

Digital Libraries in Jordanian Universities and Overcoming the Digital Gap in the Time of COVID-19: A Case Study of Yarmouk University

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Abstract

This study aims to evaluating the pattern of digital library utilization in the time of COVID-19 by the postgraduate students in Yarmouk University - Jordan, in addition to helping the university library's staff and decision makers to identify the role that the digital library play as a response to the closure due to the COVID-19 pandemic and its effectiveness, Moreover, to examine availability of the ICT infrastructure and support modality the distance teaching and learning which took place due to the university closure since the start of the pandemic. A was used to collect data on how the needs of the postgraduate students and their use of the digital library resources during the period of COVID-19 pandemic. The sample consisted of (180) postgraduate students selected by using simple random sampling technique through (GoogleDocs) in order to represent the study population which is (759) postgraduate students. The findings indicated the poor utilization of digital information resources since students depended on the internet to obtain free digital resources. As a conclusion, the students' skills have overcome the digital gap as their generation depends on the use of all forms of smart devices.

Keywords

Digital Library, Academic Libraries, COVID-19, Postgraduate Students, Jordan.

Introduction

The outbreak of the deadly COVID-19 represents a set of challenges to various society sectors and one of which is higher education. Universities with large numbers of students are considered vulnerable to infection particularly (Lassoued, & Alhendawi, & Bashitialshaaer, 2020). As Jordan continues to fight the epidemic, the universities all over the country follow the guidelines of public health to close the universities. The emerging virus causes many challenges to the universities, libraries and information institutions in

their attempts to meet the needs of users in the digital era. Currently, the libraries are investing the digital resources heavily, especially the academic libraries in which the users access different digital resource on the internet. There is no doubt that there were some urgent initiatives that emerged to prevent the outbreak of the COVID-19. For example, in our Arab world, there is an initiative named 'Darsak', (which means your lesson) and it is a free educational platform launched by the Ministry of Education in Jordan in order to continue the education process.

Digital Libraries & Digital Gap in COVID-19 Era

Apple Inc, for instance, presented a comprehensive educational application called (Classroom App), while Microsoft offered the service called 'MS Education' (Ali, 2020). Oak Park Library addressed its users through its logo 'your digital library always open' (World Development Report, 2018). Furthermore, European Research Libraries provides trustworthy resources for researchers including many publishers, associations, and scientific organizations with lists of related articles which are currently free. Accessing these resources can be canceled any time and some of them can be pre-copies (Europe's Research Library Network, 2020). Moreover, they are keen to exclude opinion articles and to provide scientific information and find scientific data and information³. However, how can the professionals of technology, education and learning be prepared for autumn which is nearer in spite of the uncertainty and many challenges? (World Economic Forum, 2020). They have incorporated into their technical plan numerous books and information resource centers, in order to deliver better services to users (Oak Park Public Library, 2020). All of what mentioned above makes the pandemic of COVID-19 negative reflection on the digital gap as it is considered a crucial issue related directly with how to get a job and then maintaining this job to be a standard to provide qualitative life (Goodwillsp, 2020).

In this digital era in which COVID-19 has spread all over the world, we see before and during the outbreak of this virus that the digital gap has expanded between 'who possesses and who does not posses'. This gap is between who can access and use the tools of technology and communication and who cannot. Currently, this affects the ability to develop more than ever, since even accessing these tools and the internet with high quality, which affects all life sectors such as the health sector and educational sector, is very difficult. All that is mentioned above indicate the negative reflection the pandemic has on the digital gap as it is considered a crucial issue related directly with getting employed and then keeping the job in order to ensure a decent quality life (Nature, 2020). World economic forum indicated that billions of people communicate over internet to

keep in touch during the COVID-19 pandemic. In addition, about of half of the world's population cannot access the internet and be informed about the updates. What about these billions of people who cannot access the internet? (World Economic Forum, 2020).

During the period of COVID-19 crisis in the first quarter of 2020, the libraries of Arab universities including Jordanian universities have started new forms of cooperation through The Center of Excellence at Yarmouk University which provides the universities' libraries with digital resources, in addition to using emerging techniques to upload catalogs of the libraries' association and publications of the electronic journals on the internet as well as encouraging communication. As a result, there is a need to increase the investment in education (World Development Report, 2018). The university administrators need to pay more attention to the quality of library facilities in all the universities involved. This will allow libraries to fulfill user quality of service standards in all universities, leading to academic improvements (World Development Report, 2018; Grajek, 2020; Cox, 2020).

