THE USE OF WEB FACILITIES FOR CONFERENCES AMONG ACADEMICS IN KASHIM IBRAHIM LIBRARY AHMADU BELLO UNIVERSITY ZARIA AMIDST COVID 19 PANDEMIC IN NIGERIA.

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Abstract

This study investigatedthe use of web facilities for conferences among academics in Kashim Ibrahim Library Ahmadu Bello University Zaria Amidst Covid 19 Pandemic in Nigeria. Two research questions were raised to guide the study. The questions were to find out the problems faced by academics of Kashim Ibrahim Library in participating in electronic conferences during the Covid 19 pandemic and the strategies for improving the use of virtual facilities/zoom for effective conferences/meetings amidst the Covid pandemic. The study adopted quantitative research method and descriptive research design. The population and the sample of the study was theentire 111academic staff of Kashim Ibrahim Library. The instrument for data collection was a semi structured questionnaire to allow respondents give added information. Data generated was analyzed using frequency tables, simple percentages and descriptive mean of standard deviation. Findings revealed that most academics in Kashim Ibrahim Library attempted the use of electronic conferencing/zoom amidst Covid 19 pandemic but are majorly faced with problems of Login/Non acceptance of details, Space/accommodation, International time barrier differences, Power supply, Network fluctuation among others. The study therefore recommended that adequate electronic communication and computer network facilities like super highway bandwidth which could mitigate these problems be put in place. With this, the use of virtual facilities could be positively enhanced.

Keywords: Virtual, ICT, Distance Learning, Covid, Pandemic

Introduction

Natural or manmade disasters and pandemics have often ravaged nations of the world. Most often, they stampede human activities economically and educationally. Some have made even the world powers and technology shake to their marrows. The effect, most often tolled more on the developing countries who have to grapple on staggering feet to contain the havocs such pandemics may have come with. Such is the Corona Virus Disease typically called the COVID 19, which has adversely affected inclusively the Nigerian people, the economy and more importantly the state of the Nigerian educational systems on which the nation relies.

Presently, the corona virus pandemic aside bad leadership is one of the greatest threats to education in most developing countries like Nigeria- an enormous educational calamity that needs immediate attention. The pandemic is making clearer and clearer the erstwhile faint line in digital divide where nations that are digitally and technologically incline soars while others drown. This digital divide, if not curbed in countries like Nigeria may widen the gaps of inequality in education in comparison to other countries.

During this tough time of the pandemic when the suffered education is still suffering, the concern is not about whether online/web facilities or Virtual Conferences/Zoom Meetings (VCZMs) teaching i.e., learning methods can provide quality education/interaction. It is rather how academics and institutions in conjunction with their information centers i.e., libraries will adopt online and web facilities for webinars, conferences in information sharing, learning, teaching and research in a way never before in order to reduce the effect on education (Carey, 2020). Resistance to change will not help any educational system across the world at this COVID time because all will be judged on the ability and pace to adapt to the inevitable changes (Liguori & Winkler, 2020).

According to Favale, Soro, Trevisan, Drago, &Mellia, (2020) the COVID-19 had put more than 1.6 billion students out of school in about 161 countries. A figure estimated to be 80% of the world's students' population as of March 2020. It had also in the period disengaged students and researchers all over the world and Nigeria in particular from the conventional flow of academic activities which prior to the COVID 19 was deplorable. Even before the pandemic, world education has been a pathetic situation as the World Bank's statistics revealed that children who cannot read and understand at age 10 stood at 53% and are children in low- and middle-income countries before the outbreak (UNESCO, 2020).The situation is tantamount to learning crisis for students who will have no wherewithal to academic activities except through the internet which most often is beyond their reach. And if the pandemic is not curbed, the fate of education in countries like Nigeria tends to worsen if we do not act fast.

To this effect most academic institutions, libraries and information centers as front liners in information generation and dissemination in Nigeria have tried to keep pace. They have resorted to the use web facilities for online teachings while research institutes and university libraries are embracing virtual conferences and zoom meetings (VCZMs) which are not without attendant hitches. Before the pandemic, there has been an increasing interest in the use of Information Communication Technologies (ICT) and VCZMs for academic activities in higher education in Nigeria. But for the fact that most of these institutions could not afford it, it has dragged. With the pandemic, ICT/VCZMs has now become a tool for addressing the hitches of webinars, conferences, teaching and learning challenges and have become a change agent and a central force for research and academic competitiveness.

