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Teaching in times of crisis: The impact of the COVID-19 pandemic on higher education

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ABSTRACT

Although increasing numbers of studies have examined online teaching in the last decade, examination during a crisis context is rare. This study fills this critical gap and is a rapid response research to suggest insights on how to manage the transformation to online teaching as the COVID-19 pandemic unfolds. Based on 16 interviews with educators from a university located in the Gulf Cooperation Council (GCC) region, namely, Qatar, we present measures of support that contribute towards charting the path to the next normal. Our recommendations are segregated along three categories of educator-focused support, student-focused support, and institution-focused support.

Introduction

This study contributes to the literature on crisis management in the education sector by answering two questions associated with the COVID-19 pandemic. These are: (1) what are the challenges facing higher education and online teaching? (2) Which recommendations can we provide to policy makers and managers in higher education institutions to contribute towards charting the path to the next normal? Despite the challenges, universities launched initiatives to remotely deliver education. We are uncertain whether these initiatives are popular or effective, but the launch reflects how in times of distress solace could be found. However, there is evidence to suggest that teaching contexts influence teachers' delivery and approach and eventually students' learning and progression (Goumaa et al., 2019). In parallel, there remain critique of online teaching and the need to train educators on relevant changes in their delivery modes and personas (Arbaugh & Hwang, 2013; Drysdale & McBeath, 2018).

Although increasing numbers of studies have examined online teaching in the last decade, examination during a crisis context such as that of COVID-19 is rare and this study aims to fill this critical gap. A strength of this exploratory study lies in the preliminary insights collected during the early stage of the COVID-19 outbreak and the recommendations we were able to make by suggesting three forms of support: educator-focused, student-focused and institution-focused, hoping to enable students to progress their studies successfully during this unprecedented and challenging time.

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Supplemental data for this article can be accessed here

Theoretical background

Online teaching is an education experience that involves a separation in time and space between the teacher and the student for the latter to achieve an academic credential where the students and the teacher meet over live streaming video and/or audio for synchronous and nonsynchronous interaction (Drysdale & McBeath, 2018). It is identified as a promising mechanism that offers the education opportunity to students who cannot attend university in person (Arbaugh & Hwang, 2013). It is established in pedagogy research that teaching context influences educators' approach to teaching; the process is not straightforward but rather 'fluid' and influenced by the educator's practices, the student's perceptions and the institution's context in which the offering is delivered (Goumaa et al., 2019).

With incidents such as pandemics, active shooters and natural disasters, crisis management has become a critical function of higher education administrators (Holzweiss & Walker, 2018). A crisis can be defined as 'an event, often sudden or unexpected, that disrupts the normal operations of the institution or its educational mission and threatens the well-being of personnel, property, financial resources, and/or reputation of the institution' (Zdziarski, 2006, pp. 3–24). Crises are synonymous to disasters and are believed to be ambiguous circumstances, pose a fundamental threat to an organisation's survival and influence various stakeholders which presents a dilemma in decision making (Elbanna et al., 2015). Such events mostly demand immediate actions, suspension of ordinary procedures, the use of uncertain information, and the need for coordinated actions and hence organisations react differently if the trigger of a phenomenon they face is perceived as a crisis (Elbanna et al., 2020).

In the education industry, it is established that, during crisis times, students exhibit emotional and behavioural difficulties because they encounter social isolation; consequently, educators and administrators find themselves endeavouring to support students' continued learning (Huebner et al., 2007). Social isolation stems from a student's inability to interact with their peers and their failure to accept the surrounding reality; it is also acknowledged that behavioural and academic performance are affected during crisis times (Gerrard, 2019).

Materials and methods

A qualitative approach was deemed suitable since it enables the collection of rich data from multiple participants to facilitate an in-depth exploration of the investigated phenomenon and context. Given this, the empirical evidence is drawn from 16 semi-structured interviews with two types of academics, namely, those with teaching roles only and executive academics who, in addition to their teaching roles, have senior management positions. All participants were selected based on criterion theoretical sampling they were the module leader of their courses and hence were involved in a significant amount of educator-led online teaching activities during the lockdown.[1] Prior data collection, the research team managed to discuss the research questions with a senior administrator who was involved in managing the transition to online learning during the pandemic and to pilot the interview protocol with two experienced lecturers in two different disciplines. Participants confirmed that their university uses blackboard online platform. The existence of this platform enabled the transition to online virtual delivery.

