Multidisciplinary academic perspectives during the COVID-19 pandemic

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Summary
To date, the outbreak of the novel coronavirus (COVID-19) has infected more than 5 million people and caused around 350 000 deaths globally. In most countries, the world as we knew it came to a sudden stop and this led to the biggest shift of employees to remotely conduct their work. Academic institutions were extensively affected, as teaching and assessment activities were hampered, and graduation ceremonies were cancelled. In addition, there was an imminent disruption in academic and research activities including face-to-face conferences and conventions. Among many challenges, academics had to grapple to remain engaged professionally and socially with students and colleagues. Digital technology being an integral part of life has become essential for connectivity and communication. In this commentary, multidisciplinary academics from Kuwait and Saudi Arabia share perspectives and experiences in adapting to the COVID-19 reality. From healthcare sciences to engineering, and from business to education, this paper highlights the role academics play in combating professional and social challenges during COVID-19.

KEYWORDS
academia, COVID-19, global crisis, pandemic, university

INTRODUCTION
The novel coronavirus (COVID-19) has had a direct impact on the whole world, and people are scrambling to volunteer and help in those trying times. The World Health Organization (WHO) declared it as a pandemic on 11 March 2020,
nearly 3 months after the first case was discovered in Wuhan, China. The fact is this is not the first pandemic humanity has gone through. We have gone through the H1N1 pandemic in 2009, the H3N2 virus pandemic in 1968, the H2N2 virus pandemic in 1957 and the most severe pandemic in recent history, the 1918 H1N1 "Spanish flu" virus.

Worldwide, academics generally work combining teaching, research and community service duties. Teaching, in many countries, has not stopped, with a majority shifting education instantly to online platforms. Academics are now passing their "lockdown" hours venturing into the world of virtual learning. Whether they are novices or experts, the instant shift did not allow many to be well-prepared for the challenges ahead. On the other hand, research and service have definitely slowed down. Indeed, research writing can be continued; however, research that involves fieldwork has come to an abrupt stop. That is especially true for medical research, where data collection either involves medical professionals (who are currently at the front line fighting this new pandemic) or is located at medical sites. Conferences, a key setting for research, have been cancelled or postponed. Finally, although some universities have continued with committee meetings, in general, planning ahead is very difficult in these times of uncertainty. Hence, the service leg of the academic’s job has also been affected.

Using technologies is now imperative. In working remotely, academics need a strong and well-planned connection to continue serving their students and institutes as well as the public. An investment in mobile technologies, which offers students greater flexibility in when, where and with whom they learn, may introduce, for example, the need to ensure students have the necessary digital literacies as well as the ability to work independently and autonomously. Cyber connections may allow a semi-normal teaching environment to take place. Online platforms provided virtual classrooms as well as media for innovative assessment methods. It also connects researchers together providing a continuity of work, while authorities advocate for social distancing. Although most academics did not use these technologies regularly for teaching, meetings or services before, the current crisis has pushed people out of their comfort zones in order to respond to this urgent need that moved work from being "on campus" to "in house" teaching and learning.

“This is not just a public health crisis, it is a crisis that will touch every sector, so every sector and every individual must be involved in the fight” remarked WHO Director-General in March 2020, as the announcement was made characterizing COVID-19 a global pandemic. This paper presents multidisciplinary accounts, perspectives and initiatives made by academics in the Gulf Cooperation Council (GCC) Arab States, including Kuwait and Saudi Arabia on how academia has stepped up for the global fight against COVID-19, both professionally and socially.

1.1 Social connection and engagement

Considerations in adjusting public health and social measures (PHSM) had to be implemented to prepare and respond to this new health emergency. GCC Arab States, including Kuwait and Saudi Arabia, have implemented large-scale PHSM including movement restrictions, closure of schools, universities and businesses, geographic quarantine and international travel restrictions (lockdown measures). Whilst the social and economic impact of such measures remains under investigation, concerns about individuals' mental health and well-being are growing. However, among all the uncertainties, a balance must be struck between adhering to public health officials' advice and recommendations to combat the virulent virus and preserving individuals’ physical and mental health.