Inconsequential of the challenges, Information Communication Technology/Virtual Conferences and Zoom Meetingshas become a force to reckon with in the era of the pandemic because they are pulling together other areas in the academic contents, methods, and the general

quality of teaching and learning, thereby making academic a one stop shop for students and researchers (Lei, 2020). Information Communication Technology/Virtual Conferences and Zoom Meetings as a central force in academic competitiveness interwinds with educational and social shifts that demands technological skills critical for the developments of academics and the visibility of their research outputs through their libraries and information centers (Almajah, Al-Khasawneh, &Althunibat, 2020).

In the academia for instance, Information Communication Technology/Virtual Conferences, webinars and Zoom Meetings have redesigned the conception/misconception of the challenges and opportunities of learning, and brought about new learning possibilities for almost all teaching related situations. Not against, but complementing traditional classroom teaching, Information Communication Technology/Virtual Conferences and ZoomMeetings is proving its efficiency in making teaching and self-learning more interesting. Though web facilities, webinars, Virtual-supported teaching, learning and research in developing countries may have dark sides but it always stimulates academics to explore and reflect on their knowledge construction. This according to Liguori and Winkler, (2020) had been one of the missions of most educational systems to overcome the teaching, learning and research crisis in higher institutions.

The challenge/struggle today is to reduce as much as possible the negative impact the COVID pandemic is having or will have on teaching, learning and research in institutions and to get back on a path of faster adaptation using Information Communication Technology/Virtual Conferences webinars and Zoom Meetings in and by academics. Richer countries are better prepared to move to online learning strategies, although with a lot of effort and challenges for teachers, students and parents. In middle-income and countries like Nigeria, the situation is mixed and needs urgent attention. Many institutions do not have ICT facilities or supportive

bodies, Others do. There must be a balance to avoid digital divide in our institutions of higher learning.

Problem Statement

Online-mediatedteaching, webinars and research for information processing and sharing via conferences is supposed to take the place of physical meetings in instances of inadequacies like the present corona pandemic in the world. Popularly called virtual conferences/zoom meetings (VCZMs), it makes easy for professional bodies to share ideas through computer mediated forum. ICT and computer being the hub of information sharing in the world as studies have shown has high impact in virtual conferencing and information sharing devoid of physical contact or presence (Brianna, Derrian, Hunter, Kerra, Nancy, 2019). Even for this assurance, interested users of Information Communication Technology/Virtual Conferences and Zoom Meetingstools for information and educational related activities in developing countries like Nigeria still find it difficult to fully utilize the potentials virtual facilities portends for teaching, learning and research in the academia while the need for information sharing and use amidst urgent need is inevitable.

From observation, the researchers noted that most participants in webinars, virtual meetings and or conferences especially among Kashim Ibrahim Library staff who are supposed to be vanguards of information dissemination leaves most of the virtual conference sessions withoutsatisfaction. The question therefore stands as to what could be the challenges of these academics and information professionals in fully participating in webinars, virtual meetings and conferences which evidently cater for the impossibilities of physical meetings in times of inadequacies that the nation presently faces. This study therefore becomes essential to find out the challenges of academics as vanguards of information in Kashim Ibrahim Library Ahmadu

Bello University, Zaria, in the use of virtual conferences/zoom amidst COVID 19 pandemic in Nigeria.

Research Questions

The following research questions were used for the study:

1. What challenges do Kashim Ibrahim Library academics face in participating in virtual conferences during the COVID 19 pandemic?

2. What are the strategies for improving the use of virtual facilities among academics inKashim Ibrahim Library amidst the COVID pandemic?

Literature review

The use of Information Communication Technology for Virtual conferences/zoom meetings (ICT/VCZMs) in education and information sharing are not totally new in the academia, libraries and information centers. Many have been using it for conferences and sharing research outputs in the developed nations. Baytiyeh, (2018) stated that Information Communication Technology/Virtual Conferences, webinars and Zoom Meetings are characterized by the use of ICT and electronic media for a variety of information sharing and learning processes that range from add-on functions in technologically driven spaces to full substitution for the face-to-face meetings through online facilities across the globe. Barboni, (2019) also averred that Information Communication Technology/Virtual, webinars,Conferences and Zoom Meetings are typically characterized by the use of ICT in teaching, learning, research and information sharing among professional bodies and like minds most especially in the academia.

