

An Assessment of Online Education During COVID-19 Pandemic: Case of Kardan University

Kardan Journal of Economics and Management Sciences

3 (3) 51–64

©2020 Kardan University

Kardan Publications

Kabul, Afghanistan

DOI: 10.31841/KJEMS.2021.22

<https://kardan.edu.af/Research/CurrentIssues.aspx?i=KJEMS>

Sarfaraz Karim

Abstract

Significant challenges have created for the global higher education community because of the Coronavirus 2019 (COVID-19) pandemic. This study purpose was to find out the experience of online classes with various factors among students. Through a descriptive statistical analysis and Ordinal Regression Analysis this study used sample of 276 students studying at school of graduate studies of Kardan University. The study found that there is positive relationship between online education and support provided from administration and it is also found that overall the response is positive towards online education as well as facility provided by the university. There is a significant difference in the male and female student's responses as result found that the responses have been diverse among gender (by cross tabulation) towards online education, Kardan university administration and social consequences. There are significant opportunities to start new way of learning and this research will help management in the education sector to understand ways to enhance and explore the different ways of online education as well as student's experience towards it.

Keywords: COVID-19, Digital Education, Higher Education, Online Education, Webinar

Introduction

On March 11, 2020, World Health Organization (WHO) has declared the novel coronavirus (COVID-19) outbreak a global pandemic (WHO,2020m). The first case was officially recorded on 31 December 2019, in the Wuhan City of China. Since then it gradually shifted to other part of the world and there has been substantial growth across the globe. According to the World Health Organization (2020 a), on 31 March 2020, there have been 697,244 confirmed cases with 33,257 deaths (4.77% mortality rate). By the end of June, the top ten countries by reported cases are United States of America, Brazil, India, Russia, Peru, South Africa, Chile, Mexico, United Kingdom, Iran, Pakistan and Spain (World Health Organization, 2020J). By the mid of July, the total confirmed cases in the world is 10 million and half million are the death cases which is 5% mortality rate. There is extensive impact on the global higher education sector by Coronavirus 2019 (COVID-19) pandemic.

At the beginning 180 million Chinese students market (primary, Colleges and universities) were impacted and Initial responses focused on the delivery of online classes and training to students who were unable to leave China (Perrotta, 2020). The global higher education landscape has dramatically changed in the past few months due to the spread of the coronavirus. Students across the higher education sector have been dramatically impacted by the spread of the coronavirus, from travel restrictions to social distancing, isolation measures, quarantines, campus closures, and border closures. Afghanistan which is located in South Asia is a landlocked country having bordered by Pakistan, Iran, Uzbekistan and China. The first confirmed case in the country is reported on 24th February 2020 in the Herat province. As of 15 July, there have been about 35,000 positive cases, with 23,000 recoveries and 1,100 deaths across all 34 provinces in the country. With around 14000 cases Kabul Province has the highest number of COVID-19 cases in country, followed by Herat with 5,200 cases, and then Balkh with 1,700 cases. Initially Afghanistan government announced on 14 March, that all educational institutes in the country would not open until 21 April. However, from 11 April, it was announced that lessons would be taught online via television and radio. On 7 May, for school students the Ministry of Education launched an online website in Dari and Pashto. On 19 June, it was announced that all Afghan schools and universities will remain closed until September.

Kardan University the number one private university in the country has taken an early and proactive response to COVID 19 pandemic. The leadership of Kardan University has been kept watching and monitoring the changes in

the higher education and way of shifting from physical classes to online classes since early February. Kardan University is fully prepared to take its teaching and learning activities fully online effective Monday, March 23, 2020. Kardan University's staff, students, and faculty are using advanced Learning Management System (LMS), one of the most advanced learning and teaching platforms in the country, along with modern interactive platforms to deliver quality higher education. (Kardan, 2020)

