

2021

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### Recommended Citation

Yaseen M. Al-Rawi, Osama; Subhi Al-Dayyeni, Wisam; and Reda, Ibrahim (2021) "COVID-19 Impact on Education and Work in the Kingdom of Bahrain: Survey Study," *Information Sciences Letters*: Vol. 10 : Iss. 3 , Article 5.

Available at: <https://digitalcommons.aaru.edu.jo/isl/vol10/iss3/5>

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# COVID-19 Impact on Education and Work in the Kingdom of Bahrain: Survey Study

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Received: 21 Apr. 2021, Revised: 22 May 2021, Accepted: 24 Jun. 2021.

Published online: 1 Sep. 2021.

**Abstract:** The Coronavirus (COVID-19) pandemic has disrupted teaching and work in the entire world. The COVID-19 reshaped the management of education and work leading to a rethinking of new approaches in the education system or the business environment. A lot of studies and reports were published over the world analyzing and discussing the current situation and looking for solutions and alternatives to overcome this crisis. This paper discusses the impact of the COVID-19 pandemic in education and work environments in the Kingdom of Bahrain using the survey method. Also, it reviewed the precautionary measures that were taken by the Kingdom to confront this dangerous pandemic. In addition, it discussed the use of digital tools and technology, which will help to overcome the problems initiated during the pandemic. An online survey was performed by distributing 12 research questions to different people in the Kingdom of Bahrain. 210 answered the questionnaire, and the data were analyzed with statistical software. Overall findings of this study indicated that the online learning transition in the Kingdom of Bahrain was successful because most of the respondents agreed with the use of online learning. Moreover, the respondents who had jobs revealed that COVID-19 affected their work.

**Keywords:** e-learning, COVID-19 pandemic, Bahrain precautionary measures, online learning, and using digital tools and technology.

## 1 Introduction

The world has lived with a big crisis associated with the Coronavirus (COVID-19) pandemic since the beginning of 2020. This virus has dramatically changed the landscape of the higher education system in the entire world. However, this was not the first time when traditional education was suspended. SARS coronavirus (SARS-CoV) also negatively impacted the education activities of many countries around the world. Also, the H1N1 Flu outbreak also negatively impacted education activities in 2009 [1]. The COVID-19 caused schools and universities across the world to be closed so the students can follow social distancing [2]. The lockdowns worldwide as a response to COVID-19 have disrupted traditional schooling and caused a tremendous impact on students, instructors, and educational organizations [3]. To continue the teaching process during the pandemic, educational institutions in most of the countries around the world decided to use Electronic Learning (e-learning) for the students of all academic fields [4]. Most of the

countries have issued new regulations on the learning method at every stage of education.

The COVID-19 crisis caused several countries in the world to close off their educational institutions. About 1.5 billion students (87.6% of the overall enrolled learners) across the globe became out of school because of the closure [5]. A number of researchers studied the education process during the COVID-19 pandemic period. In [6], discussed the top Chinese universities' response to the COVID-19 outbreak. It mentioned that Zhejiang University (ZJU), which has seven sites in Zhejiang province, has joined what might be one of the largest remote learning experiments in the world. The Zhejiang University offered more than 5,000 courses to both undergraduate and graduate students. In [7], shared strategies, steps, and resources to encourage middle grades teachers to continue the online teaching. Also, the authors offered approaches to implementing differentiation, collaboration, and approaches for authentically evaluating students in online learning.

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The Kingdom of Bahrain did not impose a lockdown because of the presence of large numbers of expatriate employees from different nationalities and cultures. However, other strict measures were taken to control the spread of the COVID-19 [8]. The Kingdom of Bahrain has issued electronic bracelets to track its active cases of COVID-19 [5]. Similar to the other countries in the world, in the Kingdom of Bahrain, higher education institutions have been affected by the spread of COVID-19, so that Universities switch to online teaching and learning systems after the closure of the educational institutions on 25<sup>th</sup> Feb 2020. However, the COVID-19 pandemic had a positive influence on the higher education sector in the Kingdom of Bahrain because students chosen to pursue higher education inside the country instead of studying abroad [9]. In the Kingdom of Bahrain, several applications of artificial intelligence and technologies were used during the COVID-19 crisis in the education system [10].

Online learning has become the panacea for the teachers and the students during the COVID-19 outbreak. However, today the blended learning can be considered to be more effective and popular [11]. Blended learning includes the blend of face-to-face (normal learning) and technology-based (online learning) [12]. Blended learning can increase the interaction between the students and the teacher, and reduce the online transactional distance [11]. The education institutions in Bahrain were planning to transfer to blended learning at the beginning of the academic year 2020-2021, especially the private institutions.

