre of instructional leadership (Hallinger & Murphy, 1985; Leithwood et al., 1990; Reimer, 2013). A comprehensive review of the literature on instructional leadership by Boyce and Bowers (2018) revealed that of 109 studies reviewed, there was crucial evidence that showed significant relationship between principal leadership as a component of instructional leadership. For the purposes of this chapter, Reimer's (2013) model is discussed to shed light on the role of the school leader in offering instructional leadership.

Reimer's (2013) model of instructional leadership offers four dimensions. These include: (1) vision, mission and culture building where the focus is on both staff and students. (2) Allocation of resources by ensuring that there are adequate and appropriate resources that are suitable to the cultural, linguistic, physical, socio-economic and learning needs of the school context. (3) Improvements to instructional practice through monitoring of classroom practice, fostering and encouraging a culture of sharing good practices, and developing professional learning communities at school. (4) Management of people and processes by ensuring effective management of human and non-human resources to include professional development and staff recruitment and retention. Reimer's model takes a holistic approach to instructional leadership where the school leader is a leader of people, processes and systems and a model of instructional and pedagogical mastery (Miller, 2016).

In any holistic approach to instructional leadership, the local school context inclusive of the policies of the governing education authority (Miller, 2016; Mulford & Silins, 2003) are critical considerations. The context of the school could be one of opportunities and constraints that the principal must understand in order to lead instruction successfully. Consequently, it is important for the principal to work with other stakeholders in carrying out the roles and functions associated with instructional leadership. Lambert (2002) argues, "the days of the lone instructional leader are over" (p.37). Barth (2002) noted that principals who were successful at effective instructional leadership were those who possess the capacity to inspire teachers to work beyond the boundaries of their classroom to transform the school into a learning space. To this end, Louis et al. (2010) caution against conceptualizations of instructional leadership where the focus is only on classroom instruction.

Like the dimensions of Reimer's model, Horng and Loeb (2010) view instructional leadership as organizational management for instructional improvement. Here, emphasis is placed on recruiting high-quality teachers and providing them with the appropriate support and resources to be successful. This view of instructional leadership emanated from a survey of 800 principals, 1100 assistant principals, 32,000 teachers and 250 observations and interviews of principals in three urban school districts in the USA. It was concluded that, despite differing contexts, schools demonstrating growth in student achievement were more likely to have principals who are strong organizational managers. Furthermore, Ottow (2021) notes that the pandemic provides an opportunity for instructional leaders to thrive if they focus their efforts on how to lead through the pandemic, cultivating trust and re-skilling their team to seize opportunities brought about as a result of the crisis.

Methodology

This generic qualitative study utilized interviews to provide accounts of instructional leadership from four school leaders in two different schools. The aim was to understand their individual and contextualized responses to leading teachers during the crisis of COVID-19 and to report, in specific ways, their responses to teachers' digital skills and competencies. Using purposive sampling based on the criteria of willingness, availability and being principal, the first included selecting principals through the researcher's personal network. This was on the basis that those who are within the researcher's network, amidst the pressures associated with COVID-19, would be more co-operative in sharing frankly and openly.

During initial discussions with the principals, it became apparent that their Vice Principals (deputy principal) played a pivotal role in how they led, so the Vice Principal for each principal was interviewed. Consequently, the concept of instructional leadership utilized in this research assumes that the principal does not work alone in performing instructional leadership but executes instructional leadership with integral support of others (Lambert, 2002). The sample comprised four participants: two principals and their vice principals. Of the four participants, two were

Table 1 Demographic data of participants

	School type	Location	Teaching experience	Leadership experience	School leadership experience	# of students	# of teachers	Sex
Prin. Joel	Secondary	Urban inner-city	20	5	4	1400	100	Male
VP Joan	Secondary	Urban inner-city	23	3	1	1400	100	Female
Prin. Stone	Primary	Rural	20	3	3	511	21	Male
VP Frat	Primary	Rural	15	5	2	511	21	Female

males and two were females. Principal Joel and Vice Principal Joan lead an urban inner-city secondary school with a teaching staff of 100 and 1400 students, while Principal Stone and Vice Principal Frat lead a rural primary school with a teaching staff of 21 and a student population of 511. See Table 1 for other demographic data.

A semi-structured interview protocol facilitated in-depth interviews with each participant. See Appendix A for the semi-structured interview instrument. The interviews lasted between 60 and 90 min. The interviews were transcribed and structural coding was used to identify and assign first level in vivo codes and conceptual phrases to segments (Saldaña, 2016). Latent coding was then used to identify second level codes and phrases. Codes were then clustered to develop categories based on the research questions. These categories were then analysed to derive themes. The themes are used in the study to describe features that were common and different in the leaders' accounts.

Results

The results are presented in this section using four themes with narratives representative of the accounts of the principals**.** The four themes are: (1) school leaders' understanding of instructional leadership, (2) school leaders' approach to leading instruction during the crisis, (3) the paradox of leading instruction remotely, and (4) co-operation and collaboration in digital response to instructional leadership.

School Leaders' Understanding of Instructional Leadership

Effective instructional leadership begins with the leader having an understanding of what is involved. Therefore, participants were asked to share their understanding of what leading instruction connotes to each of them. Participants, in sharing their

understanding, saw instructional leadership as supporting teachers with curriculum, lesson planning, and providing instructional guidance and direction for the school. Principal Stone's comments reflect their shared understanding.

> ……Whatever is to be done in the school the leader must be at the front of it. You may not be physically doing it but you must guide it – channel the instruction in the direction you want the school to go and that direction must be in line with the Ministry of Education standard and the expectation of the community.

The school leaders' expressed understanding of instructional leadership seems to align with much of the literature on instructional leadership which suggests that the principal is the visionary, providing the instructional leadership direction while taking into consideration contextual peculiarities (Hallinger, 2005; Miller, 2016; Reimer, 2012). Additionally, their views aligned with the second and third dimension of Reimer's (2013) model of instructional leadership, suggesting that perhaps other dimensions needed to offer a holistic approach to instructional leadership were missing. Further comments offered by Principal Stone and Vice Principal Joan provide insight into the rationale or possibilities for the other components missing from their expressed understanding.

> ……I can't say I have a grip on that [supervising teachers lesson planning and curriculum]. I have some experience in what I should be looking at in the lesson plan and I would have had some experience in teaching and creating lesson plans but I think I am largely untrained as a Vice Principal (V.P). (VP. Joan)

> ……When principals fail or when schools are in a bind it is simple because some principals don't understand that concept [instructional leadership]. They take it to a different level to say "I am the chief instructional leader you must do as I say" – No. It is about doing what is best for the school, not what you say. Harness the resources as the chief instructional leader, harness the resources of the people you have around you to get them to buy into the vision of leading the institution in the way you want it to go. (Prin. Stone)

The school leaders' views, therefore, indicate the need for an expanded view of instructional leadership as organizational management for improvement as proposed by Horng and Loeb (2010). Consequently, this suggests the need for training to support this understanding, as evidenced from Vice Principal Joan's narrative.