1.1. Problem Statement

Higher education institution and Faculties rushed to respond to teaching and learning online Since the outburst of COVID19 at the global level. The spread is from China to South Korea, then Iran and Italy to USA and India resulted in the higher education sector in affected countries to change to focus on their own operations (UNESCO, 2020). The higher education sector has been challenged by a need to respond to the evolving landscape in terms of student load, new way of teaching and learning, self-isolation guidance, and supporting staff role in transformation. Many universities are responding in diverse ways, and given the speed of the changes like never before towards online education. Yet, it was also a demonstration of the impact of poorly resourced institutions and socially disadvantaged learners where limited access to technology and the internet impacted on Organisational response or students' ability to engage in an online environment (Zhong, 2020). Many scholars questioned if higher education was prepared for the forthcoming digital era of learning (Houlden & Veletsianos, 2020). In this study, researcher wanted to know how students feel about kardan university's responses to covid19 as well as to know their experiences of online education during Covid19 pandemic.

1.2. Research Questions

RQ1- Do students experience and feel about changes in educational delivery and the rise of online learning?

RQ2- Is there any difference between male and female experience towards online education?

RQ3- Have students get response from universities during this crisis?

RQ4- Do students experience social changes during this crisis?

1.3. Research Objective

The main objective of this paper is to find out the student's experience and their response towards the shifting of academic activities from physical to online and students' academic response to the coronavirus crisis.

2. Literature Review

There are two main ways of conducting online education. The first is Massive Open Online Course (MOOCs) through the use of recorded classes and opened out to public. The second one is via live online classes conducted as webinars, or zoom sessions. Universities require high-speed internet and education delivery platforms or learning management systems, besides stable IT infrastructure and faculty members who are comfortable teaching online. Students also need high-speed internet and computers/mobiles to attend these sessions or watch pre-recorded classes (*The Economic Times*, 2020).

Crawford, *et al.*, 2020 conducted a recent mapping study discussed the responses of universities in 20 countries to the COVID-19 pandemic which included full suspension of all operations in the university, rapid curriculum redevelopment into online platforms, or allowing classes to continue while meeting minimum standards set by the government such as 1.5-meter social distancing or reduced social gatherings. These curricular changes, however, may not be favorable to some students especially those who do not have internet access at home or a private car to travel between home and school since public transportation has been suspended.

Crawford, *et al.*, 2020 further observed that small in population size countries like Australia, they are now progressing to alternative forms of learning. Some universities in Australia like Macquarie University, Monash University, Victoria University have a temporary halt to learning to design online learning. Universities like University of Queensland, University of Technology Sydney and few more are intending to continue face-to-face learning with social distancing protocol and supplemented online recordings/offering.

China's higher education sector got little time to prepare as the first country to report a case. In China many were not prepared for the transition but few higher education institutions offered online delivery prior to COVID-19. Initially in the month of January with numerous reports in China suggesting this was a short-term approach and onsite teaching would commence in two to four weeks., but they failed to implement that and many universities commence their classes online and this leads delay to the

start of the spring semester was almost a month for many universities (Cappelletti, 2020). At present, they remain closed for onsite classes. With the transition to online in place for organisations, attention has now turned to the quality of the learning experience. Further, the ongoing physical social isolation is impacting the academic workforce that traditionally is up the front of the classroom (Qu, 2020).

According to the report of BBC News (2020i), in UK there has been some controversy with arguments being posed that this may affect student decision making where they might choose a course that is not in their best interest over what appears to be universities suggesting a move to unconditional offers for places amidst the COVID-19. Meanwhile, some students are creating voluntary groups to help support fellow students and members of their communities during the advised social distancing and isolation measures put in place (BBC News, 2020h, 2020i).

In India Universities are suspended their activities and examinations followed by the University Grants Commission advising till further notice. India health system is poorly underprepared and clueless about the severities of this pandemic (*The Economic Times*, 2020). According to *The Economist* (2020) no universities in India could be identified as announcing a move to online instruction because of COVID-19 and many are implementing a shutdown or postponement strategy until the mid of March. Report published in *The Economist* (2020), the IITs also shifted to conducting online classes, and sharing study materials and audio files with students over the internet. Management from IIT said that faculty members using supplementing Moodle (an open-source learning-management system) with assorted social media and online platforms for assisting students and are available online during interactive sessions for students to clear their doubts. Report further suggested that the universities and teachers agreed that their transition to online teaching had not been very difficult. However, if the lockdown continued over a longer period, some investment in infrastructure and additional training for teachers and students would be required, they said.

