Navigating COVID-19 Pandemic and Building Resilience: A Case Study of Al-Furat Al-Awsat Technical University ATU

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Article Info

Abstract. The COVID-19 pandemic has created the largest disruption of education systems and, in particular, the higher education system in human history. Social distancing and restrictive movement policies have significantly disturbed traditional educational practices. Indeed, such disruption will not be the last to impact the continuity of higher education has led to an interest in the concept of institutional resilience. Also, returning to the original operation state of universities campuses after relaxation of restriction is another challenge with many new standard operating procedures. Like almost all other academic institutions, Al-Furat Al-Awsat Technical university ATU provides people with professional and personal skills and capabilities. ATU has access to a remarkable number of young and curious people who are passionate, creative, and desire a better world. ATU, therefore, needs to ensure equipping current and future leaders, decision-makers, teachers, and innovators with the knowledge, skills, and motivation towards facing such unpredictable challenges. The current article highlights in-depth five steps undertaken by ATU university's leader to improve the university's complicated infrastructure systems to building resilience and withstanding current and futuristic distributions.

 Keyword:

ATU-resilience, ATU- infrastructure, COVID-19 Pandemic.

1. Introduction

In December 2019, COVID-19 was firstly identified in Wuhan, China. Since then, the outbreak of the virus has spread worldwide, affecting almost all countries. Thus many countries around the globe have imposed what is usually known as responsive care strategies, which include handwashing, face masks wearing, and social distancing. Actions also include cities lockdown and staying home orders aiming to control and eliminate the transmission of the virus [1]

It is well known that higher education institutions are highly vulnerable to community transmission of the COVID-19 virus. In this respect, all universities suspended face-to-face academic activities, implementing alternative teaching methods such as online delivery methodology. Indeed, switching to online delivery is not a new concept as during the H1N1 Influenza virus in 2009, many universities have switched to online delivery [2]. Also, after Hurricane Katrina's landfall in August 2005, a consortium of 153 colleges and universities reacted quickly to switch to online delivery, thereby offering an online catalog of more than 1300 courses [3]. Navigating the COVID-19 pandemic, higher education serves a critical role in society, benefiting both individuals and communities by strengthening knowledge, ensuring the employability of the labor force, and contributing to sustainable development goals. Therefore, it is crucial to maintain academic continuity despite the implemented delivery methods.

Educational institutions have to respond to a crisis and continue to provide continuous services through adaptation and adjustment. In this respect, university resilience often refers to how an academic institution can return quickly to the normal educational conditions after facing disruption. It would be the key role of survival of any higher education system. Indeed, there are insufficient researches in the literature on resilience in higher education in the context of COVID-19. Therefore, the current research article adopts a case study of Al-Furat Al-Awsat Technical University (ATU), a young technical public university based in Al-Najaf City – Iraq. Like other Iraqi higher education institutions, ATU had experienced the transition from face-to-face to online curriculum delivery since January 2020, when COVID-19 became a threat to the general public in Iraq. Despite those challenges raised by the COVID-19 pandemic, focusing on the university infrastructure, the current study highlights the five important steps undertaken by ATU's leader that aid ATU university to make the necessary changes and reconsider its vital roles and responsibilities in society.

2. Planning for Various Scenarious

The COVID-19 pandemic has provided us with an opportunity to pave the way for thinking about various scenarios of interruptions to normal campus operations at all different times during the academic year. It seems worthy to mention that all Iraqi universities, including public and private one, are governed by rules and instructions issued by the Iraqi Ministry of Higher Education and Scientific Research. Thus, decisions of reopening and/or return-to-normal procedures, including partial or incremental operations, may have a concise time frame. In this respect, ATU has established a Special Committee from the deans of scientific faculties lead by the Vise chancellor for management and administrative affairs. The main responsibilities of this committee are to interpret, facilitate and apply such ministerial orders and report back to the university chancellor the readiness of their scientific faculties, which ultimately inform the decision-makers in the ministry.