In addition to the impacts of COVID-19 on education across the globe, COVID-19 has also disrupted work and businesses all over the world. The decisions that followed the spread of the Covid-19 pandemic had a severe impact on the labour market, particularly the closures associated with disruption of business and the almost complete disruption of passenger traffic, as well as the closure of schools, the shift from traditional to distance learning, and cancelled all related activities, all of which had a negative impact on the work situation.

In this regard, the report of the International Labour Organization (ILO) indicated that the partial closure decisions issued by the countries of the world have affected almost 2.7 billion workers out of 3.3 billion representing the total workforce in the world, this means that the proportion is close to 82% of the world's workforce affected negatively by the effects of the 6.7%, as for the final outcome, of employee job losses for the year 2020 is unpredictable and can only emerge by the end of 2020 as this depends entirely on developments in this serious pandemic, but in any case the report considered the crisis generated by the pandemic to be the worst crisis the world has ever experienced since the Second World War crisis [13].

The Kingdom of Bahrain was one of the first countries in the Arabian Gulf region to take measures that would slow the spread of the virus, which include subjecting those coming from abroad to home quarantine for 14 days and initiating medical and other examinations, but what concerns us is those actions and decisions concerning the partial closure that led to shifts in working methods, which directly affected sectors of the labour market such as manufacturing, small-scale traders, leisure, transport and other sectors.

## 2 Objectives of the Study

This study aims to obtain the answers to the following questions:

1. What are the early precautionary measures in the kingdom of Bahrain towards the COVID-19 pandemic?
2. What is the status of education in the kingdom of Bahrain during the COVID-19 crisis?
3. How does the technology employed in the kingdom of Bahrain to face the crisis?
4. What is the role of the electronic government system to control and manage the education/work during COVID-19?
5. What are the challenges of the education transformation in the kingdom of Bahrain from online to blended learning in the next stage (future work)?

To answer these questions, this study adopted the descriptive research approach by using the survey method. The answers from the respondents will give us the results. The importance of this study comes from the fact that it gives a clear idea about the status of education and working conditions in the kingdom of Bahrain during the COVID-19 crisis. Also, the use of technological systems and precautionary measures were taken in the kingdom of Bahrain during the crisis. To achieve the goal of this study, a set of questions were used in the survey and they presented the research tool. This survey was performed on a group of Bahraini people in the community. They were selected randomly to achieve the goal of this study.

## 3 Methods

The questionnaire was accessed online from February 1, 2021, to February 19, 2021. In this research, the questionnaire of this survey was developed by the authors for this study. A survey technique was used to gather data from the community in the kingdom of Bahrain regarding the previous online teaching and the current blended learning to see the response of the community. Different social media applications were used to distribute the research questions of this survey. The data were analysed with the Microsoft Excel software application.

## 4 Bahrain Measures and Technological Capabilities

Several countries around the world, including the kingdom of Bahrain, have technological capabilities and advanced infrastructure supported by telecommunications and information networks supported by the staff with the technical capabilities and expertise necessary for such a critical phase. Gulf Cooperation Council (GCC) countries are an important strategic region with extensive experience in crisis management. The coronavirus crisis that swept the world in a few weeks has posed a more serious challenge to the Gulf States than others [8].

There are many digital applications used by educational institutions in the kingdom of Bahrain, such as “ClassDojo”, “MS TEAMS” and “ZOOM”. In addition, the e-learning platform is available in higher education institutions, such as “MOODLE”, “BLACK BOARD” and others. However, the process of online transition was smooth in all institutions in the kingdom of Bahrain because most of the organizations are reviewed and accredited by the Higher Education Council (HEC) and Education and Training Quality Authority (BQA) in Bahrain. This means that these institutions had a clear policy, procedures, good infrastructures learning resources, e-learning systems and other facilities and services.