School Leaders' Approach to Leading Instruction During a Crisis

An approach to leading instruction represents the school leaders' way of dealing with situations of instructional leadership during the period of crisis. In sharing the instructional practices enacted during the crisis, each leader, except Principal Joel, expressed the use of a management team approach comprising senior teachers and other selected teachers. However, each school utilized a different arrangement and modus operandi for the management team indicating the connection between instructional leadership and a school leader's leadership style. Jensen et al. (2017)

note that a management team approach is useful during a crisis, as it allows the leader to benefit from collective wisdom. In the urban school, school leaders described the management team approach to leading as fixed for a particular duration. For the rural school leaders, the management team approach included involving others on a need basis, suggesting a practice of adaptive leadership (Drago-Severson & Blum-DeStefano, 2018). The comment by Vice Principal Frat offers insight into how the team is designed to allow for the adaptive approach.

> We have a management team and we will have meetings now and then and figure out what is happening based on things that we have to get done in the school. It is important to note that every senior teacher has a junior teacher understudying him/her (VP Frat)

For Principal Joel who leads the urban school, leading instruction utilizing a management team approach meant being on the ground himself to get first-hand information. His comments seem to be reflective of his leadership style which then influences his actions of and for instructional leadership. This is what he shared.

> You have to be inter-driven, you have to be on the ground, in the classroom listening to the teacher, providing the support and providing the kind of guidance and leadership so that the teachers will be better able to guide the students and the students' results will improve and they would be better able to become better learners. (Prin. Joel)

Given that literature, Boyce and Bowers (2018) suggest that there is a strong relationship between principal leadership and instructional leadership, and it may manifest itself in relation to school climate, teacher autonomy and teacher satisfaction. I wondered about the added burdens Principal Joel has placed on himself with such frequent visits during a pandemic and whether his approach would defeat the purposes which he was trying to achieve given the crisis. The caution of not seeing himself as the lone instructional leader and viewing instructional leadership as relying mainly on classroom instruction by Lambert (2002) and Louis et al. (2010) is worthy of mention here for Principal Joel. While class visits are important perhaps, a more efficient approach would be to establish valid and reliable reporting systems to provide the data. Once properly and appropriately established with clearly defined goals and roles, he would need to trust the system to work. Principal Joel's approach to leading instruction during the crisis could lead to principal burn out and lack of responsiveness especially where the crisis is prolonged, and the school size is large.

The Paradox of Leading Instruction Remotely

Effective leadership and management of people, curriculum, pedagogy, resources and achieving the school's goals and mission for both staff and students during a crisis are critical to successful instructional leadership during the crisis (Mayors, 2013; Rowe & Guerro, 2013; Smith & Riley, 2012). As expressed through the narratives of the school leaders, COVID-19 represented a paradox. As a paradox, COVID-19 caused disruption to the way in which the instructional mission was conducted. However, while there were challenges, the pandemic also brought

opportunities that benefitted the instructional mission and vision of the school. School leaders noted that leading remotely was different and, at times, more challenging than leading face-to-face. Challenges expressed included longer work hours, increased stress of teachers, feelings of helplessness and isolation brought on by lack of person-to-person physical contact.

> Leading instruction during the pandemic is totally different. Everything was face-to-face before and we could actually group the teachers, talk with them, see how they are feeling, auxiliary staff, see how they are feeling. You could actually see them at work. This pandemic has opened everybody's eyes that meetings can be done virtually and not face-to-face. I prefer face-to-face because we could actually go into the classroom to see what the teachers and students are doing; see how they organize the class. Sometimes, I feel as if I am not reaching them. In my study, many of the teachers feel this way. With face-to-face we could always pop in, sit with them and find out how it is going. It is kind of hard, we do not get to actually connect with them as I would normally do. (VP Frater)

These challenges heightened by lack of social and professional interaction with colleagues are aligned with views by Harris and Jones (2020), who note that the pressure for school leaders continues to be relentless and that the pandemic has heightened well-being issues. Notwithstanding these challenges, opportunities included easier access to teachers' classroom, greater use of technology, increased responsiveness to teachers' needs because of the technology and increased within school and across school collaboration. The following narrative offers some insights from the school leaders.

> It is a blessing in disguise in that you don't have to preach anymore to anybody to infuse technology in the curriculum, in your lesson plan and teach because there is no other way to do it. There was a teacher who sat and was only reading notes to the children online. You get to go in the class, see that and fix it. The teacher's reason for doing that was because it kept the children busy. You intervene now and help the teacher to find some other way instead of wasting an entire hour giving notes and when the child leaves, he has not learnt anything. Covid is helping to change all of that. (V.P Joan)

These positive outcomes suggest greater opportunities for instructional leaders to be responsive and help those whom they lead thrive during the crisis (Harris, 2020; Ottow, 2021). The narrative by Vice Principal Joan demonstrates the cyclical nature of Smith and Riley's 3T model where there was an identification of the practical issue being faced by the teacher (Triage), offering responsive on-the-spot training to resolve the issue (Transition) which should redound to renewed contextual understanding for both the vice principal and the teacher (Transform).

Co-operation and Collaboration in Digital Response to Instructional Leadership

Several researchers (Horn & Loeb, 2010; Lambert, 2002; Kerrissey & Edmondson, 2020; Smith & Riley, 2012) have highlighted the importance of working together as a critical component of instructional leadership. The responses from the school

leaders suggest that their instructional leadership response to leading teachers to hone the required digital skills for the remote environment required collaboration and co-operation amongst staff. Such co-operation and collaboration required identifying staff with the appropriate skill set necessary to lead the digital response and establishing professional learning communities with other school leaders. Their digital response during COVID-19 included hosting common planning sessions and workshops, creating training videos, one-to-one capacity building sessions, and the acquisition of equipment and internet as responses to ensuring that learning is continued. The school leaders also suggested that the younger staff were more adept at the implementation of technology and that the older staff took a longer time to learn. This points to the difference between digital immigrants (older staff) and digital natives (younger staff).

> What is equally important is that we are a network and partnership. I have networked and I am in dialogue with other principal colleagues especially in our Quality Education Circle (QEC). I have learnt that we can learn from each other and we must continue that type of collaboration especially in our area where most of our schools are situated in inner-city communities and the students are from a similar background so that collaboration is imperative for us to move forward. (Prin Joel)

This approach to instructional leadership demonstrated by the school leaders finds support with Jensen et al. (2017) who recommend drawing on the collective skill set of the group as no one person will possess all the required skill sets. Additionally, distributed leadership was utilized to respond to the instructional needs of the teachers. The two principals indicated that they delegated the responsibility of leading the digital response to teachers or Vice Principals to their team whom they considered to be better at leading the technological response. Principal Stone stated

> All my teachers are at school on a Thursday. Every Thursday we have a common planning time. We have a teacher, Miss G, she is responsible for curriculum development, assessment and information technology. I call her my IT specialist, so she is in charge of the online teaching platform. I am not that technologically savvy, as yet. She is very good at it and is doing her masters in curriculum and IT which is a perfect fit for now. (Prin Stone)

While the school leaders were responsive to the instructional leadership needs and used various strategies, the urban school leaders' responses suggested that training needs for their teachers were greater than the rural primary school leaders. This is an interesting finding since, oftentimes, narratives about rural schools centre on the lack of access to technology without concern about technological competence of staff, while narratives about urban schools highlight adequacy of access but do not highlight lack of competence to use the technology. This is what Vice Principal Joan shared about teachers in her urban school.