Figure 1. ATU's Speciel Committee, March 2020

3. Building an Emergency Reserves Fund

Establishing certain types of university infrastructure to accommodate sudden educational interruptions would differently require pre-reserved budgets. Before the COVID-19 pandemic, most universities did not plan for such a crisis since it started in one city and dramatically advanced to the rest of the world in almost no time. Such accelerated spread of the virus has effectively shortened the university's leaders and decision makers' time to think and prepare. In this respect and since March 2020, ATU Set a goal of achieving an emergency – reserved fund based on its annual income and expenditures. Figure (2) below displays the ATU's contingency reserved funds during the 2020-21 academic years. Based on the figure below, ATU should currently have around 122 million IQ dinar as an emergency reserved fund.
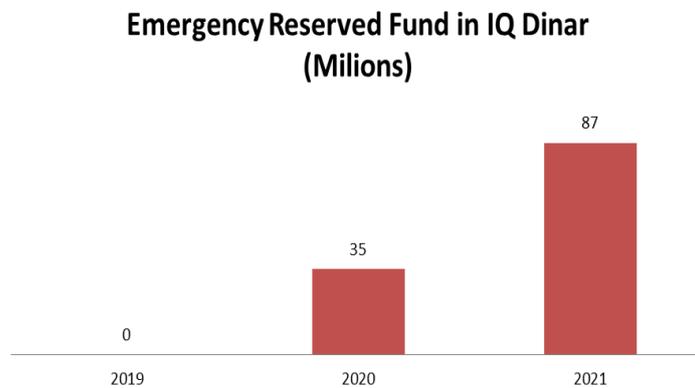
Emergency Reserved Fund in IQ Dinar (Milions)

Figure 2. ATU's Contingency Reserved Funds During 2020-21 Academic Years.

4. Establishing Emergency Contingency Plans

Contingency planning is the tool to anticipate and solve problems that typically arise in humanitarian response. It simply includes analyzing potential emergencies, analyzing the potential impact, establishing clear objects & strategies, and implementing preparedness actions. Since February 2020, ATU's high Chencellory Board started developing emergency contingency plans, at which point the responsibility was then passed to the newly formed special committee (refer to point 2 above). The established plans start from the main chancellory site, down to scientific facilities, colleges and institutes, scientific departments, and at scientific labs and employee groups. Such plans are annually reviewed and updated by the special committee for completeness, consistency, continuity assurance, and mutual compatibility, making recommendations for any needed changes. For instance, plans may address lab shutdowns, storage or disposal of volatile or hazardous substances, securing facilities, decisions about laboratory animals, interruptions to clinical trials, and establishing a critical personnel list for operations that must be continued during a shutdown. Other plans include fire control and management plan, evacuation plan, risk management plan, emergency response plan, event emergency management plan, etc.

5. Developing the IT Infrastructure of the University

E-learning tools have played a crucial role during this pandemic, helping universities facilitate student learning during the closure of universities [1]. While adapting to the new changes, staff and student readiness needs to be gauged and supported accordingly. Thus, developing the IT infrastructure of universities becomes crucial in maintaining academic continuity and fulfill their missions during the COVID-19 pandemic. In this respect, ATU took severe actions towards improving its existed IT infrastructure. The actions started with upgrading its contract with the internet provider company that double the download – upload speed. The advanced contract provides free internet services for all staff and students within the campuses. It also provides free internet access for students who cannot afford to purchase it through free pre-paid internet vouchers. ATU also allows students from poor families to borrow laptops, tabs, and smartphones to attend online lectures and exams.

In addition, ATU installed Interactive Smart Light-Boards in all its five different sites, colleges, and institutes and made them available for lectures and professors to teach and pre-recording their lectures. Figure (3) below shows the 1st ATU light board studio, firstly established in the main chancellery site.

Figure 3. ATU's 1st Lightboard Studio.