People’s lives have been significantly altered in the wake of COVID-19, and students and academic staff in higher education are among those affected by social restrictions, mainly social distancing and self-isolation. Students and academics engaging in remote learning and teaching during COVID-19 closures may cause or exacerbate negative psychological effects related to feelings of isolation, anxiety, stress, insomnia, confusion, boredom and anger fueled by the uncertainties surrounding the virus. Only in March, it was estimated one in five people around the world is living under some form of lockdown, scientists describe this as the largest psychological experiment ever conducted.

Within the realm of higher education, institutions are challenged with how to mitigate risks and factors leading to or exacerbating mental health issues and well-being of students and staff during COVID-19. In a collaborative
effort to address this issue, at Mohammed Al-Mana College for Medical Sciences (MACHs), an activity aimed to restore/maintain social connection among students and with academics was piloted. Located in the Eastern Province of Saudi Arabia, MACHs is an educational host for over 1250 students across bachelor programs in pharmacy, nursing, clinical laboratory sciences, physical therapy and respiratory care and over 100 faculty members. An “Online Coffee Break” (OCB) initiative was trialed at MACHs during the Spring academic semester to virtually bring students together for casual and informative sessions. The new activity was campaigned and delivered by the Department of Student Affairs and in collaboration with the college’s social counselor. In its development, “Social distancing is not social isolation” became the underlying theme and overall driving purpose of these interactive sessions. The majority of sessions were designed for and delivered to students. During planning for the OCB sessions, various topics were researched, summarized and presented in an interactive fashion over 2-hour online meetings. Attendees were encouraged to participate in various discussions to express concerns and share experiences to help them cope, both physically and mentally, during lockdown. In an attempt to provide general supportive advice, topics such as time management, coping with stress during online assessments and ways to self-motivation to achieve academic goals were explored. Moderators of the OCB sessions conducted surveys (results pending) to explore students’ opinions and overall satisfaction with these virtual meetings and gain insight on ways to improve and promote such an activity for the future. The results from the surveys may prompt a need to formulate recommendations and policies that will specifically address mental health and well-being among students and academics.

A similar initiative is the “Virtual Recharge Hour” held at Kuwait University. Prior to COVID-19, the “Recharge hour” was organized for academic staff in “face-to-face” sessions. The aim of these casual but structured sessions was for teaching faculty to share their teaching innovations to enhance student engagement, use of innovative tools in course design and assessment to keep the teaching community connected. In April 2020, these sessions were transformed to virtual meetings to provide the peer-support deemed necessary to face the challenges and disruptions caused by the COVID-19 pandemic. This innovative initiative started a community of practice that is most needed in these times of uncertainty.

Academic leaders must play a proactive role in mitigating mental health effects among students, and initiatives like the ones described above can help to explore such concepts considered vital during and post the era of COVID-19.

1.2 Higher education transition to online education

COVID-19 has led many higher education institutions to a sudden pause leaving many in a position of not foreseeing the continuity of their education presently. Countries that transitioned to online learning, compared to other countries, had past experiences of applying online learning due to having a good infrastructure for such a transition, along with past experience with online learning that may be due to other emergencies as in natural disasters or political instability. This is whilst in other countries the transition to online education was implemented as a strategy of “Emergency Remote teaching” (ERT) due to the global crises of COVID-19 and contingency of when they will resume face-to-face learning on campus.