> For the most part, a lot of our teachers could not use the technology. We then started to do one and one training. The first approach fixed that. There was also another problem. The teachers were not responding to administrators, at least, I felt so…….. We, then, trained some teachers who were tech savvy. Once I was having that one and one with the teachers, I was also finding out who was spending their time doing what and we found about 10 or so who were tech savvy. For the first time, I see the teachers at my school alive and participating. We have discovered that a lot of people do not do well in group training. Those are the

> more mature teachers. These persons are in the over 45 age group. The younger teachers in their 20s and 30s are on fire with the technology. (VP Joan)

The school leaders' instructional practices of co-operation and collaboration emphasize the second and third dimension of Reimer's (2013) model of instructional leadership, which speaks to the provision of adequate resources and the fostering of a culture of sharing good practices, and developing professional learning communities. Additionally, their responses also highlight the importance of context-responsive strategies, which promote co-operation and collaboration and which led to re-energized staff suggesting the evidence of the transformative stage of Smith and Riley's (2012) 3T model.

Discussion

The findings from this study have highlighted that the continuation of quality education during a crisis requires a range of responses that are not limited to the period of crisis but that such responses are linked to the practice of instructional leadership prior to, during and after the crisis (D'Auria & De Smet, 2020; Mayors, 2013). The narratives of the school leaders suggested that instructional leadership during the crisis must be centred on the act of leading teachers for the continuation of learning. Within this study, the act of leading and the school leader's interpretation of his or her role in continuing learning during the crisis, therefore, seem to be connected to what school leaders saw as opportunities and challenges during the crisis of COVID-19 as they led instruction. Given the findings, there are two main areas to which I would like to turn my attention in the discussion; the principal leadership dynamic in instructional leadership and the key ingredients for effective instructional leadership during a crisis.

The Principal Leadership Dynamic in Instructional Leadership

According to Boyce and Bowers (2018), principal's leadership as a dimension of instructional leadership has a strong influence on school climate, teacher satisfaction and teacher autonomy. Within this study, the school leaders saw leading instruction as a task that required their intimate involvement which suggests the opportunity for strong influence on what teachers did and how teachers responded during the crisis. The school leaders, however, utilized a team management approach to manage their influence, as they sought to respond to the needs of teachers. This team management approach for one principal (urban principal) meant having the same team throughout the crisis, while for the other principal having other leaders on the team as necessary (rural principal). Regardless of the approach, Leithwood et al. (2020) note that principals during a crisis need to ensure responsiveness to

contextual peculiarities and engagement in collaborative problem-solving. One interviewee noted (Principal Stone), however, that in meeting the expectations of the different stakeholders, tensions may arise, as, at times, there might not be congruence between the expectation of each group of stakeholders. Deriving the best solution to reduce such tension requires maximizing the use of the talent in the school. This could be done by having various members of the team assume lead roles at different points based on the match between need and skill set. This, however, requires principals to ensure recruitment of qualified staff and relevant ongoing professional development to up-skill staff prior to and during any crisis (Horng & Loeb, 2010; Reimer, 2013). School leaders from the rural primary school seem to have benefitted from such practice.

Additionally, the principals' narratives suggest that they utilized an eclectic model of instructional leadership, indicating that they were not reliant on any one instructional leadership model to lead effectively during the crisis. While utilizing an eclectic model may be appropriate, it is critical that principals communicate clearly to their management team what they are seeking to achieve and the strategy for achieving it. This seemed to have been clear for the management team of the rural school leaders, but, at times, not so clear for the urban school leaders. Additionally, the model they utilized suggests that principals influence who becomes involved in the management team and how the team functions. This underscores Miller and Hutton's (2014) view that principals' leadership is often influenced by values, beliefs, leadership style and their situated context, suggesting they would lead the management of a crisis differently. Regardless of the style of the principal during a crisis, the principal must remember that he/she is a leader of learning (Hoerr, 2015; Spillane et al., 2004) for self, staff and students. Consequently, the principal must adjust his/her leadership style, conceptions and beliefs as necessary to respond appropriately to the needs of the context.

Another observation from the school leaders' narratives is that most of their responses aligned mainly with the second and third dimension of Reimer's (2013) instructional model suggesting a limited/narrowed practice of instructional leadership. Coupled with this were comments by the school leaders about the lack of understanding by some leaders as to what instructional leadership really entails. This reaffirms the need for principal training to be grounded in the practical realities of leading instruction in schools.

Key Ingredients for Instructional Leadership During a Crisis

During a crisis with the best of intentions, there are no blueprints for instructional leadership and so effective instructional leadership is responsive but not erratic. Attention should be given to the act of leading and the continuation of learning. Smith and Riley's (2012) 3Ts offer useful insight and seem to be an approach that aligned with the responses of the school leaders in this study. The school leaders in this study, at the time of data collection, which was 7 months since the pandemic,

started and school closure, were moving between all three phases. Their narratives suggest that they had time to reflect on what they did initially, what they have done to create stability and what practices they are planning to maintain as they look forward to the end of the crisis. Integral in their narratives were four C's: communication, co-operation, collaboration and context. These four Cs were required, as they transitioned from face-to-face instructional leadership to remote instructional leadership.

Transitioning to remote instructional leadership required the instructional leaders to possess a range of skills that not all school leaders possessed. Therefore, this meant having honest communication with staff to identify those amongst them with appropriate skills to lead while they acquired the skills. Consequently, whether this was part of the school leaders' practice or not the school leader had to make use of distributed leadership for the effective functioning of learning activities. The challenges expressed underscore the need for the leveraging of multiple perspectives and shared leadership responsibilities as key adaptive leadership practices to respond creatively to the challenges experienced during the crisis (Drago-Severson & Blum-DeStefano, 2018). Distributed leadership calls for the school leader to share prestige and power with the best talent for the role in the school and, therefore, requires clear communication and active collaboration and co-operation amongst staff (Hill-Berry, 2019). Additionally, the duality that resided in their experiences of COVID-19 being a blessing in disguise underscores the role of leadership in managing communication during a crisis, in that what is communicated and how it is communicated could either inspire and motivate staff or frustrate and demotivate staff (Edmonson, 2020; Mayors, 2013).

Co-operation and collaboration seemed to progress through different levels from the initial onset of school closure to the point of creating stability. Co-operation requires both team and individualized responses and it is up to the school leaders to identify which approach to co-operation to utilize given the situation at hand. Underlying tensions and personal issues amongst staff and leaders need to be resolved, so that teachers and leaders could collaborate and work together in the best interest of the school community. To this end, where tensions exist as part of being responsive during a crisis, appropriate data must be collected to get to the root cause of issues. It is important to note that, within the context of this study where there seemed to be a collegial approach and strong relationship within the school, communication, co-operation, collaboration, the delegation of responsibilities and capacity building were much smoother.