In USA the infection rate dramatically increased, and by late March, the number of confirmed cases in the USA had surpassed China. Whilst some websites (Clark, 2020) by mid-March were reporting only 5 percent (260 out of 5,300) higher education institutions had decided to move to online instruction with minimal on-campus presence, anecdotal evidence suggests most higher education institutions have made the transition. As of 29 March, there were 103,321 confirmed COVID-19 positive cases, with 1,668

deaths (WHO, 2020a). As per Herpich (2020), universities like Harvard University, Yale, Princeton, Stanford, University of California, Southern Oregon University and Massachusetts Institute of Technology: (MIT) announced from 10 to 15 March that they would deliver all instruction remotely by 23rd March. Many universities moved Spring Break by one week to allow the transition to online, with an analysis of higher education in Texas (Bawab, 2020) revealing that whilst the majority will return with online instruction, some institutions as of the 22 March have yet to decide.

A fragmented approach can be viewed in achieving higher education learning and teaching quality. This includes assessment strategies such as lab research continuing and face-to-face lectures going on as usual at University to be allowed at University campus like International Islamic University Malaysia, Utara Malaysia, University Malaysia Terengganu and some of them banning their students from leaving campus without express permission (Lim, 2020). Malaysia has 20 public universities and the response by most of them is to encourage or mandate online learning, using live streaming on Facebook or YouTube, Light board Video Technology, Zoom, or in-house e-learning platforms (Lim, 2020; Ramadan, 2020; Teoh, 2020; Sarawak, 2020).

In Italy the Bologna University, Turin, and Milan as well as polytechnics of different cities set up remote learning and teaching with examinations and learning activities delivered to students online, especially via Webex. In order to assist students, several public universities have also approved the postponement of fee payments from March to May (Di Paco, 2020). The University of Turin in Italy has 80,000 students across 155 courses. There have been more than 2,500 video-conferencing sessions with more than 70,000 participants, 4,200 hours of recorded video by 3500 academics and researchers as of 13 March (University of Turin, 2020; Di Paco, 2020; RedazioneOP, 2020). Almost 9,000 students had watched videos on demand, with an average of 12 videos viewed per student, and more than 6,000 students participated in at least one live streaming session (over 800 sessions in all) (Verona & Taranto, 2020).

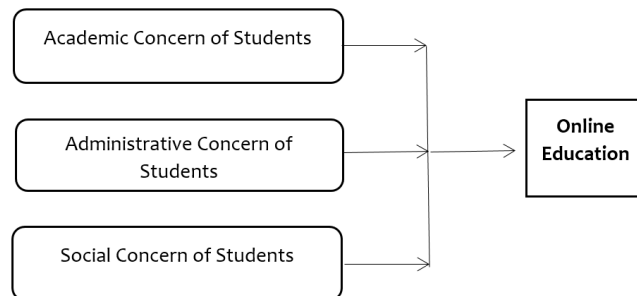
The American University in Cairo also took several steps to move from face-to-face classes to online classes (American University in Cairo, 2020). Issues relate to the availability of the right hardware and software, networks, and storage capacity. Some universities like Alexandria University have opted for live and recorded sessions. Live situations can assess whether the technology infrastructure in state universities can smooth online learning considering the expected traffic (Alexandria University,

2020). Egypt Notable Private Universities have taken steps to carry out their teaching online during the period of campuses closure. For instance, the British University in Cairo offers e-learning using Moodle, Microsoft Class Notes, and Microsoft Teams software (The British University in Cairo, 2020).

In Egypt some of the tools that are used to deliver online classes include Blackboard, Moodle, email, and Zoom. Some of these tools were well-known before the crisis, but the crisis has accelerated the plans to use them. There might be some issues in implementing online learning by major state universities in Egypt like Cairo University and Alexandria University (American University in Cairo, 2020).