This study differs from previous literature, that was conducted to demonstrate the role of digital libraries in overcoming the challenges they may face. This is reflected in bridging the digital divide, and one of the challenges of COVID-19 crisis, that digital libraries provide many digital sources that may use remotely and which be provided freely and over internet with high quality. When looking for the future challenges, digital libraries will continue to present great services in spite of the epidemic and its outbreak dramatically. So, the main role of the academic and public libraries is represented by provision the support for different beneficiaries specially those who are tackling the task of teaching and learning inside or outside the universities, whether before Corona crisis, during the period of closure, or after the outbreak of the virus and continuation of opening some of vital sectors.

Study Purposes

The purpose of this study is to answer one question:

How can digital libraries in the Jordanian universities overcome the digital gap during the period of COVID-19 pandemic?

In order to innovate research methods that are able to provide data to answer this research question, the following purposes are identified:

- Evaluating the potential role of the digital libraries in Jordanian universities in overcoming the digital gap during the COVID-19 pandemic.

- Recognizing the challenges that universities' libraries faced in Jordan and reducing the limitations of the virus which prevent the world from cooperating directly in all fields.
- Using digital libraries in Jordanian universities and the special role that they play to meet this challenge.

The Importance of Study

This study, which measures the scope of digital libraries role in overcoming the digital gap and evaluates the ability of digital libraries in overcoming this gap during the period of global home isolation, is considered the first of its kind, and accordingly:

1. The findings of the study will be basic information that is important with regard to the digital gap in terms of using digital information resources and the internet.
2. It will help librarians, academics, and governmental policies makers cooperate in their seeking to develop the infrastructure of the Jordanian universities' libraries.
3. It is important to understand how libraries need to amend their practices and provide services to accommodate the new patterns of research and scientific communication.
4. It helps develop digital libraries and services which concentrate strategically on reducing the digital gap in such circumstances that have restricted the world and directed it to the distance learning processes.

Study Methodology

To achieve the purposes of the study, the researcher used the survey method through a questionnaire to collect data on the use of the digital library resources by postgraduate students. In addition, the current issues related to the postgraduate students' role in utilizing the digital library services during the universities closure because of COVID-19 were investigated. Furthermore, the survey method was used to recognize the obstacles that prevent accessing to the digital information, and to explore the scope of the digital library environment during the COVID-19 pandemic in Jordanian universities as well as whether the library services attached to the network were useful, practical and meet the users' needs.

Study Sample

The number of the postgraduate students at the Yarmouk University during conducting this study was 759 for the academic year 2019-2020. The sample that represented the population was 200 postgraduate students selected through using simple random sample technique through using (Google Docs). Moreover, Israel model⁷ was used to determine

the sample size. The Israel model indicates the possible sample sizes as ($\pm 3\%$, $\pm 5\%$, $\pm 7\%$, & 10%) referring to the accuracy levels so that the trust level is (95%) and ($P=0.5$). Since ($\pm 10\%$) of accuracy is chosen and the total number of the involved in the survey study is (759) the number of 200 postgraduate students selected is justified, noting that the retrieved analyzable questionnaires were (180). (Israel, 2003).

The Honesty and Stability of the Tool

To ensure the validity of the questionnaire used to collect data on this study, it was investigated by number of academics whose research fields are related to this study. The academics' notices, proposals and suggestions were used to review the draft of the questionnaire before final accreditation. And in order to ensure the reliability of the tool, (10) questionnaire was distributed to (10) of the postgraduate students at Al-Balqa Applied University through using E-mail. The answers were investigated through using (Pearson Correlation) to get reliability efficiency of (0.78).

Procedures of the Tool Management

The researcher distributed the questionnaire to the study sample via e-mail. (180) questionnaire were retrieved out of (200) questionnaires that were sent, and this represent the percentage of (90%) of the total questionnaires sent. Data that collected from the questionnaire were coded and then inserted in the statistic package of the social science (SPSS) for the purpose of highlighting the comparative frequencies of the participants' responses.

Data Analysis Method

The descriptive statistics were used including the number of frequencies and percentages for the purpose of analysis.

Table 1 Sex of the Respondents

Sex	Frequency	Percentage %
Females	138	76.7%
Males	42	23.3%
Total	180	100%

Table 2 Educational level of respondents

Educational level	Frequency	Percentage %
Master's degree	70	38.8%
PhD	110	61.1%
Total	180	100%

The tables (1 &2) show that the number of the females' answers is (S=138), with a percentage of (P=76.7%) which is higher than the number of the males' answers that is (S=42), with a percentage of (P=23.3%). This indicates that the female's postgraduate students are more than the males across different faculties in the university. The table also shows that (S=110) with a percentage of (P=61.1%) are of the postgraduate students in the Doctorate stage. While, (S=70) with a percentage of (38.8%) are of the postgraduate students in the Master Stage.