Therefore, Information Communication Technology/Virtual, webinars,Conferences and Zoom Meetings as a combination of the use of technologies in Virtual conferences/meetings and

Distance learning go hand in hand and have been trending in some country's academia before the strike of the COVID. Information Communication Technology/Virtual Conferences and Zoom Meetings has been of academic importance to universities and educational systems who have earlier embraced it before the pandemics. According to Liguori and Winkler (2020), Information Communication Technology/Virtual Conferences and Zoom Meetings in education form an element of flexibility in the learning and information sharing processes through the use of technologies, and interdisciplinary approaches to teaching, learning and research. The use of technologies and interdisciplinary approaches are key factors in virtual conferences/meetings in higher education most especially in times of pandemics and natural disasters when traditional/conventional meetings are near impossible. Lei, (2020) noted that where reliable ICT facilities are available, it allows for instantaneous and effective use of VCZMs for consistent teaching, learning, research, conference delivery, interaction and sharing of needed contents for problem solving among academics around the globe andfor the development of their locals.

With this, it is evident that functional/dependable ICT for webinars, virtual conferences/meetings have the possibility to support learning processes, collaboration, flexibility, interactive education and training, as well as evaluation of content and skill in educational institutions in times of inadequacies (Affouneh, Salha, Khlaif, 2020). The above is corroborated by Martin, (2020) stating that webinars, virtual conferences/meetings in higher education are definitely a tool that increase interactivity among researchers and information professionals. It helps them to disseminate research outputs for problem solving across the globe and also for students who are ready to adopt virtual for distance learning owing to its benefit on platforms where they can engage in their teaching and learning activities.

In times of inadequacies as the nation faces, webinars, Virtual conferences/meetings for academic activities is proving its place as it is occupying the center stage of educational activities especially in the higher institutions where we have multi-disciplines. Aside flexibilities and other advantages that web and virtual facilities come with in educational arena, Rieley, (2020) submitted it constantly teaches academics the skills and competencies of developing professional and technological skills to self-study, the ability to plan and organize, time management skills, the ability to solve problems, to take responsibility, to work under pressure, to be creative and initiative. This is because all participants in any VCZMs must be extraordinarily alert and conscious of details which most have attributed to be a challenge in adopting and use of virtual facilities (Martin, 2020).

Understanding that virtual facilities, if well absorbed, gives researchers opportunity to develop academic qualities, which are undoubtedly necessary for modern and technologically driven professionals, it also offers academic institutions opportunities of ranking higher in global and international academic ratings (UNESCO, 2020). Hence, urgent adoption of virtual conferences/meetings for academic development are key for students, staff and the management of any institution who wants to achieve meaningful standing in the area of teaching, learning and research in occasions of natural disasters or pandemics like this. However, Carey, (2020) noted that the use of these Information Communication Technology/Virtual Conferences and Zoom Meetingsfacilities are not without attendant hitches for developing nations who have had to grapple with even the conventional educational methods, but it should not be a barrier to consideration for adoption.

Challenges such as poor audio and video production, poor synchronization, network fluctuation complacency are among various other setbacks for users of virtual conferencing facilities in most developing nations of the world (Brianna, Derrian, Hunter, Kerra, & Nancy

2019). Carey, (2020) noted further that the government and administration of educational institutions have great role to play in supporting their citizens who most often are challenged by the use of these facilities or see the processes as burdensome due to economic stress and therefore see the adoption of Information Communication Technology/Virtual Conferences and Zoom Meetingsfor academic interactivities as unsurmountable. Though Basilaia, Dgebuadze, Kantaria, &Chokhonelidze, 2020) noted that the pursuit of knowledge that is technologically dependent is undertaken for individual benefits, rather than as an obligation from any authority. So, individual development is central before the society can benefit and whatever the surge any natural calamity might bring should not deter the acquisition of knowledge or the processes of acquiring it for national development.

In line with this, Affouneh, Salha, and Khlaif (2020) suggested that technocrats in institutions can help make the use of the technologies available in institutions to be user friendly in order to allow balanced user interactions thereby encouraging digital equity through the web while promoting a self-regulated learning process. With this, the boundaries of space and time and other challenges are maximally reduced while flexible adaptable ways of interaction for every participant is encouraged despite evident constraints (Singh and Thurman 2019). Even with challenges, virtual facilities in academia for educational purposes has proven to be more advantageous compared to the traditional approach of conferences and meetings- pandemics aside.