According to Crawford, *et al.* (2020), on one side of the extreme, universities rapidly closed their face-to-face operations and moved to digitalized education. Some universities, were already partially prepared for this endeavor given the University had some blended or fully online offerings. Other universities had a lot more ground to cover. On the other side, one group of universities did very little to respond and opted to meet their government's minimum standards (e.g. 1.5-meter distance or reduced social gatherings).

Below is the framework of the model which researcher used in developing the questionnaire and model the research based on the responses of the students on below mentioned factors.



Source: Author's compilation

3. Methodology

At the beginning of pandemic, in Afghanistan only two Universities were able to start online classes successfully and Kardan university is one of them. As per record of Kardan University 2020 about 905 students are active in school of graduate studies. From the total population of 905 regular program students, sample of 276 students' included in the investigation by using Yamane (1967) formula to calculate sample size:

Thus, the sample size of the study was designed based on the formula developed by Yamane at 95% confidence interval and 5% of precision.

$$\begin{aligned} \text{So: } n &= N/1+N(e)^2 \text{ (Where } n= \text{ sample size, } N= \text{ Population and } e= \text{ level} \\ &\text{ of precisions)} = 905/1+905(0.05)^2 \\ &= 905/3.25 \quad n \approx 276 \end{aligned}$$

3.1. Research Design

To gather comprehensive and factual information to outline an on-hand phenomenon Descriptive survey is used. A questionnaire comprising of close and open ended questions. Close ended questions are on a 5-point Likert scale to collect information for this study. Scale points were labeled as:

1 = Strong Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

3.2. Sampling Technique

Research respondents from school of graduate studies of Kardan University were selected by simple random technique of probability method. This technique provides an equal chance for all the students to be get selected. Questionnaire was distributed to target population through online and got the response in a week and 276 (30% of total population) sample have been collected for analysis.

3.3. Reliability Test

Cronbach’s alpha was used to check the inter-item consistency for each of the key study variables. Table 1 presents the reliability test results.

Table 1: Cronbach’s alpha

| Variables | No. of items | Cronbach’s alpha |
|------------------------|--------------|------------------|
| Academic Concern | 10 | .985 |
| Administrative Concern | 5 | .979 |
| Social Issues Concern | 5 | .975 |

George and Mallery (2003) had provided the rules of thumb e. i. if the value of alpha is >0.9 = Excellent, >0.8 =Good, >0.7 = Acceptable, >0.6 = Questionable, >0.5 =Poor. It can be seen from the above table that the reliability of the survey instrument is highly significant.

3.4. Results

Table 2: Demographic Profiles of the Respondents, n=276.

| Demographic Variables | Category | Frequency | Valid Percentage |
|-----------------------|------------------------------------|-----------|------------------|
| Gender | Male | 222 | 80.4 |
| | Female | 54 | 19.6 |
| Age | Below 25 Yr. | 21 | 7.6 |
| | 26-30 Yr. | 129 | 46.7 |
| | 31-35 Yr. | 90 | 32.6 |
| | 36-40 Yr. | 18 | 6.5 |
| | Above 40 Yr. | 18 | 6.5 |
| Education | MBA 1 st Year | 114 | 41.3 |
| Status | MBA 2 nd (and 2.5) Year | 117 | 42.4 |
| | MIR 1 st Year | 27 | 9.8 |
| | MIR 2 nd (and 2.5) Year | 18 | 5.4 |
| Place of Work | Govt. Organization | 75 | 27.2 |
| | Private Organization | 153 | 55.4 |
| | Unemployed | 18 | 6.5 |
| | Others | 30 | 10.9 |

3.5. General Profile of the Respondents

The response of each demographic profile (Table2) is expressed as a percentage (%) of a total 276 respondents. The number of male respondents was 80.4% (222 respondents) and female respondents were 19.6% (54 respondents). The majority of the respondents fall under the age group of 25-30 years i.e. 129 respondents (46.7%), followed by 90 respondents (32.6%) from the age group of 31-35. The majority of 41.3% (114 respondents) and 42.4 % (117 respondents) were in MBA 1st year and MBA 2nd year respectively class followed by MIR 1st year students 9.8% (27 respondents) and MIR 2nd year students 5.4% (18 respondents). The majority of respondents 55.4% (153 respondents) are working in the private organisations followed by government organisations 27.2% (84 respondents). This is also observed that all female (54 respondents) are working in the government organisations.