In Kuwait, higher education institutions diverted to different paths. While the private higher education institutions received approval from the Kuwait Ministry of Education to transition their education to online platforms to resume the Spring semester. The public higher education institutions on the other hand, have postponed the Spring semester to be continued in August of 2020. One prominent reason for the public institutions’ reluctance to transition to online learning is due to the regulations with accreditation of online learning, along with the shortage of time frame to accommodate such a transition. Furthermore, the stigma that accompanies the concept of “online learning” as an inferior method of higher education teaching is a valid reason why some academia professionals and stakeholders are cautious in transitioning to E-learning. Despite the fact that a recent research article states that these perceptions (i.e., online learning stigma) are not accurate.
A recent study by Basilaia and Kvavadze on the transition to online education during COVID-19 shows that this pandemic crisis has encouraged many institutions and countries to change their regulations and place new laws to ensure that the transition to other learning methodologies during times of crisis is possible in order to prepare the population as whole. As transitioning online may seem the most effective strategy at these times of crisis, there may be concerns regarding such transition in higher education across all majors. Kuwait University has acquired subscriptions to high-quality online learning platforms such as BlackboardUltra and Microsoft Office365 for a number of years now, and many faculty members have been utilizing these platforms in conjunction with their conventional teaching. However, a full transition to online learning in a time of crisis does not signify merely transferring course materials to an online platform, it requires proper design and preparation including training faculty to familiarize them with the technical issues and expectations when tackling E-learning platforms in addition to effective practices in communicating with their students and vice versa. Also, there may be students who do not have the right technology, such as hardware and limited access to a network to utilize online resources, especially at times when mobility is restricted such as a lockdown in their region. These challenges are apparent in a lot of institutions that have not practiced "online learning" on a grand scale prior to this crisis.

In order to support higher education institutions toward their response to COVID-19, an acclimatization of ERT must be implemented. According to Hodges et al., "ERT is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances" and that is by providing a set-up that can transfer instruction and materials online in an efficient manner that supports the continuation of learning during a crisis or an emergency. Its goal is to provide solutions for transitioning face-to-face learning to online mode until the eradication of the crisis or emergency takes place. Prior to transitioning to ERT, it is critical to provide support to both students and faculty members to benefit from the designed training sessions which will result in better online learning experience. An extensive training program aids faculty to utilize their newly acquired competencies to plan, manage, instruct, deliver content, as well as assess student's performance. This will ensure more effective outcomes.

For institutions that have no prior experience in providing online learning, ERT may be the effective solution in the time being until face-to-face learning resumes. Many universities around the world are taking the step to move to ERT during COVID-19 while utilizing the types of resources available to them in that regard. The move to ERT should be considered temporary for the current situation and should not be mistaken for a long-term online learning solution. Notwithstanding, online learning has an advantage as it gives students a global access to their education regardless of their location without any disruptions. The continuation of learning will minimize the impact of this COVID-19 crisis on higher education particularly on the student population. As it will provide them with an opportunity to be engaged, be productive from their homes and spend valuable time on their education.

1.3 Healthcare sciences

There is no doubt that at times of crisis, a well-planned multidisciplinary approach has to be taken. Healthcare faculty may help in drug development and virology expertise, some may assist in health promotion activities, medical information interpretation, leadership and management skills. In addition, higher education institutes are the source of new ideas and discoveries. They are responsible for advancing and disseminating knowledge and developing informed and able citizens. Academics could be at the forefront of interpreting scientific data to the public and play a vital role in public health promotion. Article dissemination in times of crisis can be a double-edged sword. Studies published instantly reach the public and have direct effects on drug availability and handling – to take in to account the recent example of the "hydroxychloroquine" study. Six million doses of hydroxychloroquine were consequently donated to the USA by Drug company Teva despite lack of evidence. People started hoarding the drug which caused lack of stock for people who really needed it - those with autoimmune disorders such as rheumatoid arthritis and malaria.

Medical schools in the USA have played a role in the development of worldwide case trackers and opening up their research labs to assist governments in releasing test results. One of the most popular case trackers has come
from Johns Hopkins University’s Center for Systems Science and Engineering, which was modeled from a previous dashboard created to track measles risk in the USA. Some colleges are working on mapping proteins to interrupt the replication process of the virus. Virology experts are partnering with the industry to develop vaccines. In Kuwait, a key focus has been on supporting the mental health of all those staff in the front lines, including healthcare professionals, police, military, aviation staff and volunteers. An app called "Tenweem" was initiated by a professor of psychology in Kuwait that allows subscribers to listen to professionally guided programs that help them with overcoming anxiety, fear and panic attacks. Additionally, a group of psychiatrists (many from academia) have collaborated to provide free sessions at @coronacarekw, a national initiative to provide virtual psychological assistance and guidance to front-liners, COVID-19 patients, as well as those under quarantine.