Martin (2020), submitted that virtual facilities and zooms forms a blended educational environment with interactions that produce asynchronous online forums, synchronous textual and audio/video chatting, email, and conversations. These, as substantiated by Lei, (2020) has afforded researchers opportunity to share profiles relating to diverse research interests giving prospects for building research engagement and interest in global academics for local problem

solving. It also creates the potential among conference participants to make support to local institutions through online interactions as response to curb the challenges of globalized world while creating remote environmental and educational impact. By this, learning, acquisition and practice of soft skills through virtual conferences/meetings program is achieved as individuals with soft skills and technical competence are always preferred for prospective employment. UNESCO, (2020) also noted that through VCZMs, New technology and online provision can create a market for content providers where the dimensions and scope of international education provision are transformed with the emergence of new education providers such as publishers, content aggregators, distributors, and professional bodies who contribute to the diversification of transnational education from focused educational programs, to general hobbies.

In as much as there is glamour in the use of Information Communication Technology/Virtual Conferences and Zoom Meetingsfacilities for conferences and academic development, it is quite evident that adoption of technology for educational purposes in developing nations can have challenges as Brianna, Derrian, Hunter, Kerra, & Nancy (2019) earlier submitted. Challenges faced by intended and actual users range from complacency on the part of some users to some lacking central administration support for the use of the facilities, power backups in cases of electrical failure to lacking supports of technical expertise, tone, accent, pronunciation problems of presenters to bad synchronization and poor audio/video productions among others. Generally, the use of ICT, which go along VCZMs can be a challenge for new users. Academics and institutions around the world are expected to respond to the mounting pressure of first adopting the use of ICT and virtual in enhancing educational and research deliveries to enable them prepare grounds for effective VCZMs (Almajah, Al-Khasawneh, & Althunibat, 2020)

Though, the pressure of making Information Communication Technology/Virtual Conferences and ZoomMeetings a reality in universities in the developing countries viable has attendant challenges which most often can develop into a complex problem between stakeholders' interest. There should be a peep into management bureaucracies which may not favor interested academics to participate in a course, or an employer may not allow people to develop their competences. But as Basilaia, Dgebuadze, Kantaria, &Chokhonelidze (2020) earlier posited, self-development suffices in such cases especially as younger academics are keener in the use of modern communications technology as opposed to traditional forms of training. On the other hand, Social barriers and administrative barriers can be a challenge especially when participants do not know the best method to interconnect with available facilities.

Methodology

Quantitative research method was adopted for the study while using descriptive survey research design. This was based on the fact that the research relied on collection of quantitative data. The population of the study was the whole 111 academics in Kashim Ibrahim Library, Ahmadu Bello University Zaria. The entire population was sampled with a return of 96 (91%) usingthe table of sample determination by Cohen, Manion & Morrison (2011) and Research Advisors (2013). Both proposed that for a population that spans between 100, a sample of 80 can be drawn with confidence level of 95% and a margin error of 5%. To this effect, the total population was used for the study. Questionnaire were administered to the academic staff. The distribution of the questionnaire was face to face to academic librarians who use Information Communication Technology/Virtual Conferences and Zoom Meetingsamidst the pandemic. This exercise spanned 3 weeks with an interval of 1 week between. The data collected was analyzed using Descriptive statistics of mean and standard deviation, frequency and percentages.

Findings

This section includes the findings that lead to the identification of the main challenges that academics in Kashim Ibrahim Library face.

Table 1: Challenges Faced Using Web/Virtual Facilities amidst COVID 19 Pandemic

N	Challenges	Respondents			Total	Mean	SD
		C	NC	UD			
1	Login detail problem	69(71.8%)	27(28.1%)	0(0%)	96	2.79	2.18
2	Space/Accommodation	70(72.9%)	26(27.0%)	0(0%)	96	2.51	1.31
3	Time zone barrier	78(81.2%)	17(17.7%)	1(1.0%)	96	3.00	0.89
4	Poor Power supply.	91(94.7%)	5(5.2%)	(0%)	96	2.60	0.98
5	Network fluctuation	94(97.9%)	(2.0%)	0(0%)	96	2.81	1.97
6	Punctuality and time limitation problem	55(57.2%)	39(40.6%)	2(2.0%)	96	2.91	1.09
7	Data Cost.	88(91.6%)	7(7.2%)	1(1.0%)	96	2.51	1.16
8	Audio production	65(67.7%)	28(29.9%)	3(3.1%)	96	2.77	0.8
9	Video production	70(72.9%)	20(20.8%)	6(6.2%)	96	2.69	0.91
10	Synchronization	80(83.3%)	11(11.4%)	5(5.2%)	96	2.96	0.88
11	Tone/accent/pronunciation problems	67(69.7%)	15(15.6%)	14(14.5%)	96	2.50	0.91
12	Technical expertise	45(46.8%)	46(47.9%)	5(5.2%)	96	2.54	0.69
13	Power backups	92(95.8%)	4(4.1%)	0(0%)	96	2.59	0.96
14	No central support	85(88.5%)	10(10.4%)	1(1.0%)	96	2.53	1.51
15	Complacency	76(79.1%)	15(15.6%)	5(5.2%)	96	2.70	0.81