Table 3: Nonparametric Correlation

| | | | You are comfortable and satisfy with online classes. | support from Kardan Administration team |
|----------------|--|-----------------|--|---|
| Spearman's rho | You are comfortable and satisfy with online classes. | Correlation | 1.000 | .799** |
| | | Coefficient | | |
| | | Sig. (2-tailed) | . | .000 |
| | support from Kardan Administration team. | N | 276 | 276 |
| | | Correlation | .799** | 1.000 |
| | | Coefficient | | |
| | Sig. (2-tailed) | .000 | . | |
| | N | 276 | 276 | |

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation matrix in table 3 above illustrates the correlation or relationship between the “online classes” and “support from Kardan Administration team”. As both variables are measured on ordinal scale, so Spearman’s Correlation is used to find the relationship between two and it is found positively correlated with value of (r=.799, p<0.01)

Table 4: Cross Tabulation between Gender and Technology uses by Respondents
Gender of the Respondent * You are successfully using the tools and technology needed for your online classes. Cross tabulation

| | | You are successfully using the tools and technology needed for your online classes. | | | | | Total | |
|-----------------------------------|-----------------------------------|---|-------|-------|-------|-------|--------|--------|
| | | S.D | D | N | A | S.A | | |
| Gender of the Respondent | Female | Count | 15 | 12 | 24 | 3 | 0 | 54 |
| | | % within Gender of the Respondent | 27.8% | 22.2% | 44.4% | 5.6% | 0.0% | 100.0% |
| | Male | Count | 0 | 0 | 0 | 132 | 90 | 222 |
| % within Gender of the Respondent | | 0.0% | 0.0% | 0.0% | 59.5% | 40.5% | 100.0% | |
| Total | Count | 15 | 12 | 24 | 135 | 90 | 276 | |
| | % within Gender of the Respondent | 5.4% | 4.3% | 8.7% | 48.9% | 32.6% | 100.0% | |

Cross Tabulation between Gender and Successfully using of tools and technology needed for online classes is shown in table above. Overall the response was very positive and highly satisfy but when is seen in gender wise then it is observed that around 50% female students are collectively on the negative response.

Table 5: Cross Tabulation between Gender and willingness to continue online classes even after Covid19

Gender of the Respondent * you want to continue with online classes even after end of COVID19 Cross tabulation

| | | you want to continue with online classes even after end of COVID19 | | Total |
|--------------------------|-----------------------------------|--|-------|--------|
| | | Yes | No | |
| Gender of the Respondent | Female | Count 11 | 43 | 54 |
| | % within Gender of the Respondent | 20.4% | 79.6% | 100.0% |
| Male | Count | 172 | 50 | 222 |
| | % within Gender of the Respondent | 77.5% | 22.5% | 100.0% |
| Total | Count | 183 | 93 | 276 |
| | % within Gender of the Respondent | 66.3% | 33.7% | 100.0% |

Cross Tabulation between Gender and willingness to continue online classes even after Covid19 are shown in tables above. Overall the response was positive as 66.3% are saying yes 33.7% are saying no but when is seen in gender wise then it is observed that around 80% female students are not in favor of online classes after this pandemic.