It was essential to take significant measures to control the COVID-19 spread in the kingdom of Bahrain through several actions. For example, two important mobile applications were used by Bahrain people/community. The first mobile application “BeAware Bahrain” which is a remote electronic monitoring application [8]. It allows the concerned authorities to follow the cases of home quarantine remotely and track the movements of persons or cases under the compulsory home quarantine. Currently, it controls and manages the process of vaccine for the people in Bahrain. The second mobile application is “SkipLino”. It was used in all Bahrain institutions, to control the presence of auditors from citizens and residents in the kingdom during the conduct of their transactions in various ministries. This application can help to ensure the presence of a limited number of

auditors/people to avoid congestion and ensure protective distances until they complete their transactions. In addition to the ideal organization and speed of conducting transactions, this application allows pre-booking of reviewers so that it controls the number of reviewers and distributes them according to working hours. This application has proven to be effective, as employees or auditors, and has been accepted by everyone and it may continue to be used even after the crisis. Moreover, Infrared thermal cameras have also been used in some important and crowded places such as airports, hospitals, etc. to measure the temperature remotely. These cameras can perform remote examinations of up to 200 people per minute. Finally, the presence and development of the Bahrain electronic government help to reduce the difficulties and made the online transition process very smooth to overcome the crises [10].

## 5 Results and Analysis

This survey study has 12 Research Questions (RQ) related to the education and work in the kingdom of Bahrain during the COVID-19 crisis. A total of 210 participants from the community responded to the online survey.

### 5.1 RQ1 to RQ3: Characteristics of Respondents

In this part of the survey, the respondents were questioned to register their demographic details (age, gender, and residency status). Among the 210 participants, 95 (45.24%) were males and 115 (54.76%) were females. For the residency status, 122 (58.10%) were Bahraini citizens, 67 (31.90%) were residents, and 21 (10%) were visitors. The age of the participants was 18 and above. 129 (61.43%) were 18 – 30, 56 (26.67%) were 31 – 50, and the rest 25 (11.90%) were above 51. Fig.1 shows the demographic details of the participants in this survey study.

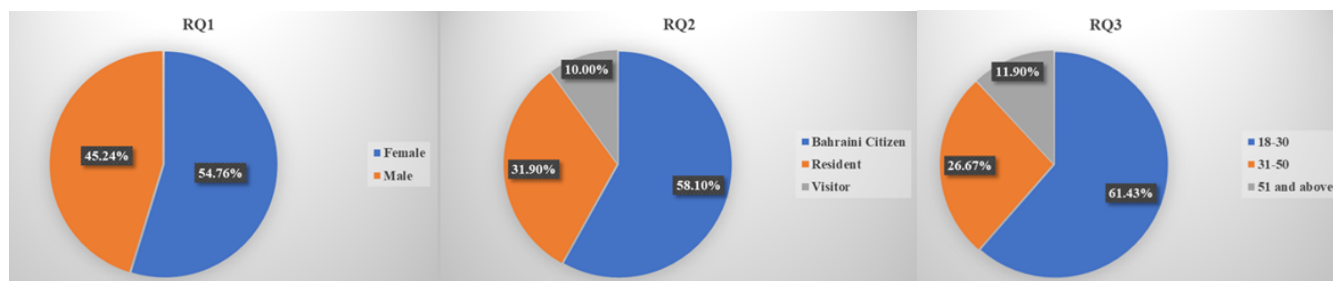


Fig.1: RQ1 to RQ3: Characteristics of respondents.

### 5.2 RQ4: Do you have a job?

A total of 105 (50%) respondents answered that they have a job, 44 (20.95%) respondents answered that they do not have a job, 14 (6.67%) respondents were retired, and the rest 47 (22.38%) were students. Fig.2 shows the job status of the participants in this study. This means that the questionnaire covered all segments of society in the kingdom of Bahrain.

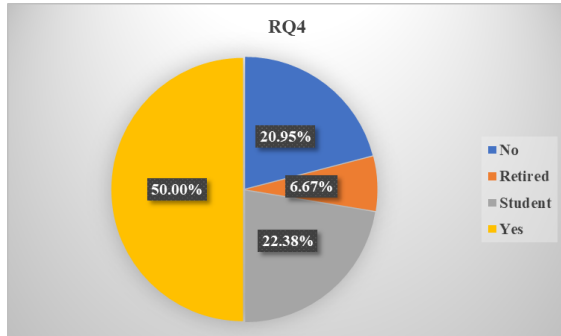


Fig.2: RQ4: Do you have a job?

### 5.3 RQ5: Did Covid-19 affect your work or study performance?

This research question will cover the impact of the COVID-19 on work or study performance. A total of 95 (45.24%) responded that they were affected by the COVID-19, 59 (28.09%) responded that they were affected somehow, and the rest 56 (26.67%) were not affected. These results were influenced by the nature of the work, where sometimes they have to go work on sites and/or work from home. However, most of the people who work/study in Bahrain were affected due to the sudden spread of the COVID-19 pandemic. The Kingdom of Bahrain did not impose a lockdown, but instead took other strict measures to contain the spread of the COVID-19. Therefore, the government of Bahrain has provided material support to needy families and has paid electricity vouchers for all citizens and residents for the first three months since the start of the pandemic. The answers distribution of RQ5 is shown in Fig.3.