Field Study, 2020, Benchmark 2.5

Key: C=Challenged; NC=Not Challenged; UD=Undecided; SD=Standard Deviation

The items in Table 1 have the following mean scores:Login detail problem ($\bar{x}$ =2.79; SD=2.18), Space/accommodation($\bar{x}$=2.51; SD1.31), Time zone barrier ($\bar{x}$ =3.00; SD0.89), Power supply($\bar{x}$ =2.60; SD0.98),Network fluctuation($\bar{x}$=2.81; SD 1.97), Time limitation problem ($\bar{x}$=2.91; SD1.09), Data Cost.($\bar{x}$=2.51; SD1.16), Audio production($\bar{x}$=2.77; SD0.8), Video production ($\bar{x}$=2.69; SD0.91), Synchronization ($\bar{x}$=2.96; SD0.88), Tone/accent/pronunciation problems ($\bar{x}$=2.50; SD0.91), Technical expertise($\bar{x}$=2.54; SD0.69), Power backups ($\bar{x}$=2.59; SD0.96), No central support ($\bar{x}$=2.53SD1.51), Complacency ($\bar{x}$=2.70; SD0.81).

Table 1 generally revealed that challenges are high for academics in Kashim Ibrahim Library in the use of VCZMs amidst COVID pandemic. All the mean scores are above the 2.5

benchmark indicating “challenged”. This paragraph specifically detailed the challenges in order of magnitude up-down from network fluctuation during use as the main challenge 97.9%, followed by Power interruption 95.8%, Time allocation 94.7%, Data cost 91.6%, lack of central support 88.5%, synchronization 83.3%, Time Zone Barrier 81.2%, complacency79.1%, space/accommodation and video production 72.9% respectively, login detail problem 71.8%, Tone accent/pronunciation 69.7%, audio production 67.7%, punctuality/time limitation 57.2% and Technical expertise 46.8%. Based on the results, the respondents’ critical factors that needs to be urgently addressed and with highest priority which affect the usage VCZMs are (1) Network fluctuation: stable and robust network is needed (2) Power backups: steady and uninterrupted power should be provided (3) Time allocation and (4) Data cost.

The implication of the finding above is that the situation needs urgent intervention. Management of institutions, agencies and government bodies need to rise to the support of staff who are ready to use the facilities for information sharing for both personal and national development. This finding agreed with Brianna, Derrian, Hunter, Kerra, & Nancy 2019 who identified that improvement on the use of VCZM facilities for development of the populace is not what should be left on individual shoulders but government.

Table 2 includes the findings that lead to suggestions of measures that could be put in place to mitigate the challenges of faced in VCZMs among Kashim Ibrahim Library staff.

Table 2: Strategies for Improving the Use of Web/Virtual Facilities

S/N	Statements	Frequency	Percentages
1	General encouragement/Orientation by Management.	70	72.9
2	Provision of Modern Technology	94	97.9
3	Need for Fast Internet connectivity	92	95.8
4	Need for Uninterrupted Power Supply	88	91.6
5	Efficient Administration	76	79.1
6	Regular maintenance of facilities	79	82.2
7	Well-equipped Computer Laboratories	84	87.5

8	Fully Digitized Operations	90	93.7
9	Provision for emergencies (Plan B)	60	62.5
10	Improved/Hybrid Structural Facilities	80	83.3
11	Renewed Government Policies on Virtual Education	91	94.7
12	Improvement on Digital Equity.	66	68.7

Field Study, 2020

Table 2. detailed the response of staff on steps to alleviate the problems faced in the use of VCZMs. The findings revealed that Provision of Modern Technology is suggested as first strategy as indicated by 94 (97.9%) closely followed by Need for Fast Internet connectivity 92 (95.8%). Renewed Government Policies on Virtual Education 91 (94.7%), immediately followed by the need for Fully Digitized Operations 90 (93.7%) and Need for Uninterrupted Power Supply 88(91.6%). Well-equipped Computer Laboratories follows with 84 (87.5%) while Improved/Hybrid Structural Facilities 80 (83.3%). Regular maintenance of facilities 79 (82.2%) and Efficient Administration 76 (79.1%). General encouragement/orientation70 (72.9%), Improvement on Digital Equity 66 (68.7) and lastly Provision for emergencies (Plan B) at 60 (62.5%).