The school leaders noted that the younger trained teachers transitioned much quicker than their colleagues who were older. This also means that, during a crisis while generalized support is needed, school leaders would be called upon to provide tailored, individualized instructional support based on needs of staff. Furthermore, while the school leaders with young staff saw this as beneficial to their role as instructional leaders during the crisis and might use this to shape decisions regarding recruiting and retaining staff in the future, there is cause for caution. The caution lies in the fact that one should not equate ease of ability to use technology with one's ability to teach effectively with the technology. There is a marked difference in

being technolgically savvy as opposed to possessing technological competency and being technologically competent.

The school leaders in this study provided a range of support suggesting that instructional responses during a crisis cannot be a one-size-fits-all approach and school leaders need to be flexible in providing support during a crisis. This might require school leaders to shift from their normal way of leading and to assume new ways of functioning in order to be effective (Harris, 2020). The school leaders also suggested that professional learning underpinned their responses during the crisis. This entailed learning for themselves and creating opportunities for their staff to learn. The period of crisis also provided a range of approaches to professional learning such as through teacher leadership where teachers used their initiative to share a new approach or learning tool. Train the trainer where small groups who displayed natural aptitudes for a skill were trained and then they were asked to train others. One-to-one coaching/mentoring where teachers taught the school leader or where those who were not grasping at the group pace were provided with individualized ongoing training support to achieve mastery. Community of practice and ongoing learning where any member of staff was free to share a best practice once he/she felt it could be of benefit to teachers in particular content areas or to make administrative tasks more manageable. Consequently, instructional leadership requires a contextualized approach which takes into consideration not just skills and competencies but personal dynamics such as age, relationship amongst peers, etc. and the need to understand the nuances reflected in those dynamics. Relationship building and trust were dynamics reflected in the school leaders' response during the crisis. Once these were present, this made leading and strategizing for the continuance of learning much easier.

COVID-19 also presented an opportunity to discover new talents that resided in the school and to use this to benefit the school community. The narratives of the school leaders suggest that where trust and collegial relations are present, teachers would volunteer and avail themselves of the opportunities provided. Notwithstanding, the school leaders suggest that even with the best approach and practice there would still be staff who do not fit into any of the established approaches and while this would cause added workload for the school leader, support for them must be found so that no one is left behind.

Conclusion

This study sought to understand school leaders' individual and contextualized responses to leading teachers during the crisis of COVID-19 and to determine, in specific ways, their responses to teachers' digital skills and competencies. From this study, I argue that attention to instructional leadership is critical for the continuation of quality learning during periods of crisis. This includes paying attention to the act of leading and the continuation of learning. Embedded in the act of leading is a flexible and eclectic approach to instructional leadership which is supported by clear,

honest communication, individual and group co-operation, and collaboration within and across schools which must be responsive to context.

Additionally, central to the continuation of learning is flexibility of school leaders in utilizing an eclectic approach to instructional leadership and in responding to the ongoing personal and professional needs of staff, so that they could respond to the needs of their students. Furthermore, school leaders who will be successful in getting staff to respond during periods of crisis must ensure that trust is built, and good relations are hallmarks of their instructional leadership prior to any crisis. Once this is established, it will make the transitionary phases of the crisis much more manageable. Nonetheless, to be effective during a crisis as evidenced from this study, school leaders need to utilize clear communication and reduce barriers of power to facilitate co-operation and foster collaboration. Such strategies require school leaders to pay attention to the contextual peculiarities and the personal and professional needs of their team, so that the best talents could be utilized, and the most appropriate solutions derived. Consequently, school leaders must be willing to engage in ongoing learning. Such ongoing learning is twofold. First to learn about the staff during the crisis and secondly to learn about self in order to fulfil gaps identified in him/herself as a school leader. Therefore, school leaders during a crisis should possess willingness to learn with and about staff. The presence or absence of these key ingredients could determine the success of school leaders during a crisis.

Appendix A

School Leaders' Interview Instrument

Interview Protocol for Collecting Data

This study seeks to understand Jamaican school leaders' (principals' and vice principals') instructional leadership practices during a period of crisis and how they respond to issues related to the digital divide, as evidenced through the skills and competencies of those they lead. Using a generic qualitative design, the study seeks to answer two main research questions:

(1) *What are the instructional practices of Jamaican school leaders during the COVID-19 pandemic?*
(2) *In what ways do school leaders respond to the digital gaps presented by teachers?*

1. Tell me about your school (number of students, types of students, number of teachers, location, organizational structure).
2. Describe your role in this school (length of years in this role; role previous to this).
3. Specifically, to the role of leading instruction (a) What do you understand the phrase school leaders leading instruction to mean (probe as necessary)?

4. How do you lead instruction in this school?
5. How was your leading of instruction similar or different during the period of COVID-19? (Were there changes that you had to make?)
6. What are the instructional practices you utilize to support teachers? (Probe as necessary)
7. What were the strengths seen in teachers as they relate to their digital skills and competencies?
8. What were the digital gaps evidenced in the skills and competencies of the teachers you lead during the COVID-19 period?
9. How did you respond to the digital gaps presented by teachers as you lead instruction during this period (support mechanisms, tools, training, etc.)?
10. How would you describe your experiences leading teachers during this period of COVID-19?
11. How would you describe your schools' digital/technological response to teachers during this COVID-19 period?
12. What would you recommend to be school leaders' response during a period of crisis?

Any other comments

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Higher Education Quality Assurance in Pandemic Times

Nataliia Stukalo

Introduction

The challenges associated with the global COVID-19 pandemic set new imperatives for higher education quality assurance systems (HE QA) at all levels. The international quality assurance networks and institutions such as ENQA, EQAR, INQAAHE, CEENQA and CHEA highlighted a crucial role of quality assurance (QA) agencies. They were encouraged to be flexible under quarantine restrictions and lockdown conditions, to adapt QA activities to address extraordinary challenges associated with the pandemic, to enhance the roles of QA agencies in order to support universities and to maintain the trust of society and academic community.

Furthermore, life in quarantine is the new reality for everybody all over the world. The COVID-19 pandemic resulted in a number of challenges, which should be addressed by all countries, people and institutions including quality assurance (QA) agencies. Modern society and institutions facing such changes should react accordingly and amend their policies and procedures in order to address challenges associated with such changes. Higher education sphere is quite sensitive in terms of quarantine because, in most countries, governments, as a matter of urgency, have stopped the administration of face-to-face classes in all educational institutions. Consequently, most QA agencies immediately cancelled all site visits and other face-to-face activities.

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Background to the Study

The new era of European higher education started in 2005 with the adoption of the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). Since that time, the ESG were revised in 2015 (ESG-2015) and considerable progress has been made in quality assurance in the European Higher Education Area (EHEA) in terms of implementation of student-centred learning paradigm, stakeholders' engagement, promotion of the use of competencies and learning outcomes approach.