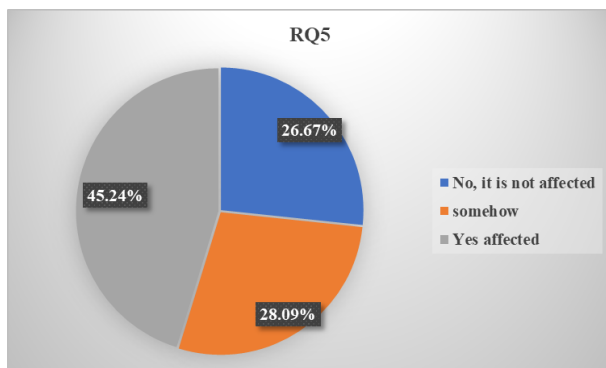


Fig.3: RQ5: Did Covid-19 affect your work or study performance?

### 5.4 RQ6: What is your study/job status after the pandemic?

For this survey question which is about the status of the study/work, it can be seen that the most common response from the participants was that online status 117 (55.72%). 33(15.71%) responded that they were studying /working physically. The rest 60 (28.57%), were studying/working physically and attend online classes as well. Fig.4 shows the distribution of the answers for the RQ6. In the kingdom of Bahrain, all the public/private schools and universities switched to online learning. However, only 30% of the academic and admin staff required to be on campus physically as a maximum percentage for attendance [14]. In some private institutions, students can attend some classes physically, especially the practical ones, and the rest of the classes online, taking into consideration precautionary measures. However, the physical attendance of the students is considered optional and there should be an approval by the parents.

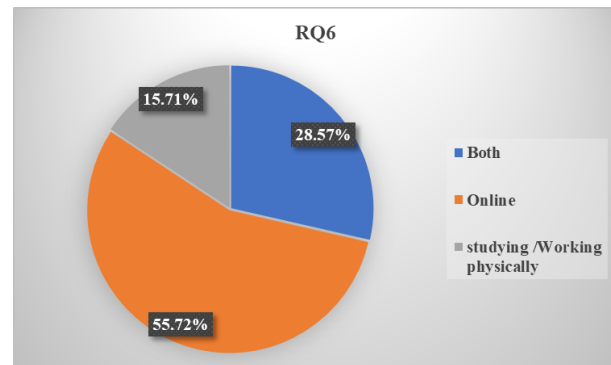


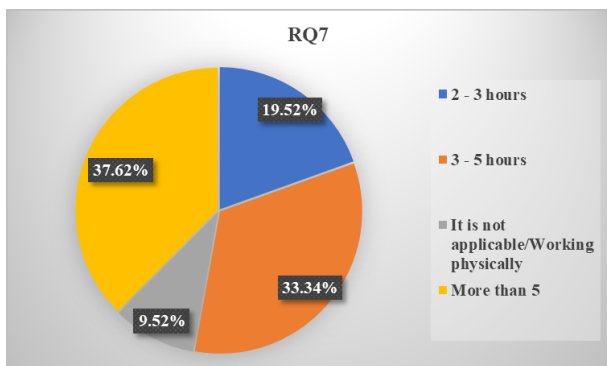
Fig.4:RQ6: What is your study/job status after the pandemic?

### 5.5 RQ7: How many hours per day do you spend in distance education/work?

This RQ is related to the average time spent on distance learning/working. It is connected to the one in the previous section (i.e., what is your study/job status after the pandemic?) because it can give more details about the timing used for distance education/work. The results for the RQ7 showed that 41 (19.52%) responded that they spend 2-3 hours, 70 (33.34%) responded that they spend 3-5 hours, 79 (37.62%) responded with more than 5 hours, and the rest 20 (9.52%) responded that they are working physically so they do not use distance way. If we divided the results in this section into two parts (the participants who use online education/work and the participants who do not), one can see that the percentage of the participants who use online 190 (90.48%) is much higher than the others who do not use online 20 (9.52%). The results in this section show the impact of the COVID-19 on the transformation to the