Table 3 Knowledge of Digital Library

Variables	Frequency	Percentage %
1. Knowledge of the website of the university' digital library	180	100%
2. Knowledge of the university' subscription the digital database (Emerald)	168	93.3%
3. Knowledge of accessing digital resources in the university via smart devices connected to the internet	168	93.3%

Table (3) shows that all respondents with a percentage of (P=100%) have the knowledge of the existence of the website of the university' digital library. The average of awareness about the digital library refers to the focus of the graduate studies policy in the Jordanian universities on using printed and digital resources to write researches and support the educational process.

In addition, most of the study sample with a percentage of (P=93.3%) know about the subscriptions of the university in the digital databases, and the possibility of accessing these databases via smart devices connected to the internet. This could be associated with the spread of E-mails sent by the university library to make the postgraduate student aware of digital resources that the university subscribes to.

Table 4 Frequency and Percentage of the Use of Digital Library during university closure due the COVID-19

Variables	Frequency of Using Digital Library	Percentage %	Frequency of Using Internet	Percentage %
Daily	30	16.6%	120	66.6%
Weekly	0	0	30	16.6%
Every two weeks	12	6.6%	0	0
Monthly	0	0	0	0
Sometimes	108	60%	30	16.6%
Never	30	16.6%	0	0
Total	180	99.9%	180	99.8%

Table (4) shows that (P=60%) of the study sample uses the digital library from time to time, while S=30 with a percentage of (P=16.6%) indicated that they do not use the digital library. The reason is their dependence on the internet as findings showed that (P=66.6%) of the study sample use internet daily to access the free digital resources. The answers given by a number of the study sample on using digital library is because of the ease of accessing free digital resources provided by the government at reasonable prices for all groups of people, academics and non-academics specially at the era of COVID-19 which made governments all over the world committed to facilitate accessing the internet to keep and maintain the sustainability of education and learning via various platforms.

Table 5 The pattern of using digital library resources during the university closure due to COVID19

Variables	Frequency Yes	Percentage %	Frequency No	Percentage %
1. I visit the digital library website to search for information resources	54	30%	126	70%
2. I can access the resources of the digital library from home	66	36.6%	96	63.3%
3. I use the resources of the digital library for meeting academic research-related goals only	60	33.3%	120	66.6%
4. I am satisfied with the resources of the digital library	24	13.3%	156	86.6%

Table (5) shows that S=126 with a percentage of (P=70%) of answered that they do not utilize digital library to access digital resources and the reason is because they focus on using internet which provides them with information about the latest news on COVID-19. While S=66 with a percentage of (P=36.6%) indicated that they utilize the digital resources at their houses during the university closure.

The findings of this investigation of using digital library resources were not surprising, (P=60%) of the study sample pointed out that they use digital library sometimes. While, the majority of the study sample stated that they not only use the digital library for academic research, but also, they use it for other activities. And as the researcher has mentioned above, the research could be on any information about COVID-19. Furthermore, table (5) shows that (P=86%) were not satisfied with the digital resources' services of the library since it does not meet all the users' needs regarding resources and specialties.

Table 6 Difficulties in using digital library resources during the university closure due to COVID-19

Variables	Frequency	Percentage	Frequency	Percentage
	Yes	%	No	%
1. Lack of knowledge on how to use computer	0	0	180	100
2. Slow access to digital library via internet	54	30	126	70
3. Absence of the internet connection	0	0	0	0
4. Unavailability of resources that are related to the needed information	144	80	36	20
5. Unwillingness to read via computer screen or smart devices	24	13.3	156	86.6
6. Unavailability of continuous power source	54	30	126	70

Table (6) explains the difficulties and obstacles that face the users of the postgraduate students when using digital resources. The analysis findings pointed out that few (S=54) with a percentage of (P=30%) answered (Yes) on 'the slow internet access', and the larger answers of (Yes) were on the 'unavailability of the resources that are related to the needed information which is one of the main obstacles postgraduate students face as (S=144) with a high percentage of (P=80%) of the study sample answered (Yes) to this variable. While among the other factors that were less restrictive was the 'unwillingness to read via computer screen or smart devices' with a percentage of (P=13.3%). However, in an open question at the end of the questionnaire on the students challenges when using digital library in the light of COVID-19 pandemic, some answers indicated the difficulty of using the official E-mail of the university in addition to having difficulty in using the user's name and password given to the postgraduate students at the University as a formal mean to access digital databases and all digital library services that the university subscribes to.

Discussion

In spite of the availability of large body of literature related to the digital gap in general, this study was an attempt to evaluate the extent of the gap in reality related to the universities' closure due to COVID-19 and to narrow that gap in some countries like Jordan. As a matter of fact, there is an assumption that this gap expands more and more in normal cases, but in this study, it was necessary to attempt to measure the role of digital libraries and their resources in narrowing the gap (if it does exist) and then attempt to identify its main characteristics and features in the time of COVID-19. All of this is before investigating the role that digital libraries may play in filling this 'gap'.