The ESG-2015 uses the term 'quality assurance' to describe 'all activities within the continuous improvement cycle' (ENQA, 2015, p. 7). The national quality assurance agencies are playing the key role and according to the ESG-2015:

> The role of quality assurance is crucial in supporting higher education systems and institutions in responding to these changes [*the modern changes in higher education such as a more 'student-centered approach to learning and teaching, embracing flexible learning paths and recognizing competences gained outside formal curricula'*] while ensuring the qualifications achieved by students and their experience of higher education remain at the forefront of institutional missions (ENQA, 2015, p. 6).

Thus, during emergency, quality assurance (QA) agencies could contribute to the development of the methodological approaches and make recommendations on how to address such modern challenges. Additionally, they could become platforms for collecting and sharing best practices of teaching and learning to ensure that education quality is maintained regardless of the pandemic.

The role and functions of HE QA are implemented at some levels: institutional (universities and the other higher educational institutions), national (countries' state systems and frameworks of QA) and international (among countries, agencies and within international networks and associations). Institutional level relates to all functions regarding internal quality assurance through external quality assurance (for instance, accreditation, evaluation, educational audit etc.). Societal role of quality assurance and national quality framework development are promoted at national level. International level is realized through cross-border quality assurance and internationalization of higher education. Moreover, it is important to highlight the meta-level of quality assurance role, which relates to all previously mentioned levels and is cross-functional. The culture of quality enhancing involves consulting, supportive communication, sharing best practices and maintaining trust. These are considerable and influential QA functions at all levels (see Fig. 1).

This chapter presents the coherent picture and consolidates various QA functions, roles and practices at different levels during emergency times.

Literature Review

While the topic of quality assurance in higher education is not new and widely researched in many countries, its particularities in emergency times are not investigated properly. This is quite natural as only in 2020 the world faced unprecedented

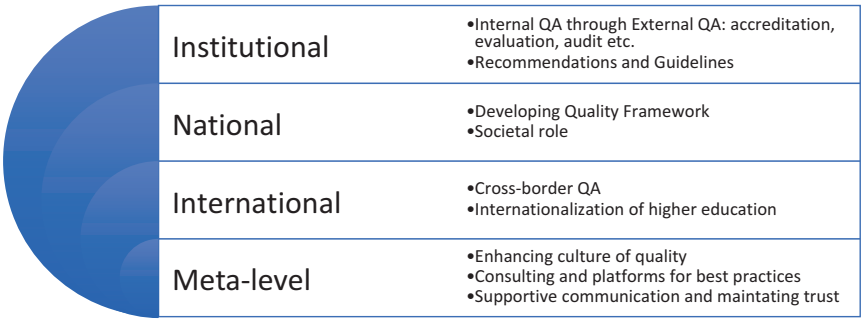

Fig. 1 Role of quality assurance at different levels

emergencies, which seriously affected higher education and its internal and external quality assurance worldwide. Thus, there is no comprehensive and sufficient conceptual basis and theoretical background for issues related to higher education quality assurance in a pandemic and during quarantine restrictions.

Practical experience in this research area is ahead of theory and most studies and research papers on this topic are dated in the second half of 2020 and later. The quality assurance agencies, associations and networks collected and published practical cases and experiences of the first reactions and responses to pandemic challenges. For instance, in mid-2020, ENQA published 'External quality assurance in the time of COVID-19: Case examples from ENQA member agencies' at the website (ENQA, 2020b). This collection of case studies is the first publication that includes the actual experience of quality assurance agencies from Belgium, Spain, the United Kingdom, Sweden, Latvia, Georgia, Ukraine and other countries. It allows agencies to learn from each other on how external quality assurance agencies are adapting to the circumstances caused by the COVID-19 pandemic and quarantine restrictions. The lessons learnt relate to external evaluation and recognizing online education, introducing distant site visits, maintaining dialogue with stakeholders and supporting higher education institutions. In this publication, the QA agencies report on their immediate actions, experience on distant site visits and adopting regulatory changes, and actions to guide universities (ENQA, 2020b).

Some similar efforts to collect, discuss and exchange actual experience of addressing pandemic challenges in external QA were made by other QA networks and associations including Council for Higher Education Accreditation (CHEA, 2020b), Central and Eastern European Network of Quality Assurance Agencies in Higher Education (CEENQA, 2020), International Network for Quality Assurance in Higher Education (INQAAHE, 2020) and others. However, these attempts are mainly made in the form of webinars, conferences and online meetings and, at present, they are not systematized or structured into the single collection of papers or book.

In the field of external QA, the most recently published studies are focused on the issues related to remote site visits and online accreditations. Accreditation in the remote mode has become a complicated issue due to some reasons including

absence of relevant policies and procedures (Motova et al., 2020), but there is evidence that remote accreditation is possible (Freiberger & Shanin, 2020) and it can be effective (Stukalo, 2020b). The QA agencies that apply the remote mode of accreditation, report both advantages and disadvantages of such a process. The negatives are mainly seen as the need for more intensive preparation with the requirement of extra time and technical resources, increasing workload for QA agencies staff, dependence of review quality on technologies and equipment (Freiberger & Shanin, 2020; Motova et al., 2020; Stukalo, 2020b). Better flexibility of the procedures, absence of geographical limitations, time and money saving are among identified advantages of the remote quality assurance procedures (Motova et al., 2020; Stukalo, 2020b).

It is also noted that there are some special requirements for remote accreditations at personal and institutional level. For instance, all parties involved (QA agency, HEI) should have relevant equipment, access to Internet and other facilities. Furthermore, all individuals involved (experts, QA agency staff, HEI's representatives, interviewed stakeholders) should have appropriate digital competencies. Thus, there is increased need for training in building online moderation competency of the QA agency staff. Freiberger and Shanin (2020) suggested that project managers should be trained in online accreditation moderation. The importance of leading and supporting experts/reviewers during the distant site visits is also highlighted by Gould (2020). Most authors (Freiberger & Shanin, 2020; Motova et al., 2020; Stukalo, 2020b) agreed that the remote site visits could be considered as an alternative or one of the options for the external QA even after pandemic restrictions are lifted.

External QA is highly interdependent with the internal QA, which is also affected by pandemic and quarantine restrictions. Maintaining public confidence in the quality of education by means of a qualitative analysis and effective internal QA responding to an unprecedented external crisis is discussed by Boland (2020). This paper proves the crucial role of autonomy and subsidiarity principles in emergency and their importance for institutional agility and enabling tailored decision making.

Another challenge for internal QA systems is to ensure that students are supported and to respond effectively to their urgent needs during the pandemic. On the other hand, most authors see many positive effects of the pandemic on internal QA systems. In 2020, the HEIs mobilized their material, technological and human resources to ensure a rapid paradigm shift to remote mode. There is evidence that internal QA monitoring of the learning and teaching process allows quick action mechanisms and responds to students' needs more effectively and with enough flexibility (Lourenco, 2020). Black (2020) reported there is an increase in students' engagement into the internal QA because of the introduction of remote mode of operation. There are some other improvements in internal QA caused by emergencies such as 'stronger inter-service collaborations, centralization of available resources, teacher training (at distance), peer learning, and off-campus assessment' (Mandscheff, 2020, p. 6).