Given the lockdown, data were collected through videoed semi-structured interviews over the Zoom virtual meeting platform for two months, early April-early June 2020, and the research team undertook content analysis of the transcripts. Each interview lasted, on average, for about 45 minutes. The interviews were recorded and transcribed verbatim. During the course of the interviews, additional insights were recorded as detailed notes and included in the interview transcript within 24 hours.

Participants were asked about the impact of COVID-19 on higher education and probed through questions such as: 'How are you as a lecturer/teacher responding to the virtual delivery?' 'Have you revised your teaching slides or way of teaching?' 'How has your university responded to remedy faults and deficiencies in infrastructure and IT systems?' 'Did your students raise concerns about the online teaching?[2] Following recommendations by Khan et al. (2014), we streamlined data collection to permit rapid analysis.

Results and discussion

We first identify key challenges and potential opportunities of the online teaching during the COVID-19 era. Then, we present three proposed support mechanisms to enhance online teaching, namely, educator-focused support, student-focused support, and institution-focused support.

Challenges

The study's participants identified that the sudden shift to online teaching has been a complex challenge for them, students, and the university administration. In the following section, we address some aspects of this complex challenge.

First, concerns revolved around the disengagement of students and difficulty in interaction and communication during lessons, seminars and office hours. The following concerns were expressed:

'It is not easy to engage students in the discussions; they are hesitant to speak or answer'.

'The students were anxious and lost focus – I could tell.'

Second, the need for educators to exert additional efforts to make the teaching material accessible, understandable and engaging. Two participants commented:

'I have been teaching this module for more than four years, but I had to revise my slides and make sure they are uploaded with [a] voiceover and in a size that is easily downloaded.'

Participants also discussed challenges related to their computer skills and the need to learn how to use the new teaching platforms:

'It took me a while to get used to Blackboard Interact; I used to log in 30 minutes prior to the class start time, to make sure the set-up is alright.'

Third, participants discussed logistical challenges such the limited accessibility to online teaching platforms and the consequences this may have in terms of increasing students' stress and anxiety:

'I would have preferred the interactive mode of a virtual class but, due [to] broadband connectivity, I had to switch to the static mode where I upload the slides and arrange an hour's group call with students.'

Fourth, participants mentioned the risk of the teaching experience being dehumanised due to lack of social interactions. Academics described the teaching experience as 'less enjoyable'. An Associate Professor of Finance observed:

'I found the experience daunting and challenging. I usually enjoy the time I spend with my students; over the past weeks, it was O.K. but not the same. I find the virtual mode less enjoyable.'

Fifth, participants mentioned the challenge of administering in-class tests and concerns about integrity and rigour. The senior management team's focus on students' morale and psychology during the crisis has led to many compromises regarding the quality standards. A Professor of Law, representing many professors, said:

'We can't supervise students online. We [educators] do not know if they are the ones completing the exam or [if] someone is helping them. In my opinion, [it is] a fundamental breach of quality standards and rigor in academia.'

Sixth, the need to redesign exams and other forms of summative and formative assessments to suit the new teaching format was highlighted. A Professor and a Director discussed this point, observing respectively that:

'My postgraduate students struggled to keep contact with their group members, so I had to change the assignment to individual submissions.'

'What are we going to do with assessments? At the school level, they are grappling [with] how to address the issue of exams.'

Seventh, how to conduct virtual extra-curriculum activities to enhance students' applied learning was regarded as a 'challenge' and a 'key question to ask academics'. Calls were raised to course directors to plan virtual extra-curriculum activities in order not to impair students' applied learning experience. A Director said:

'We hold several extra-curriculum events during the academic year, how would we do that going forward? It is part of the learning experience and supports the schools' vision of applied learning. We [the university] need to enforce an alternative plan.'

Eighth, participants identified the need to accommodate cultural considerations such as the use of video features with female students and the sensitivity of invading privacy. A Business Professor said:

'Gender is a key consideration; I cannot force any of my female students to turn on the camera to confirm she's actually engaged. Even for male students, they may say that there are family members around and it is not convenient for them to talk or turn on the cameras and microphones.'

Opportunities

In addition to threats, the participants highlighted several opportunities. First, the flexibility of the new approach was cited as a fundamental prospect. Flexibility took different forms such as the ability to reach students everywhere and in different time zones and the ability for students to go back to the recorded lessons. Participants expressed:

> 'I see pros for this approach; some faculty members did not keep the same lecture time, so they could teach at their own time, given the challenges with family and travel, and it may be an advantage for many academics.'

