

# Readiness of Qassim University for e-Learning during COVID-19 pandemic: Students' Perspective

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## Abstract

Most governments across the world have temporarily shuttered education institutions to halt the spread of the COVID-19 epidemic. The epidemic has caused countrywide lockdowns that might put technology to the test for finding solutions to distant learning. Saudi Arabia, as a country, has accomplished online and remote learning despite the persistent closure of schools. However, a few systems have been identified to help with distance learning. Many countries and schools had not prepared for such systems and had little equipment to facilitate distance learning. The access to technology by households varies as some middle-income nations have less access to cellphones and broadband internet. Therefore, the study aims to identify the extent to which institutions have incorporated IT technology in e-Learning systems. The study focuses on 250 students at Qassim University during the outbreak of the COVID-19 pandemic. A link to an online questionnaire was sent to the students as they were asked to complete and mail the report. A chi-square test and standard deviation were used to test and analyze the results. The results showed the efficiency of using IT technology in achieving e-Learning systems. Therefore, the degree of readiness of institutions for the COVID-19 pandemic was low, and the study has shown a statistical significance of IT technology to be included in the e-Learning system to combat the effects of the pandemic.

## Keywords:

COVID-19 epidemic; e-Learning; readiness; Saudi Arabia.

## 1. Introduction

University learners around the world have had their training seriously disturbed that time due to the COVID-19 pandemic, as universities find it difficult to deal with repeated closures and reopening's, and move, if an option, to online education. However, it is the students who are most affected by the emergency procedures. Universities closing because of health and other crises are not novel, about limited into the developing world, plus the possibly overwhelming results are well apprehended, including learning loss and high dropout rates<sup>[1]</sup>.

Students with the least potential and the poorest are the most affected when universities close, so governments have been fast to call to the connection of education also the protected availability of universities, wherever feasible, as nations begin to impose closure actions. "Unfortunately, the range and rate of the modern changes in education is unique and, if prolonged, could advance the right to learning," stressed "the Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO)."

Nevertheless, the idea of a virtual study

online is a far-fetched vision for millions. In April, UNESCO reported gaps in digital technology-based distance education, by data explaining that some 830 million learners do not have a path to a computer. The picture is especially severe in low-income countries: approximately 90% of learners in some countries do not have a home computer, while 82% cannot connect to the Internet. Last June, the "United Nations Children's Fund (UNICEF) responsible for education," Robert Jenkins, said, "Us are soon studying at a deeper and extra divisive learning crisis. But, in several developing countries where online or computer education is not an option for greatest learners, radio has been instrumental in reaching millions of people and is being used to maintain some form of education. The study aimed to reveal the degree of readiness for digital learning in the Kingdom of Saudi Arabia during the Corona pandemic from the perspective of Qassim University students, and to identify the extent of students' readiness and availability of possibilities to use digital learning in the Kingdom of Saudi Arabia, and the availability of digital infrastructure at Qassim University, and to identify the impact of the capabilities of And the skills of students and faculty members in dealing with the technology necessary to prepare for digital learning.

Mobile learning (M-Learning) is acquiring a lot of significance among the new generation. Mobile learning upgrades for understudies thinking and spurs them for profound learning and hence prompts sig-

nificant production of information. Among the benefits of versatile learning, scarcely any significant ones incorporate; Mobile learning is an extra or supporting wellspring of discovering that are accessible any time; wherever; any organization; on any remote gadget, and so on Versatile learning raises the learning revenue and correspondence of students as it gives learning material in various configurations that are open whenever. Portable learning upholds better approaches for learning through cell phones, for example, cell phones, PDAs and MP3 players. Innovations focused on Mobile learning are bound to significantly affect fair and square of proficiency in the learning system. This has prompted most learning organizations to embrace versatile innovations in the different fields of learning exercises <sup>[2]</sup>.

## 1.1. Structure

### 1.1.1 Definition

The pervasiveness of portable technologies is one reason why it might demonstrate hard to characterize the m-learning idea (Grant 2019; Ferreira et al. 2015). Its definition is relevant to online schooling (e-learning). "E-learning can take place through various electronic media such as PCs and PCs, among others, because these devices may connect to both online and offline programs. Regardless, mobile customers may access m-learning information from any location, whilst others are scattered around the city. Several studies consider m-learning to be an advancement or a subset of e-learning rather than a separate discipline. Portable education, ac-

According to Garcia-Cabot, de-Marcos, and Garcia-Lopez [3], is a subset of e-learning since it is a more evolved invention than the previous one. Conversely, several fresh studies suggest that this form of learning is a distinct discipline [4]. Some argue that the 'portable' portion of m-learning refers to their users' mobility [5] [6]."