Another issue raised in the studies reviewed is the importance of clear and effective communication and adapting to its new comprehension (Freiberger & Shanin, 2020). The researcher's findings presented during European Quality Assurance Forum in 2020 (EQAF-2020) also confirmed that positive communication is of critical importance during emergencies and contributes to sustainable external quality assurance in higher education (Stukalo, 2020a). The universities demonstrated some scepticism regarding remote reviews and site visits; however, this perception changed after having the experience and transparent communication by QA agencies (Huertas et al., 2020). Therefore, it is important to note the modern role of QA agencies is much wider than just external reviews and it is transforming under pandemic circumstances (Stukalo, 2020a).

To sum up, there are some attempts to describe current cases of external quality assurance and new functions of the QA agencies; however, there is still a lack of systematization, in-depth analysis of practice and conceptualization of the particularities of the distant accreditations and QA agencies role transformation.

Research Questions

This chapter aims to analyse and summarize best practices of QA activities during these unprecedented times. Additionally, some questions are raised and discussed. How will QA change due to COVID-19? What is the future of the distant accreditation site visits? Are distant site visits acceptable as alternatives to traditional site visits post-pandemic? How has QA's role changed in emergency? What are the functions and tools to help QA agencies' key stakeholders during the pandemic? What are good practices of supportive communication in QA during the pandemic in 2020?

Methodology

This qualitative study is based on the case study and questionnaire methods (Creswell & Poth, 2017). Both primary and secondary data were collected through observations and questionnaires. Ukrainian quality assurance agency has started virtual site visits at the end of March 2020 and became one of the first agencies in the world to switch quickly into the distant mode of external quality assurance of higher education. Thus, it is taken as a case study for this chapter. Primary data are collected through two types of questionnaires. This will be explained further. Additionally some publicly available reports and materials on foreign experiences are reviewed, compared and contrasted.

Primary Data Collection

There were two questionnaires disseminated. The first was for NAQA accreditation experts and the second was for key stakeholders (teachers, students, employers) involved in emergency remote teaching and learning. The respondents for NAQA are experts who have been involved in remote site visits from March to July 2020. The major objective of the first questionnaire was to obtain feedback on the participants' distant accreditation experiences and evaluate the appropriateness of remote accreditation site visits. The collected data set is sufficient since the questionnaires were distributed among all experts with relevant experience and the rate of response is 36%. The second questionnaire was distributed via social media and NAQA's contact lists. More than 500 participants responded. These data allowed the researcher to analyse stakeholders' expectations, and stakeholders' evaluation of NAQA's communication strategy and consultancy practices.

Primary Data Analysis

The primary data were analysed through a repeated process of critical reading, interpreting and reaching shared understandings of the data. The logical steps of the data analysis were the following: the data recording, preparing memos, labelling and archiving the analysis of demographic data, reading the interview transcripts and field notes, identifying the key patterns, coding different themes and organizing the data into relevant categories. The obtained results were compared with expectations and the research questions, interpreted and summarized. Additionally, SWOT (strengths, weaknesses, opportunities and threats) analysis was conducted to identify and contrast strengths and weaknesses of the distant accreditations as well as to analyse the opportunities and threats.

Secondary Data

This study also uses secondary data, including the results of the ENQA collection of case studies on distant site visits and external quality assurance. These cases are considered for benchmarking the outcomes of the Ukrainian case study and the results obtained through the questionnaires.

Secondary Data Analysis

The secondary data analysis is conducted to cross-check the results of this research and to validate the findings. The primary data collected through questionnaires are checked against the data and findings presented in the ENQA collection of case

studies as well as in a number of recently published articles and research papers. At the final stage, the conclusions are made.

Limitation

The limitation of this qualitative study is the timeframe of the research. Data were collected 6 months from the beginning of the pandemic restrictions until September 2020. Data collected for such a short period could reflect just first reactions, consequences, conditions and factors. However, it is an objective limitation as quality assurance in pandemic times is a new process. Another limitation is the fact that participants recruited for the second questionnaire represent opinions of only those stakeholders who have access to the Internet, e-mail and are registered on social media. However, in the Ukrainian academic landscape, many people are inactive on social media. Furthermore, it is important to note that the study is focused on the case of the Ukrainian National Agency for Higher Education Quality Assurance (NAQA) and its experience in institutional leadership during the pandemic. During May to November 2020, NAQA's experience has been shared and discussed at a number of forums and published in journals and websites (ENQA, 2020a, b; Stukalo, 2020a, b; Stukalo & Dluhopolskiy, 2020).

Effects of Pandemic for Quality Assurance: NAQA Case

Quarantine restrictions affected the QA role at all levels (see Fig. 1). The most significant effects of pandemic occurred at institutional level. Moving from face-to-face to remote mode of teaching and learning caused substantial changes in both internal and external quality assurance processes. In the case of Ukraine, on March 11, 2020, the Cabinet of Ministers announced a nationwide quarantine, which continues, at present. Therefore, starting from March 11 and until present, all higher educational institutions (HEIs) work remotely and face-to-face activities are prohibited. For the Ukrainian HE, quality assurance is a definite challenge. Quality assurance became nascent in Ukraine in February 2019 when NAQA was officially launched. At that time, there were more 1600 applications from HEIs for accreditation of their study programmes in 2020.

It must be noted that all study programmes would be considered for accreditation for the first time in Ukraine. Previously, the Ministry of Education and Science of Ukraine only accredited specialty programmes. A delay in accreditation meant that HEIs would not be able to issue diploma to their students in 2020. Moreover, there was no way to stop the process of study programmes accreditation. Therefore, NAQA team brainstormed the options to move forward under such circumstances. NAQA was partly prepared for moving accreditation onto an online format. This would have transitioned smoothly since, from the very beginning of its activities,

the digitalization of all documents and key procedures was a priority. The accreditation platform was created and electronic workflow was implemented before quarantine. All stages of the accreditation process are reported on the platform. HEIs submit documents in electronic form. The Sectoral Expert Councils review the cases, vote and submit their decisions and recommendations via this platform. There were just two procedures where the physical presence was required: (1) accreditation site visit to the HEI and (2) NAQA meeting for final decision-making. Therefore, it was decided to develop an approach that would allow these two procedures to be conducted online. The provisional accreditation procedure using videoconferencing was adopted.