> 'The recordings are available 24/7 to students. This benefits students who want to do well. A student told me: "It feels that I have the professor at my fingertips".'

Second, educators have also seen the current crisis as an 'opportunity to innovate' and recognised opportunities from online teaching experimentation. As an Associate Professor of Finance reflected:

> 'It's the crisis that would push universities to explore new teaching formats. We have known for a while that we need to embed the digital elements in various curricula; it was optional, but now, I see the task [as] a must.'

Academics highlighted that they were forced to be innovative and think of ways to engage students. Hence, innovation was 'dictated' and a participant queried whether the changes to the delivery will be maintained or would they be asked to revert to previous teaching modes.

Third, participants recognised a massive opportunity for conducting online pedagogy research and collaboration across disciplines. A Director of Research reflected on this point and said:

> 'This situation will create more opportunities for online education, online collaboration, and research in e-learning from different perspectives, and applying different theories will be expected and in 'demand', as we say. I foresee huge opportunities in pedagogy research.'

Support mechanisms in the higher education sector during the COVID-19 Pandemic

Based on the emergent insights, we segregate the recommendations into the following categories: support for educators (educator-focused support), support for students (student-focused support) and infrastructure needed in organisations (institution-focused support). The aim of the three types of support is to propose a holistic approach to enhance online teaching during a crisis. Our synthesis centres on the assumption that crisis management involves multiple antecedents; hence, a crisis must be studied and managed using a system approach. It is acknowledged that crises increase levels of anxiety, depression and aggression among students (Shrivastava, 1993). Addressing the challenges on different levels (teaching, student and institution) should minimise such an effect.

Educator-focused support

Educators asserted that it is imperative that the educator duly understands and notes the challenges encountered by students when the curriculum is delivered online. When asked about 'remedies' and 'recommendations', participants proposed a few mechanisms to educate academics about the challenges encountered by students in the virtual learning environment and asserted that these practices would equip academics with necessary skills to support students during this challenging time. The discussions identify that interactions include a variety of pedagogical tools such as the video-streaming technology, PowerPoint presentations and the use of hyperlinking resources, and therefore the educator should be aware of the peculiarities of applying his or her pedagogical tools in the virtual teaching context.

A fundamental theme in teaching-focused support is the need to conduct compulsory training webinars to offer training on how to maintain accessibility and continuity of learning. A participant observed:

> 'It is worth sharing best practices of those who find this way easy. We should also collate students' feedback.'

It is also recommended that educators receive online training on students' wellbeing because a learning environment that offers stability enables students to regain a feeling of control over their learning journey (Arbaugh & Hwang, 2013). Participants discussed difficulties in using the different functionalities of the learning platform that affect the set-up of the teaching context. To counteract this difficulty, they suggested that basic online training and accessible support resources be provided. A fundamental theme of the required training is the need to advance educators' skills to encourage and stimulate virtual classroom discussions that are grounded on mutual respect. A lecturer said: '*With the new form comes a new etiquette, like muting your microphone*'.

With the online delivery came expectations about house-keeping manners. Few academics reported that they included a slide about certain etiquettes/behaviours that are expected like raising hand if they have questions, expectations about monitoring chat boxes while giving the lecture and muting to avoid distraction due to background noise. The findings establish that academics tackled the unknown mode of teaching departing from the known teaching norms and had to ensure that the students act/being 'themselves' online. Participants also highlighted the need for '*training [on how] to encourage students to talk*'. This finding concurs with views that interactivity affects the quality of online teaching and that online discussions enhance virtual social presence (Arbaugh & Hwang, 2013).

In Table 1, we present exemplars of teaching-focused support. In developing the recommendations, we acknowledge views that instructors should alter their teaching persona if they are to deliver online teaching offerings (Goumaa et al., 2019).

Student-focused support

Participants identified that students lack certain academic skills to cope with the new teaching format. The content analysis identified the importance of the following skills: communication, numeracy, digital analytics, and interaction with virtual teams. In Table 2, we organise student-focused support to facilitate the integration of the proposed

Table 1. Examples of educator-focused support.