Contemporary education and its facilities have taken new approach. To keep pace, authorities must aid the processes of adaptation by the user to be hitch free at moments of disasters like the pandemic. Bani, & Hassan (2007), in a study on strategies for efficient educational administration as may be required by the public, they identified that no institution can attain any significant height without the government or corporate agencies putting the needed facilities in place. Hence to make VCZMs achievable, it is suggested that stakeholders consider the suggested measures.

Conclusion

From analysis and summary of the findings, it was concluded that the academic staff of Kashim Ibrahim Library use online virtual/zoom facilities for academic interaction and research,

for conferences and meetings but are grossly set back by obvious challenges as enumerated in the table. However, these problems can be lessened or totally eradicated by a well prioritized government policies by implementing the suggestions.

Recommendations

Based on the findings and the conclusions, the following recommendations were made:

1. The study therefore recommended that adequate electronic communication and computer network facilities like super highway bandwidth be put in place.

2. A renewed government and management policies on virtual education to discourage digital divide by putting in place a robust IT/ICT Infrastructure for academic institutions.

References

Affouneh, S., Salha, S., N., Khlaif, Z. (2020). Designing quality virtual conferences/meetings environments for emergency remote teaching in coronavirus crisis. Interdisciplinary Journal of Virtual Learning in Medical Sciences, 11(2), 1–3.

Almajah, M. A., Al-Khasawneh, A., and Althunibat, A. (2020).Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic

Barboni, L. (2019). From shifting earth to shifting paradigms: How webex helped our university overcome an earthquake. CISCO.

Basilaia, G., Dgebuadze, M., Kantaria, M., &Chokhonelidze, G. (2020). Replacing the classic learning form at universities as an immediate response to the COVID-19 virus infection in Georgia. International Journal for Research in Applied Science & Engineering Technology, 8(III).

Baytiyeh, H. (2018). Online learning during post-earthquake school closures", Disaster Prevention and Management. An International Journal, 27(2), 215–227.

Brianna, D., Derrian, R., Hunter, H., Kerra, B., Nancy, C. (2019). Using EdTech to enhance learning. International Journal of the Whole Child, 4(2), 57–63.

Briggs, B. (2018). Education under attack and battered by natural disasters in 2018. *TheirWorld*. https://theirworld.org/

Bryman, A. (2012). *Social Research Methods* (4th ed.). New York: Oxford University Press

Carey, K. (2020). Is everybody ready for the big migration to online college? Actually, no. *The New York Times*.

Cohen, L., Manion, L., and Morrison, K. (2011). Research methods in education (7th ed.). Ashford Color Press, Great Britain

Favale, T., Soro, F., Trevisan, M., Drago, I., Mellia, M. (2020). Campus traffic and virtual conferences/meetings during COVID-19 pandemic. Computer Networks, 176, 107

Lei, G. (2020). Peking University spring semester begins with online teaching. *Peking University News*. Retrieved from http://news.pku.edu.cn/xwzh/979e47acd7bf4c9592945323a2292f4d.htm

Liguori, E. W., Winkler, C. (2020). From offline to online: Challenges and opportunities for entrepreneurship education following the COVID-19 pandemic. *Entrepreneurship Education and Pedagogy*.

Martin, A. (2020). HowtoOptimizeOnlineLearningintheAgeofCoronavirusCOVID-19A5-PointGuideforEducators.

Rieley, J. B. (2020). Corona Virus and its impact on higher education. *Research Gate*.

Riyadh, B. D., & Hassan, S. K. (2007). Obstacles to e-learning in the Jordanian secondary schools from the point of view of teachers and students. Paper presented at the International Conference on Distance Education, Muscat.

Singh, V., Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). American Journal of Distance

The Research Advisors, (2013) Available at http://research-advisors.com

UNESCO, (2020). *COVID- 19 educational disruption and response*. Retrieved from https://en.unesco.org/themes/education-emergencies/coronavirus-school-closures