Later, in addition to the NAQA provisional accreditation procedure, the Cabinet Ministers of Ukraine adopted the regulation on accreditation during the COVID-19 pandemic and quarantine times. According to the regulations, the online site visits are conducted based on the following principles:

1. Temporality – This is the temporary procedure to address challenges associated with nationwide COVID-19 quarantine.
2. Preliminary investigation – The decision to apply this procedure to each particular study programme is made by NAQA on the basis of the investigation of each case, documents submitted by the HEI, previous site visits to this particular HEI and the other available materials and information about the HEI and study programme.
3. Consistency and comprehensiveness – The evaluation should be conducted in full, all meetings with stakeholders must be ensured and all accreditation criteria must be evaluated properly.
4. Safety – Experts and the other participants of the accreditation process must avoid face-to-face contacts. All interviews with stakeholders, discussions within expert group and meetings with HEI and NAQA representatives should be conducted using videoconferencing tools.
5. Support – NAQA Secretariat provides technical support and advises all participants of the process accordingly. It is also important to note that NAQA Head and Vice Heads conduct weekly videoconferences with the experts in order to respond to their queries and concerns.

Distant site visit lasts 3 days (the same period as normal site visit) and its agenda includes all required interviews, meetings and discussions. NAQA Secretariat supports and records all distant site visits. NAQA members join such meetings as observers. NAQA members' meetings are held based on the blended model. NAQA meets physically (with masks and social distance) and some members join the meeting using videoconferencing. It allows everybody to participate in the discussion and to vote for the final decision. Official NAQA Facebook page broadcasts such meetings.

The first online site visits using this provisional accreditation procedure started on March 23, 2020. Almost 500 (497 to be exact) accreditations were completed by July 1, and their number reached almost 1000 by December 2020. The outcomes of

the distant site visits are comparable to the face-to-face site visits: 1% – excellent study programmes; 63% – normal 5-year accreditation; 35% – conditional 1-year accreditation; 1% – denials in accreditation.

According to the expert online survey (347 participants), 51% of experts who participated in distant site visits recommended NAQA to keep distant accreditation in post-pandemic times. Additionally, 17% more experts recommended that distant accreditation should be an option. More than 14% of experts considered distant site visits to be more effective and appropriate then physical ones. Furthermore, more than 50% of experts think that there is not much difference between distant and physical site visits.

Future of Distant Accreditations

The feedback from HEIs is also mainly positive and there is evidence that expert panels, the university representatives, students and the other stakeholders feel comfortable using videoconferencing tools to meet and talk. It is also noted that NAQA Secretariat is supportive and no major technical issues are experienced. The only issue mentioned by the HEIs representative is that more efforts and IT tools are required to be prepared for such site visits (for instance, to demonstrate facilities, laboratories etc.). Moreover, expert panels ask for more documents as evidence and proof of some activities.

The first experience and analysis of the practice of distant site visits are evidence that such a format has advantages and disadvantages. Cost and time-saving, transparency and flexibility are among positives. On the other hand, there are still some legislative and regulatory issues, accreditation of some specific study programmes and the sceptical attitude of conservative stakeholders. Table 1 presents the strength, weaknesses, opportunities and threats of the distant accreditation site visits.

Distant site visit could become a good alternative to physical site visits in case of online study programmes and 100% e-learning; pandemic times and under the other exceptional circumstances; international evaluation visits. It also could be used for money-consuming purposes, as experts do not need to travel and spend money on hotels, planes, trains etc. Another alternative is a blended model of site visits where some experts could be physically present during the site visits and some experts could join the expert panel online (using videoconferencing tool). The blended site visit encompasses advantages of both online and physical site visits, however, developing and implementing this model requires clear methodology. In fact, NAQA started using the blended model of accreditation site visits from September 2020.

Table 1 Distant accreditation site visits SWOT analysis

Strength	Weaknesses
Flexibility allowing to conduct accreditations under different circumstances. Accreditation costs reduction for HEIs (experts' travel expenses are excluded). Time-saving for experts (no need to travel). Transparency (all distant site visits are recorded and can be observed by QA agency members).	Hardly applicable to some field of studies (for instance, study programmes in art, music, actor specialties). More documents are required for clear evidence. Expert panel can hardly feel the 'university Spirit' including traditions, history, informal relationships etc.
Opportunities	Threats
An alternative in case of the next waves of COVID-19 pandemic. Development of the blended model of the site visits. Implementation of innovative approaches and tools of higher education quality assurance.	Distant site visits are not allowed or allowed only on a temporary basis in some countries. Lack of relevant legislative basis. Some stakeholders are sceptical about distant site visits.

Changes in QA at Institutional Level

Quarantine restrictions caused moving the study process into distant format, so all internal quality procedures have been conducted in remote mode. The main changes related to face-to-face meetings, discussions and communication. For instance, all meetings with stakeholders regarding courses and study programmes improvements were held using videoconferencing. The internal peer reviews and feedback from employers, alumni and teachers are collected via distant tools only (e-mails, online surveys and questionnaire, webinars, videoconferences). Those internal quality assurance tools, which were conducted online before the pandemic (e.g. online student surveys), have not changed.

Changes and Challenges of QA at National Level

At the national level, the key challenge is to adjust the higher education quality assurance legislative framework to the new realities and the remote site visits practices. As mentioned previously, in the case of Ukraine, the provisional accreditation procedure using videoconferencing tools was adopted by NAQA. In fact, Cabinet Ministers of Ukraine adopted regulations on accreditation during the COVID-19 pandemic. The adoption and implementation of such documents have resulted in adherence to higher education quality assurance procedures and there were no delays in issuing diplomas. Conversely, there is an area for improvement of the existing legislation and national regulations of distant and blended site visits. It is obvious they would differ from country to country, however, some universal procedures and requirements could be introduced and shared. Furthermore, there are some other positive effects on the national higher education system. For instance, there is evidence that distant accreditations became an impetus to revise the role of

information technologies in the universities' management and study processes and to improve teachers' and university administration's digital skills.

Changes in QA at International Level

At an international level, the institutional QA architecture is well-developed and became a support for the QA agencies during the pandemic. ENQA, INQAAHE, CEENQA and CHEA established a series of webinars and conferences, launched a social media campaign, developed materials, became platforms for case studies collection and exchanged experiences and created separate web pages to share materials associated with COVID-19 issues. As a reaction to the pandemic, INQAAHE, CEENQA and ENQA have transferred 2020 members' forums, general assemblies and other activities online. ENQA created a separate web page with COVID-19-related materials and suggested to the QA agencies to be flexible and adapt their activities and evaluation processes to quarantine conditions highlighting their crucial role in supporting and offering guidance on online learning to the universities (ENQA, 2020a, b). The federal government of the United States declared the importance of accreditors' flexibility and appropriateness of distant site visits. The US authorities and CHEA encourage e-learning, conducting site visits virtually and modifying QA policies to respond to pandemic challenges (CHEA, 2020a, b; USDE, 2020).

The QA agencies also support each other sharing experiences and offering consultations on the bilateral basis. For instance, during April to November 2020, NAQA conducted about three dozens of agency-to-agency and consultancy meetings with colleagues from France, Georgia, Lithuania, Estonia, Sweden, Belgium, Turkey, Saudi Arabia, Cyprus, Slovenia, Latvia, Poland and Germany. Furthermore, during quarantine, NAQA participated with QAA International Partners Forum, European Quality Assurance Forum (EQAF-2020) and signed bilateral memoranda of cooperation and understanding with NCEQE (Georgia), Hceres (France), IAAR (Kazakhstan), AIC/AIKA (Latvia), PKA (Poland) and SQAA (Slovenia). Such meetings and cooperation affords the opportunity to learn from foreign practices, to benchmark procedures and policies, to exchange experience. The international QA environment has appeared to be supportive, flexible and open to innovations and collaboration – it helps during the pandemic not only to launch agencies like NAQA, but also to help those QA agencies that face serious problems under such unprecedented circumstances.