Sr.	Examples
(1)	Provide extensive training about COVID-19 to lecturers and senior academic administrators
(2)	Coordinate and administer periodic meetings with senior administrators to update educators/lecturers on the institution's strategy during COVID-19. Clearly communicate key performance indicators during the crisis time.
(3)	Provide mental health referral training to module leaders and educators on how to handle students' new learning experience.
(4)	Make training on digital teaching platforms compulsory and provide periodic updates that are mandatory to attend.
(5)	Deploy education mentors and coaches to support academics from different disciplines.
(6)	Train educators on active listening skills and etiquette of managing virtual classrooms.
(7)	Train educators on standard and consistent virtual class management principles/practices.
(8)	Administer an innovation teaching task force to evaluate best practices for flipped classroom techniques and virtual delivery of modules by discipline.

mechanisms into the typical higher education offering. The aim of this form of support is to address students' disengagement with the virtual online teaching. An Associate Professor said:

'We need to prepare our students better to face such challenges, to know how to react to a crisis, to be entrepreneurial and innovative. I do not think we are doing this now.'

The responses also recognise the paramount significance of efficient and timely communication between students and their educators during the crisis in alleviating and minimising students' stress. The role of educators was highlighted in this regard; a lecturer suggested: *'Frequent communication is crucial; it minimizes students' sense of distance'*. Similarly, participants outlined: '*It is important that lecturers post messages frequently on Blackboard'* and that *'Frequent communication by emails and instant messages is vital; the lecturer must instate this culture and make explicit announcements that questions and interactions are expected and to a certain extent mandatory'*. As argued by Huebner et al. (2007), maintaining communication with mentors and tutors during crisis times is of paramount significance.

When considering mechanisms to support students, two main suggestions were discussed. First, the need to embed elements of digital skills about the content and format of emails and instant messages of the virtual teaching platforms in the curricula and assessment, possibly through the extensive use of blogs and virtual teams to conduct mock group academic activities during seminars and tutorial times. An Assistant Professor, commented: *'They know how to text on their social media but, when it comes to business communication, they do not know how to write an email or a message in a business context'*. Second, the use of flipped classroom techniques to enable students to synthesise, apply and discuss key learning outcomes. Academics of different rankings said:

'We have had the flipped approach at the university for three to four years now; it is [a] useful way to encourage their [students'] interactions.'

'In the flipped form, students come to class prepared, of course, now, this is [as] important as ever and forces students to read and start reflecting on the topics that will be covered.'

Table 2. Examples of student-focused support.

Skill	Examples
Communication	Embed in the curricula learning outcomes to assess students' effective business writing skills.
	Make mandatory individual and group presentations on virtual learning platforms.
	Encourage discussions between lecturers and students on the challenges they encounter about the use of virtual platforms.
	Recognise achievements and share success stories of successful groups.
Numeracy	Embed in the topics covered the use of online templates to address various business models.
Social interaction and teamwork	Design training courses for students on online etiquettes and the use of virtual platforms.
	Educate students and lecturers on privacy and use of data policies associated with the virtual teaching platforms.
	Implement personal tutoring groups.
Digital and analytics	Teach students to create a web group to communicate in the virtual learning environment.
	Extensive focus to teach using digital tools.
	Adopt simulation tools to acquaint students with the use of technologies and virtual business contexts.

It is proved that flipped classroom teaching improves knowledge acquisition and that the use of technologies and new approaches in education is a dominant narrative for change in the 21st century (Carvalho & Yeoman, 2018). The responses asserted the need to focus on developing graduates' transferable skills such as striving towards lifelong learning, entrepreneurial and critical thinking. In Table 2 we present participants' suggestions regarding instructional activities to support students' virtual learning.

Institution-focused support

There is a need to develop robust means to transition universities to online delivery during crisis moments such as the current pandemic. To achieve that end, strategic decisions should be undertaken at the senior management level. It is established that crisis events increase decision-maker's perception of uncertainty because they distort information flow (Dayan & Elbanna, 2011). Decision makers in the higher education may be forced to apply heuristics to simplify information processing requirements when pursuing decisions under conditions of uncertainty during the pandemic. Preplanning of timely and accurate communication to different stakeholders (lectures, students, authorities) is therefore crucial.

A fundamental consensus is the need to ensure the reliability of institution's infrastructure and platforms to efficiently deliver teaching in its 'new format' and the necessity of revising and designing new forms of assessment and feedback. Assessment approaches are fundamental to student's experience and should be designed to encourage deep learning. Hence, tackling assessments and exams in a way that would not affect students' perception of the quality of education necessitated that the institution invests in advanced technologies such as invigilation software. Encouraging educators to design innovative modes of assessment was needed such as the focus on a complex real-world situations that does not have a right or wrong answer.