Some of the online platforms used so far include unified communication and collaboration platforms such as Microsoft Teams, Google Classroom, Canvas and Blackboard, which allow the teachers to create educational courses, training and skill development programs [4]. They include options of workplace chat, video meeting and file storage that keep classes organized and easy to work. They usually support the sharing of a variety of content like Word, PDF, Excel file, audio, videos and many more. These also allow the tracking of student learning and assessment by using quizzes and the rubric-based assessment of submitted assignments.

In study sectors such as chemistry, physics, engineering, biology, computing, psychology, languages, nursing, medicine, and other allied professions, program outcomes stress the importance of developing theoretical (content) and practical (processes) aspects. When developing the practical aspects, special emphasis is given to the activities that teach students experimental methods, how to synthesis observations, a range of lifelong and communication skills and laboratory practices.

In the majority of studies described in the previous section, laboratory classes are performed in the real laboratory setups that would not be practical during a pandemic like COVID-19. However, virtual labs, remote control labs or video-based labs are good choices when students are not physically located on campus [5]. In this respect, ATU emphasis on using virtual labs and simulation tools during the full lockdown period. In fact, remote laboratories allow students to undertake different experiments through the internet, whereas video-based activities provide a step-by-step overview of a real lab so that students can visualize the whole experimental process and its environment through a video. However, after the restrictions eased the dual teaching technique had been implemented. Such technique allows physical presence of students during the practical part of their study programs while online delivery remained for the theatrical lectures only. In this respect, ATU divided students in groups maintaining social distance and health precautions during the experiments. However, for extra precaution ATU has emphasis on that all staff and students should have the priority for obtaining COVID-19 Vaccination. It seems worthy to mention

that from 1 October 2021, no unvaccinated staff or students are allowed to inside the university campuses.

6. Recognizing and Planning for the Mental Health Needs of Returning Students, Faculty and Staff

As less face-to-face interaction has been actively encouraged which poses a risk to students who may find it too easy to become even more disengaged with their peers and networks [6]. Thus many students at home/living space have undergone psychological and emotional distress and have been unable to engage productively [7]. Staff and students' mental health is a crucial factor in education continuity in any academic institution. Mental health issues may range from anxiety to stress over job security to post-traumatic stress disorder to grief over the loss of loved ones [8]. Since its formation in March 2020, the special committee planned to staff and students returning to ATU campuses.

The committee ensured that their proposed plan considered different scenarios and each group's needs at which point it was robust enough to handle them. It included many projects such as establishing new and renovating the existed in campus sports stadiums, student's accommodation buildings, and their related facilities, bicycle stations, and in-campus media-radio stations. Such projects aim to destress students and staff as well as encourage them to have a new healthy-life style. They also promote social interaction between different groups.

Aiming to improve the staff and students health and wellness, ATU prepared series of workshops that educate people on attaining healthy diets as it could boost their mood and energy level, improved memory and achieved better brain function. Diets containing vegetables, fruit and whole grains have been linked to in a symptoms of depression and fatigue. ATU carried out programs that encourage students and staff to be active and having regular exercise such as walking, jogging, swimming and cycling as shown in figure (4) below. Such physical activities has been proven to reduce symptoms of anxiety and depression, and improve mood and blood circulation. Other programs aim to divide students to groups according to their preferred hobbies at which point ATU university encourages them to engage in.

Figure 4. ATU's Staff & Students Engaged in the cycling Activity

7. Conclusion

Worldwide, COVID-19 Pandemic is causing dramatic disruption in the higher education system, forcing almost all academic intuitions to halt face-to-face delivery techniques and switch to online delivery methods. In fact, reopening and/or return-to-normal procedures, including partial or incremental operations, may become a challenging practice for many academic institutions. In this respect, the current study emphasis five important steps established and implemented by Al-Furat Al-Awsat Technical University's leadership which believes it could help other universities to overcome such uncertainties. These include advanced planning, locating reserved emergency funds, building emergency plans, developing the university's IT infrastructure, and improving staff and students' mental health.

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