1.4 | Engineering, architecture and design

With global challenges and frustration about the shortage of personal protective equipment (PPE) for healthcare workers worldwide,20 engineering schools have reached out to medical schools to help in the development of PPE. In Kuwait, the Kuwait Society of Engineers, consisting of engineers in the field as well as academics from the College of Engineering and the College of Architecture, have started an initiative to design and execute face shields for the general public and healthcare professionals.

A few faculty members from the College of Architecture in Kuwait have also participated in international platforms, such as contributing to the London School of Economics blog21 and MIT webinars, to tackle issues related to the use of public space in Kuwait post-COVID-19. Faculty members at the Design Department within the College of Architecture have proven to be active members in bridging the gap between the public and academia. They have created activities and challenges for the public, an example from Kuwait being the "@beyondthequarantine" Instagram account, which invites people to engage with the current situation creatively. Other faculty members also reached out as volunteers in Visual Campaigns to promote public awareness. Many Design Faculty members appeared on live sessions through social media platforms to support the children and the youth to use their lockdown time creatively in their homes.

Moreover, there were multiple social media initiatives to encourage the general public to use quarantine as an opportunity to channel one’s creativity through art an example being @artstudioskwt and many others (@nafas.kw an alternative and holistic health service, @yadawicrafts an arts and crafts facility with supplies and workshops, and @Lapaloyac an academy for Performing Arts).

1.5 | Business administration

Business has halted worldwide. The pandemic has had a negative effect on nearly every sector in the market. Government interventions in passing stimulus packages and bailouts are necessary to achieve economic growth following this certain recessionary period the world is experiencing. In GCC countries, governments have passed stimulus packages worth a total of hundreds of billions of dollars directed toward supporting small and medium enterprises as well as private sector jobs,22 dwarfing any other measures previously seen in this region. Academics in all fields of business are at the forefront of assessing the damage in the economy as a result of the pandemic and also suggesting potential solutions as to the size of the much-needed stimuli. All businesses, both small and large, have felt the negative effects of the virus in their daily operations.

Oil prices have plunged as a result of this pandemic.23 Countries in the GCC are more exposed to these price drops, and most are facing historic deficits never seen before in the region. Academic scholars and business leaders in the region have been at the forefront of presenting proposals and studies urging governments to move away from their total dependence on oil to other sources of revenues to build more sustainable economies.
Moreover, academic business scholars in Kuwait have been leading the charge on assessing the damage and proposing solutions to the problems via participation in international webinars, presentations, TV interviews, podcasts, newspaper articles and social media not only to explain the economic effects but also to propose ideas and solutions on how to overcome this crisis.

In the west, the UK Government relied on “nudge” theories popularized by University of Chicago professor Richard Thaler, a behavioral economist, in their response to fight COVID-19. Nobel prize winning University of New York economist Paul Romer outlined plans for the US government to help reopening much of the economy by mass testing around 30 million tests daily. Business academics worldwide play a key role in studying the cost-benefit analysis of the pandemic that seeks a balance between the public health perspective of minimizing human loss whatever the economic cost, and the economic perspective that try to minimize the effect these measures will have on the economy. Columbia School of Business professor Frank Lichtenberg, an expert on the pharmaceutical industry, estimates the value of a vaccine could reach into the trillions of dollars, relating the health benefits of a vaccine to its impact on economic activity and GDP.

Leveraging business and statistical models to help evaluate the cost of the response and optimizing the expenditure on the sectors that need it most is at the core of business research. Evidence-based economic and financial policies are also required to aid decision makers in the recovery post-COVID-19.

In conclusion, this pandemic has shown us that the world is smaller than we think and that we as academics work better when we work together. Although this is a global healthcare crisis, the burden is not only on medical schools to fight this virus but also on all disciplines to integrate their work, away from their usual silos, and look for solutions. Universities should be collaborating worldwide to share ways to adapt and re-shape educational systems under these exceptional circumstances. More importantly, universities need to learn from the current pandemic by developing management strategies for quick responses to future natural, biological or economic crises.

CONFLICT OF INTEREST

The authors have no competing interests.

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