PLUM - Ordinal Regression Analysis

Table 6: Case Processing Summary

| | | N | Marginal Percentage |
|--|-------------------|-----|---------------------|
| You believe that there are no more differences between online and offline classes. | Strongly Disagree | 51 | 18.5% |
| | Disagree | 87 | 31.5% |
| | Neutral | 45 | 16.3% |
| | Agree | 57 | 20.7% |
| | Strongly Agree | 36 | 13.0% |
| Gender of the Respondent | Female | 54 | 19.6% |
| | Male | 222 | 80.4% |
| Valid | | 276 | 100.0% |
| Missing | | 0 | |
| Total | | 276 | |

Table 7: Model Fitting Information

| Model | -2 Log Likelihood | Chi-Square | Df | Sig. |
|----------------|-------------------|------------|----|------|
| Intercept Only | 265.685 | | | |
| Final | 18.922 | 246.763 | 1 | .000 |

Link function: Logit.

Significance value in the above table 7 is below 0.05 i.e. .000 so we can reject the null hypothesis and accept the alternative hypothesis i.e. there is a significant difference between online and offline classes.

Goodness-of-Fit

| | Chi-Square | Df | Sig. |
|----------|------------|----|-------|
| Pearson | .000 | 3 | 1.000 |
| Deviance | .000 | 3 | 1.000 |

Link function: Logit.

Table 8: Parameter Estimates

| | | Estimate | Std. Error | Wald | Df | Sig. | 95% Confidence Interval | |
|-----------|------------|----------------|------------|----------|----|------|-------------------------|-------------|
| | | | | | | | Lower Bound | Upper Bound |
| Threshold | [Q7 = 1] | -23.080 | .594 | 1509.262 | 1 | .000 | -24.244 | -21.915 |
| | [Q7 = 2] | -.496 | .138 | 12.869 | 1 | .000 | -.768 | -.225 |
| | [Q7 = 3] | .327 | .136 | 5.786 | 1 | .016 | .061 | .594 |
| | [Q7 = 4] | 1.642 | .182 | 81.345 | 1 | .000 | 1.285 | 1.999 |
| Location | [Gender=1] | -25.913 | .000 | . | 1 | . | -25.913 | -25.913 |
| | [Gender=2] | 0 ^a | . | . | 0 | . | . | . |

Link function: Logit.

Above table 8 indicate that [Gender=1] which is female is having value of -25.913 compare to [Gender =2] which is male. It concludes that female are more disagree in relative to male.

a. This parameter is set to zero because it is redundant.

Test of Parallel Lines^a

| Model | -2 Log Likelihood | Chi-Square | df | Sig. |
|-----------------|-------------------|------------|----|-------|
| Null Hypothesis | 18.922 | | | |
| General | 18.922 | .000 | 3 | 1.000 |

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a. Link function: Logit.

4. Conclusion

Universities are continuously striving to deliver high quality teaching and consistent communication to students during these uncertain times. Kardan University the number one private university in Afghanistan has responded proactively. This new situation will be crucial in the coming times and this survey research has found some of the crucial result which help university to develop strategies. Overall the responses were positive towards the online classes and technologies support from university but when is seen in gender wise then it is observed that around fifty percent female students responded negatively. Male students are more confident towards online educations and willingness to continue even after this

Pandemic than female students. It is also observed that there is a significant difference between online classes and physical classes. Some responses and quotes demonstrated that many fears and concerns related to career prospective, fees and Portal related issues. Universities need to work quickly to allay these concerns and answer some of these pressing questions, particularly around fixing ICT issues with proper training to students and upgradation. There must be some online training for extra curriculum activities. To do so, it is imperative that institutions listen to students' needs and concerns and leverage the latest technological tools. Students required proper communication, clarification and workshop especially female students to boost their confidence.