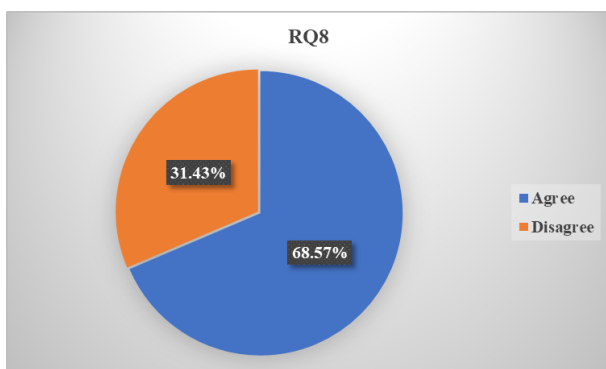
online way in the Kingdom of Bahrain as measures that would slow the spread of the virus. Fig.5 shows the results of RQ7 in this study.



**Fig.5:** RQ7: How many hours per day do you spend in distance education/work?

*5.6 RQ8: Do you agree the continuation of your online work or distance learning in the various sectors after the end of the pandemic and you see it does not affect the quality of work or teaching? Mention the reason if not.*

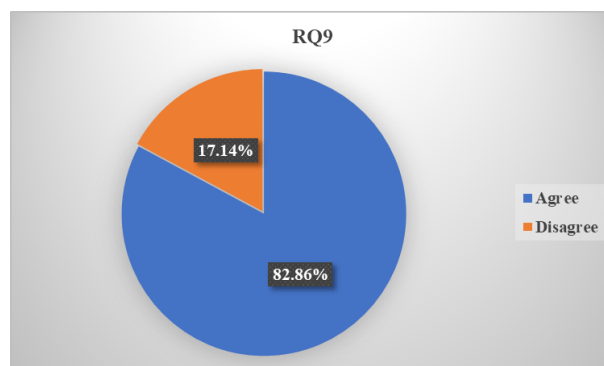
The most frequent benefits of online work or distance learning are the ability to stay at home. 144 (68.57%) participants agreed on remote work or e-learning, while the rest 66 (31.43%) did not agree on that. There were several reasons mentioned by the participants who disagreed on online work or distance learning. Some of the main reasons were: lack of interaction with the teachers, cannot implement the online teaching on practical lectures, it is challenging to make everyone active and see their body language, it can affect the quality of education, many students cannot understand the lecture well unless its face-to-face. Fig.6 shows the percentage of agreement and disagreement on online work or distance learning of the participants in this study.



**Fig.6:** RQ8: Do you agree the continuation of your online work or distance learning in the various sectors after the end of the pandemic and you see it does not affect the quality of work or teaching? Mention the reason if not.

*5.7 RQ9: With the current crisis, and if the educational process transferred to the blended learning (The use of distance learning and attendance in the classes for specific days by certain percentage), what is your opinion on that? If not mention the reason.*

The education institutions in Bahrain were planning to transfer to blended learning at the beginning of the academic year 2020-2021, especially the private institutions. For instance, the Gulf University in Bahrain transferred to blended learning in fall 2020, but it was not compulsory for the students to come to the campus. This RQ reveals the participants' opinion of this survey about blended learning. 174 (82.86%) responded that they agree on the transfer to blended learning, while the rest 36 (17.14%) did not agree. The main reasons for the participants who disagreed on the blended learning were they insisted on complete face-to-face learning, and teachers may be under pressure and load if the two methods of education will be used. Fig.7 shows the agreement and disagreement percentages for the RQ9 in this survey.

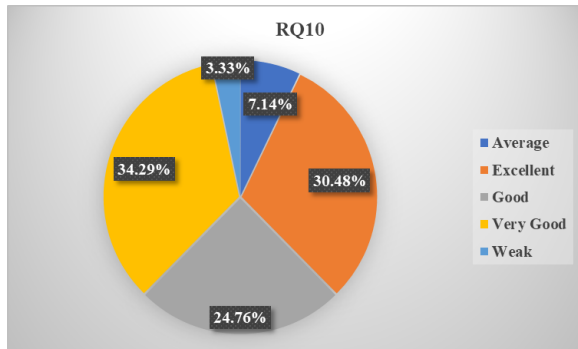


**Fig.7:** RQ9: With the current crisis, and if the educational process transferred to the blended learning (The use of distance learning and attendance in the classes for specific days by certain percentage), what is your opinion on that? If not mention the reason.