Raising Role of QA at Meta-Level

QA's role at the meta-level is increasing during the pandemic. It is critically important to maintain trust among all participants of the quality assurance (QA) process. An unprecedented level of uncertainty affects universities and HE stakeholders and

makes them search for additional support and guidance. Stukalo (2020a, b) demonstrated that the role of QA agencies has been extended during the pandemic. Consultative, supportive and practice-sharing functions are becoming more significant, implemented at the meta-level and applicable at local, national and international scales. However, these functions could be efficiently implemented only with relevant communication tools. Effective and open communication during pandemic builds trust, which is imperative in a crisis (Reynolds & Quinn, 2008). Therefore, enhancing supportive communication as an important function of QA in emergencies helps to maintain trustworthy relations between QA agencies and key stakeholders. Supportive communication is a part of organizational culture in the form of comprehensive help and guidance given by an organization to all stakeholders internally and externally. Supportive communication importance may rise during emergencies. However, the author believes that it could be effective only if it were a part of the organizational culture regardless of circumstances and if it is based on organizational values.

Positive Communication and Trustworthiness in QA Process

QA plays an important societal role and affects universities and the whole HE system. The QA agencies and networks demonstrate leadership, supportiveness and openness to ensure that the same high quality of education exists pre and during the pandemic (Stukalo, 2020a, b). It is obvious that positive communication is an important building block in creating and sustaining relationships among stakeholders and promoting trust in the QA process. The analysis of the NAQA questionnaire and the observation of the QA networks websites resulted with the following findings.

Firstly, trustworthiness of the QA agency starts with being approachable and friendly in communication with stakeholders. For instance, QA networks and agencies are easily reachable via social media platforms such as Twitter, Facebook and LinkedIn. According to the NAQA's recent expert survey, only 2% of respondents think that communication with NAQA is problematic. NAQA was launched officially in February 2019 and regularly monitors stakeholders' satisfaction with NAQA communication. Expert surveys demonstrate that communication with NAQA has improved significantly within the last year. In December 2019, 11% of experts mentioned communication with NAQA as one of the problems in the QA process, in February 2020–7% and in August 2020 only 2% of experts identify communication as a problem (NAQA, 2020).

Secondly, accountability and trustworthiness are based on honesty and openness. As an example, the NAQA's key values are trust, openness, reliability and transparency (NAQA, 2019). The major NAQA's activities are transparent and final decisions on accreditation are made publicly. NAQA established an online accreditation platform with a publicly available list of all accreditation decisions and suggestions

for improvement (NAQA, 2019). NAQA encourages open and honest dialogue among all participants of the external QA process.

Thirdly, the QA agency's policy should be consistent and aligned with values and organizational culture. In order to respond effectively to the emergency challenges, it is important to have mutual trust between the key stakeholders in the higher education system. However, there is lack of it in Ukraine as students, teachers, university administration, employers and the ministry tend not to trust each other within the educational process. It also relates to the new institutions appearing in the educational environment (such as NAQA, which started its activities only in February 2019). Therefore, NAQA aims to contribute to the trust building process in higher education and to ensure good organizational reputation. In NAQA, the accreditation process and communication strategy are built on the academic integrity and openness values presented in the strategy (NAQA, 2019). The changes, institutional reaction to the pandemic and the decision-making process are transparent and clearly communicated to the public. It helps to develop the trustworthy reputation not only of NAQA, but also of the whole higher educational system.

Last, but not least, showing support is decisive for trust maintaining, especially when circumstances are changing in emergency. In QA, support is reflected through explaining, suggesting and guiding. COVID-19 caused the lack of face-to-face communication, so QA networks and agencies switched their procedures and communication online. For instance, ENQA conducted a series of webinars, INQAAHE's, CEENQA's, CHEA's thematic webinars have also become regular. NAQA established such communication projects as NAQA School of Quality, NAQA_Recommends, NAQA_Comments, NAQA's Q&A Sessions and NAQA Webinars. These projects are conducted through social media on a weekly and biweekly basis and provide experts, universities representatives and key stakeholders with guidelines, recommendations, explanations and sharing best practices. Seventy-seven percent of respondents consider social media communication to be effective and use it regularly. Ninety-one percent of respondents are mostly (36%) or fully (55%) informed about the NAQA's activities and communication projects.

The current practice is evidence of the transparent, sustaining and innovative ways in which communication of QA institutions and networks with the key stakeholders occur. They reacted immediately to the pandemic challenges and adopted information technologies to ensure continuous communication and support of the stakeholders. Supportive communication is characterized by honesty, initiative, consistency, accountability, dedication and commitment. Such styles of communication are based on credibility, reliability and engender the academic public's trust, which is imperative during a pandemic. Therefore, the main contribution of the study lies in promoting QA agencies' supportive communication with stakeholders as a basis for maintaining trust during the pandemic. Social media tools, webinars, Q&A sessions and open communication play a crucial role when face-to-face communication is not available. The study could be useful to QA agencies and other stakeholders as the supportive communication framework could be implemented for maintaining trust and building effective relationships.

Conclusions

This chapter encompassed some issues of higher education quality assurance in an emergency. The current practices of distant site visits technology, supportive communication, leadership and adaptability of QA agencies could potentially form future trends for the next decade of quality assurance and would require some changes and amendments in the QA's legislation, regulations and methodologies. There is evidence that, in countries with developing quality assurance systems, QA agencies should be flexible and demonstrate quick reactions in order to respond to challenges and support stakeholders. This is very important in order to ensure consistency of the QA processes. Additionally, it is pivotal in building trust among all stakeholders and avoiding potential failures associated with delays in the academic programmes accreditations.

Consultancy and supportive functions of the QA agencies are of the greatest importance during a pandemic. Stakeholders are looking for additional support, recommendations and suggestions on how to address the current challenges. Such tools as webinars, trainings, live Q&A sessions via social media and social networks are widely used during the pandemic. Universities highly appreciate such consultative support and consider it in their policy-development and decision-making processes. QA agencies demonstrate flexibility and adaptability during an emergency. They develop new procedures, adopt QA processes to remote teaching conditions and make legislative initiatives to legitimize the new procedures.

Moreover, universities value the QA agencies' leadership during an emergency and are open to such initiatives. External QA innovations such as remote site visits stimulate the development of the universities' internal QA systems and new technologies implementation. Multiplication effect is evident. QA agencies become platforms for sharing best practices in university management and in teaching and learning in order to ensure academic programme quality. It is concluded that the QA agencies' role is being extended and their leadership, flexibility, adaptability and supportiveness are becoming decisive characteristics during emergencies.

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