### 1.2. Value gained in education through mobile learning

Mobile technologies can be of incredible assistance in the teaching learning process. Since mobiles are small, helpful and easy to use, those features can be used while planning portable learning environment. Coming up next are the benefits of mobile learning:

- Cellphones assist students with getting to learning content any place and whenever.
- Learners can learn while they are commuting and voyaging and time is saved.
- Mobile can store tremendous measure of data in spite of its size. Subsequently, the printing of learning materials can be diminished.
- Mobile technology enables understudies to intently interface with their friends, instructors, far off and even vested parties around the world. This enables interactivity.
- Helps to upgrade abilities, with a level of security that might be missing when utilizing shared PC offices.
- Good help for supported methods of interaction.
- Introduced opportunities for students to give prompt feedback on their learning performance.

- Psychological help for those in danger of dropping out, through interpersonal organizations or individual direction from a guide.
- Learning materials can become available to a bigger crowd, through digital recordings, versatile applications, web journals and digital books, and so forth
- Support student retention, movement and progress.
- One can get to illustrations, video clips and sound libraries from anyplace, including public places and moving transports [7].

### 1.3 The use of m-learning in instruction (with examples)

Diverse education organizations should take on various techniques for portable learning. For example, a few schools practice distance learning online modules, tablets which are generally utilized since note pads, plus different gadgets. Example of such frameworks that help the utilization of these assets is a reality-based versatile education framework. This framework is utilized to do explore exercises dependent on requests. Chiang, Yang, and Hwang [8] undertook an examination on a reality-based flexible teaching framework, which was initially tested in a Taiwanese primary school where an instructor was forced to show 57 understudies from two distinct courses. The study was intended to determine how effective the framework is at inspiring and teaching understudies. "The outcome was favorable, and the framework was found to be appropriate for further improving learning and motivation

in undergraduates. Further discoveries reveal that such understudies were moved to have confidence, became attentive, and had many aspects of life that were highly relevant to schooling [8]."

Mobile technologies are extremely alluring and simple to deal with and access data. They are cheap, can be effectively conveyed and in this way have extraordinary potential for arriving at underestimated gatherings and furnishing them with admittance to additional learning and improvement. Cell phones and advancements that help portable learning contain:

- E – Book
- Handheld game control center, new gaming consoles
- individual sound player for hearing digital broadcasts
- iPod
- Tablet Computer
- PDA in the homeroom and outside
- Handheld sound and interactive media guides, in exhibition halls and displays
- Mobile and Smart Phone

## 2. Learning Management Systems

Recently, students and teachers have been focused on keeping the learning system as easy and engaging as possible. Thusly, such countless developments have come up to get rid of the conventional learning techniques. Researchers are introduce concocting virtual frameworks of instruction, one of which includes an administration framework named as the learning management system.

The LMS, "which is frequently used in face-to-face and online learning, blended

learning, and internet learning settings, has been increasingly used by gaining knowledge foundations to help with educational conveyance [9] [10]. The LMS is growing at a growth yearly rate of 24.7 percent from 2016, with a global LMS market estimated to reach USD 15.72 billion by 2021 as a cost-effective option for massive scope dispersion of learning resources, along with unbounded reception of sophisticated innovation [11]."

The LMS may be utilized either on-premises or in the cloud. It takes advantage of the web's whenever and whenever availability, breaking down genuine study hall barriers " [10] to provide capabilities such as course management, content administration, student executives, and so on. Students benefit from the LMS in a variety of ways, including easier access to learning resources, communitarian learning with classmates (Islam and Azad, 2015), and online instructor feedback [12]."

### 2.1 Using mobile learning in conjunction with LMS

"This is the most common way of applying learning management instruments in a versatile learning environment. It necessitates that understands completely the system of a portable learning and match them with those of learning the learning management system. For example, coordinating 'miniature lectures' with mobile learning [13]. Any blend of a learning the management framework with mobile learning leads to another substance. In the previously mentioned mix, the subsequent tool is a miniature learning gadget which supports the

utilization of portable terminals in learning. The mix of portable learning and a learning management system additionally results into an entirely unexpected framework known as the mobile learning system (MLS). Such a framework empowers understudies and educators to get to taking in materials from their PCs and furthermore from Smartphone. The framework is supposed to be successful since different platforms be utilized simultaneously. The framework incorporates improvement of androids, explanation of recordings, examination of how grouping happens, push knowledge, Lucien full-text search, and other helpful inventories. The utilization of various stages guarantees that understudies and instructors associate from any spot, and whenever they need, since resources can be shared even in significant distances."