Participants also discussed the importance of timely and accurate communication. Therefore, there were calls to extend news feeds to students through several and alternative communication channels such as social media accounts of the university and the digital platforms news feed. There were also discussions about the need to devise an institution's wide initiative to provide counselling and social skills training to accommodate the

Table 3. Examples of institution-focused support.

Sr.	Examples
(1)	Invest in advanced communication tools that feed information effectively and promptly to students in staff.
(2)	roll out user-friendly platforms such as Aola and Moodle news feed to stay connected to students.
(3)	Investment in advanced platforms and work closely with developers to ensure new modes of assessments are administered without compromising quality standards Encourage educators to design innovative assessment briefs.
(4)	Institutionalise and administer training sessions to staff and students on meeting deadlines, time management, stress management and social isolation.
(5)	Organise virtual professional learning community with alumni, guest lectures and industry representatives to ensure student's experience is not impaired by the lack of face-to-face delivery. frequent informal sessions to keep the students and academic staff informed of new developments and crisis development.
(6)	
(7)	Use social media and different platforms to provide a safe virtual environment as part of the students' timetable for Q&A practice sessions and to ensure they are duly updated about their learning to ensure their perception about the quality of their degree is not impaired

adjustments needed following information updates. Our participants stressed that the institution's revised communication strategy should be designed to avoid disruption to online delivery and avoid students' perception of poor quality of the education online offering. Several participants reflected on this, observing that:

'The management needs to decide on many issues, such as student and staff training, investment in software for communication to ensure news feeds are timely and accurate to students'.

'There are many user-friendly software such as Aula and Moodle news feeds that senior management could deploy to ensure communication is timely to students and staff. In my view, crisis management is the management of information flow'

Participants further probed on the importance of inviting employers', guest speakers and alumni to 'online' professional community to ensure student's experience is not impaired by the absence of face-to-face delivery.

The emergence of these recommendations outlines the significance of input from both students and educators in guiding an institution's participative strategy. Table 3 summarises recommendations at the institution level that would support an institution in managing the quality provisions and information flow during crisis times in a way that would alleviate any sense of isolation and enhance student experience during online delivery. The calls highlight the significance of revising assessment and feedback mechanisms to compensate for the lack of face-to-face offering.

As there have not yet been any nationwide recommendations, a participative strategy provides the means to proactively innovate and adapt new teaching techniques. Educators are encouraged to act as learning facilitators to ensure quality standards are maintained during the virtual learning and that the quality and validity in assessment are corroborated.

Conclusion

Our study acknowledges the multidimensional aspects of crisis management (Goumaa et al., 2019; Shrivastava, 1993) and presents an integrated framework to address educator-focused, student-focused and institution-focused support. It provides several practical implications for policy makers, within the domain of higher education, to help them

better understand the context of COVID-19, as an example of other infectious diseases. For example, it will be impractical to capture and manage higher education without the proper application of crisis management principles. Hence, training is essential to provide senior-level leaders with the relevant competencies for managing crisis situations (Holzweiss & Walker, 2018). Moreover, Helsloot and Jong (2006) argue that higher education institutions tend to not have an integrated policy on crisis management; administration, staff and students have limited awareness of the risks to which they might be exposed during crisis times; there is little communication between the institution and its staff and students about planned measures; and the staff and students are not involved in risk management planning and implementation thereafter. Therefore, these institutions need to purposively think for developing proper strategies to handle different aspects and stages of crises such as that of COVID-19.

Although the COVID-19 pandemic is a global phenomenon with many similar consequences for the education sector across the globe, the economic, political, cultural, and institutional environment of this study should be taken into consideration when generalising its results outside the GCC region. In addition, we foresee several areas for future research such as the need to: (1) clarify the impact of the pandemic on student sense of social isolation; (2) investigate the impact of culture and online etiquettes on online delivery and possibly through ethnographic studies shed light on ways to enhance the online delivery; (3) study the communication challenge in the transition between 'normal' provision and online learning in blended approaches when all is in crisis; (4) consider input from learners at the undergraduate and/or postgraduate level. For example, although online learning allows flexibility, there remain challenges about learners who engage at different times. Hence, we foresee an opportunity to explore the effect of flexibility on student sense of social isolation and equality; (5) extend our findings by examining issues related to data privacy given the usage of online platforms; (6) study the 'new normal' and which adjustments we need to adopt to enhance it. Finally, (7) examine the impact of uncertainty on decision makers' ability to communicate timely and accurate information to different stakeholders.

Endnotes

1 A table showing the characteristics of the study's participants is available from the first author upon request.
2 The full interview protocol is available from the first author upon request.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

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