References

- (PDF) COVID-19: 20 countries' higher education intra-period digital pedagogy responses. (2020, March). Retrieved June 27, 2020, from <https://www.researchgate.net/publication/340341491_COVID-19_20_countries_higher_education_intra-period_digital_pedagogy_responses>
- Afghanistan confirms 1st case of coronavirus. (2020, March). Retrieved March 10, 2020, from <<https://www.aa.com.tr/en/asia-pacific/afghanistan-confirms-1st-case-of-coronavirus/1743012>>
- AUC Vice President for Digital Transformation's Message on Online Instruction. (2020, March 19). Retrieved July 30, 2020, from <<https://www.aucegypt.edu/news/auc-vice-president-digital-transformations-message-online-instruction>>
- Coronavirus disease 2019 (COVID-19). (2020, April). Retrieved May 30, 2020, from <<https://apps.who.int/iris/bitstream/handle/10665/331475/nCoVsitrep11Mar2020-eng.pdf>>
- Coronavirus: Afghanistan closes educational institutions. (2020). Retrieved March 14, 2020, from <<https://www.aa.com.tr/en/asia-pacific/coronavirus-afghanistan-closes-educational-institutions/1766132>>
- Coronavirus: Oxford University students set up help group. (2020, March 18). Retrieved April 24, 2020, from <<https://www.bbc.com/news/uk-england-oxfordshire-51946854>>
- Farooqui, S. (2020, May 01). Education in the time of Covid-19: How institutions and students are coping. Retrieved July 19, 2020, from <https://www.business-standard.com/article/education/education-in-the-time-of-covid-19-how-institutions-and-students-are-coping-120043001575_1.html>
- Gordon Houlden. (2020, April). Retrieved July 30, 2020, from <<https://www.ualberta.ca/china-institute/about/people/admin/gordon-houlden.html>>
- Herpich, N. (2020, March 11). Officials detail University's move to online learning to combat coronavirus. Retrieved July 3, 2020, from

- <https://news.harvard.edu/gazette/story/2020/03/officials-detail-universitys-move-to-online-learning-to-combat-coronavirus/>
- THE IMPACT OF THE CORONAVIRUS ON GLOBAL HIGHER EDUCATION. (2020, July 15). Retrieved July 19, 2020, from <https://www.qs.com/contact/>
- Inclusion and Education. (2020). Retrieved July 30, 2020, from <https://en.unesco.org/gem-report/report/2020/inclusion>
- Joseph, C., Henderson, B., Jurgen, K., & Malkawi, B. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. 1 *Journal of Applied Learning & Teaching*, 3(1). doi:10.37074/jalt.2020.3.1.7
- Kardan University's History. (2020, February). Retrieved May 22, 2020, from <https://kardan.edu.af/About/History>
- L., Q. (2020, February). Online learning: When class is just a click away. Duke Kunshan University. Retrieved May 10, 2020, from <https://www.scmp.com/tech/>
- Lau, J., Havergal, C., Morgan, J., Basken, P., Ross, J., Matthews, D., & López, N. (2020, March 18). China's coronavirus lockdown: 'In this situation, it is important to just keep going'. Retrieved July 30, 2020, from <https://www.timeshighereducation.com/opinion/chinas-coronavirus-lockdown-situation-it-important-just-keep-going>
- Lim, I. (2020, March 16). Covid-19: What are Malaysia's public universities doing? Online classes and more...: Malay Mail. Retrieved June 28, 2020, from <https://www.malaymail.com/news/malaysia/2020/03/16/covid-19-what-are-malaysias-public-universities-doing-online-classes-and-mo/1847071>
- Staff, W. (2020, March 02). LIST: Here's what Texas universities and colleges are doing in response to COVID-19. Retrieved July 30, 2020, from <https://www.wfaa.com/article/news/health/coronavirus/list-texas-universities-that-have-suspended-study-abroad-or-travel-programs/287-4242e7fe-f39b-4322-a8d1-3de59cff46f3>
- TOLO news. (2020, April 15). Retrieved April 23, 2020, from <https://tolonews.com/>
- Written by Cathy Li, H. (2020, March). The COVID-19 pandemic has changed education forever. This is how. Retrieved May 30, 2020, from <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/>
- Zhong, R. (2020, March 17). The Coronavirus Exposes Education's Digital Divide. Retrieved May 18, 2020, from <https://www.nytimes.com/2020/03/17/technology/china-schools-coronavirus.html>
- Zunyou Wu, M. (2020, April 07). The Coronavirus Disease 2019 (COVID-19) Outbreak in China-Summary of a China CDC Report. Retrieved June 30, 2020, from <https://jamanetwork.com/journals/jama/fullarticle/2762130>