As has been mentioned in the analysis of results, although all postgraduate students have the knowledge that there is a digital library in the university, the valuable information resources are not fully used by those users. In addition to their dependence on the internet to access free digital resources, it has been shown that internet facilities provided by the Jordanian Government in cooperation with communication authorities during universities closure sometimes serve the postgraduate students in spite of inability to access the internet due of the great pressure on the network by all categories of society. As a result, this explains why (P=20%) of the respondents utilize the digital library resources to access information they need even though it does not meet all student's needs. In spite of all initiatives lead by the government to solve and amend the problems of infrastructure and provide a broadband access of the digital content, as well as the latest (planned) improvements, some obstacles and problems still remain for some participants which cause frustration in using internet sometimes.

It is impossible that the reported unwillingness to use the digital library is related or linked to any technological problems as has been mentioned in the analysis. If the postgraduate students can recognize the useful effect of the digital library on their research and distance study, the unwillingness to use it may be due to some pervasive factors, such as the two factors of language and culture that most postgraduate students share at the university.

Conclusion

With some caution, it can be said that Jordan is considered as a model for Arab countries in the region because of its management to Corona pandemic in which the same studies conducted in other universities serve Arab countries and it is likely to highlight the same issues.

Besides, Jordan is considered as a regional pioneer and leader because of its accreditation of to ITC, the quality of higher education, in addition to the implement of the policy of the national information and electronic government services that it shares with Arab neighbors the belief that technology and education are two key factors in social development and economic growth.

Recommendations

Evidences indicate that filling the gap can be achieved by two ways: Firstly, if librarians become more active advocates to show the benefits of ICT and inform the researchers on the related developments which enhance information accessing, the productivity of

research and sustainability in the process of education and distance learning. Secondly, if the image of librarians is enhanced as experts who are very recognized in the content and digital services by having them provide more training opportunities for researchers, teaching staff, and students.

Based on the findings of this study, the recommendation are as follows:

- The university library has to guide the student of all levels in general in addition to the teaching staff on how to access the digital resources and databases that the university subscribes to.
- Establishing academic libraries in order to support teaching and research since they are very important for accessing and creating knowledge.
- Training and increasing the skills of librarians in cooperation with postgraduate students, teaching staff, other students, and administrative employees as an important partner in the research process.
- Improving the internet facilities of the university to facilitate accessing the digital resources of the university.
- Concentrating on finding a solution for the user's name and password problem which is an official mean for correspondence and accessing the digital resources of the university.

References

- Lassoued, Z., Alhendawi, M., & Bashitialshaaer, R. (2020). An Exploratory Study of the Obstacles for Achieving Quality in Distance Learning during the COVID-19 Pandemic. *Education Sciences, 10*(9), 1-13. <http://doi.org/10.3390/educsci10090232>
- Ali, N. (2020). How did the COVID-19 reveal the Arab digital divide? *Policy Forum Arabic*. <https://www.alsiasat.com>
- Oak Park Public Library (2020). *News & stories*. <https://oppl.org/news-events/>
- Goodwillsp (2020). Addressing the Growing Digital Divide in the Era of Coronavirus. <https://goodwillsp.org/digital-divide-coronavirus/>
- Europe's Research Library Network (2020). Coronavirus: A Message for Our Libraries from LIBER's President, <https://libereurope.eu/>
- Grajek, S. (2020). Educause Covid-19 Quick Poll Results: Fall Planning for Education and Student Support. *Educause*, <https://er.educause.edu/blogs/2020/5/educause-covid-19-quickpoll-results-fall-planning-for-education-and-student-support>
- Cox, Ch. (2020). Academic libraries will change in significant ways as a result of the pandemic (opinion). Washington: Inside Higher Ed. <https://www.insidehighered.com/views/2020/06/05/academic-libraries-will-change-significant-ways-result-pandemic-opinion>

Nature (2020). *Six tips for data sharing in the age of the coronavirus*.

<https://www.nature.com/articles/d41586-020-01516-0>

World Economic Forum (2020). Coronavirus has exposed the digital divide like never before.

<https://www.weforum.org/agenda/2020/04/coronavirus-covid-19-pandemic-digital-divide-internet-data-broadband-mobile/>

World Development Report (2018). *Learning to Realize Education's Promise*.

<https://www.worldbank.org/en/publication/wdr2018>

Israel, G. (2003). Determining sample size Fact Sheet PEOD-6, Florida Cooperative Extension.

http://www.soc.uoc.gr/socmedia/papageo/metapyxiakoi/sample_size/samplesize1.pdf

Yoganingrum, A. (2020). How to make biodiversity articles highly cited?. *Webology*, 17(1), 109-129.

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