*5.8 RQ10: What are your computer skills of using different applications that facilitate the distance learning process?*

During the COVID-19 pandemic, technology played a major role to activate e-learning and make it the core method in education. So that, technical skills will be very important for the student of distance learning to be successful in this new method of teaching. This RQ will show the computer skills of the participants. 64 (30.48%) responded that they have excellent skills, 72 (34.29%) responded that they are very good, 52 (24.76%) responded that they are good, 15 (7.14%) responded that they are considered as average level, and the rest 7 (3.33%) responded that they are weak. The overall results show that

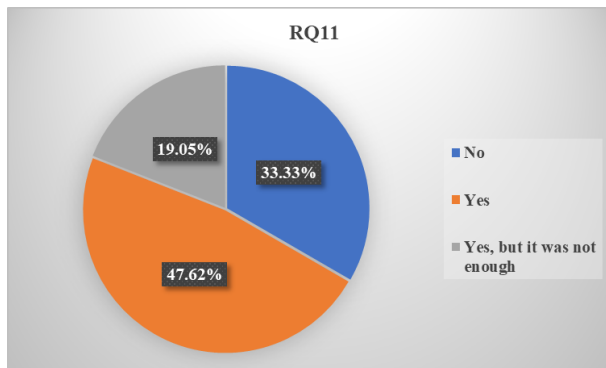
out of 210 there were 188 (89.52%) with good or higher computer skills. Fig.8 shows the distribution of the answers for the RQ10 which are related to computer skills.



**Fig.8:** RQ10: What are your computer skills of using different applications that facilitate the distance learning process?

### 5.9 RQ11: Have you taken the necessary training and workshops in your work/school fields to improve your computer skills?

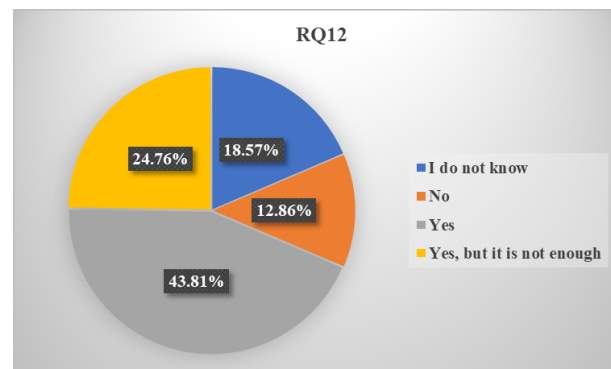
As mentioned in the previous part that the technical skills are so important during the COVID-19 pandemic, many people started taking some necessary workshops to improve their computer skills. This RQ shows that 100 (47.62%) participants have taken workshops, 40 (19.05%) have taken workshops as well, but they claimed that there were not enough, and the rest 70 (33.33%) they did not take any workshop, as shows in Fig. 9.



**Fig.9:** RQ11: Have you taken the necessary training and workshops in your work/school fields to improve your computer skills?

### 5.10 RQ12: Do you think that all the requirements are available in your school/university in case of blended learning (taking some classes physically / partially for only practical courses)?

Since blended learning needs extra materials to be successfully implemented like access to technology (software and hardware), the RQ in this section deals with what the participants think about the capability to transfer to the blending learning. 92 (43.81%) responded that is possible, 52 (24.76%) responded that it is possible, but it is not enough, 27 (12.86%) responded that is not possible, and the rest 39 (18.57%) responded that they do not know, as shows in Fig.10. However, in Gulf University several training sessions were given for the academic staff according to the plan for the next academic year.



**Fig.10:** RQ12: Do you think that all the requirements are available in your school/university in case of blended learning (taking some classes physically / partially for only practical courses)?

## 6 Conclusions

This paper discussed the education and work situations in the kingdom of Bahrain during the first stage of transformation from physical learning to online learning and the use of technology during the COVID-19 pandemic. Several precautionary measures were taken by the government to confront this dangerous pandemic and control the spread of the disease. The researchers collected the necessary data related to the research topic through the well-designed survey to reach the goals of this study. An online survey was performed by distributing 12 research questions to different people in the Kingdom of Bahrain. 210 answered the online survey questionnaire. The data were analysed with statistical software. The results were identical or close to the researcher's expectation. In addition, this study shows the excellent technological infrastructure in Bahrain, such as the strong electronic government system that helped to cope with the crisis successfully. For future work, the authors planning to

perform another research on the transition to the blended learning stage. Also, making a comparison report between the two stages using the data collected through the survey study.

### Acknowledgments

First of all, the authors would like to thank the government of Bahrain by the Higher Education Council and Gulf University for their continued support for scientific research and to attain the highest levels of the academic field. The authors are grateful to the anonymous referee for a careful checking of the details and for helpful comments that improved this paper.

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