Mobile learning and education can also be combined through a variety of activities and events. As a result, the technique utilized is known as distant learning. Because of the accessibility of better specialized gadgets, educators may get access to modules, assign duties and chats to understudies, and receive feedback on all errands assigned to substantial distance pupils. Because it is engaging, time-bound, and energizes execution and assessment measurements, the framework encourages understudies to engage more in the learning system. Such a framework is accordingly more powerful in affecting information and executing the school educational plan than the customary strategies for learning.

Likewise, integration allows learning adaptability where there are such a large number of necessities for learning. Customarily, a solitary learning the executives framework was answerable for creating, overseeing, and furthermore for course and content conveyance. Since most such frameworks are not viable with one another, there is need for the advancement of a wide range of frameworks with various usefulness. Such frameworks permit students to just work on what they need and dispose of that which they detest<sup>[14]</sup>.

One more method of integration is the utilization of cell phones that are incorporated with moodle learning the management systems. This mix builds the capacity of understudies to deal with specialized conceivable outcomes in fusing exercises of versatile learning during the time spent e-learning. The partnership also permits the usage of an application interface which has been coupled to several kinds of smartphones for the purported "mainstreaming" of all portable technologies in electronic learning<sup>[15]</sup>.

### **3. AIM OF STUDY**

The main objective of this work revolves around finding out the future college student' opinions regarding the future trends in e-learning field, to identify the future of using IoTs technology in e-learning applications.

#### *3.1. Finding*

##### *a) Sample and procedure*

To collect empirical data for this research, the survey questionnaire method was tacked up. The questionnaire was admin-



istered to students in five public faculty in Qassim university. 250 students, from Qassim university, were enrolled for the current study. The students sample consisted of 130 (52%) males and 120 (48) females. All 250 students contributed to the survey voluntarily. A link sent using university emails to the online questionnaire was mailed to them through and they were asked to complete the questionnaire.

#### *b) Measurement Instrument*

In this respect, the Instrument was developed to measure the questionnaire that measures the willingness of Qassim University learners for e-learning and distance education during the Corona pandemic. As there are no tested plus reliable means to learning students' viewpoints, the questions were created by the researchers after a review of the literature, also psychometric studies were not transferred. The estimation objects depended on a five-point class Likert scale, going from (1-5) strongly disagree to strongly agree. The interior consistency unwavering quality was 0.84 and Cranach's  $\alpha$  ( $\geq 0.88$ ), which was utilized to assess the dependability of the instrument. Thusly, the survey had adequate acceptable quality. The questionnaire items consisted of 23 items with five constructs as follows: Hardware and software Components (HS), Internet services and capabilities (IC) - Usability and Resiliency (UR) - Ease of learning (EL) - Efficiency and achievement (EA). focus on practices in undergraduate education consistently predict development during the 2020-2021 academic year's first semester. the ques-

tionnaire form and the scales were mailed (online) to voluntary students provided link.

### **3.2.RESULTS**

The internal consistency validity was gathered to guarantee that there are relationship among develops and inquiries of the instrument. As displayed in Table 3, the worth of the inner consistency validity goes from 0.843 to 0.935. The worth alludes to an OK worth of inside consistency validity which is measurably huge (at  $p < 0.05$ ) overall. Adequate worth dependability is 0.70. Hence, the estimation things have Validity and dependability and there is a solid relationship between's the connection coefficient between things of each develop things. Our finding shows that, Hardware and software Components (HS), Internet services and capabilities (IC) - Usability and Resiliency (UR) - Ease of learning (EL) - Efficiency and achievement (EA). have a significant positive affected on Preparedness of Qassim University students for e-learning. Inversion of the results of previous research, our results show that Preparedness of Qassim University students for e-learning are the most important factor in e-learning in the future. In our study, IoTs changes students' academic perceptions and actions at the identification level. The employment of IoTs and context-aware technologies for educational objectives in higher education may result in a technological progression in the academic world.

Hardware and software Components (HS), Internet services and capabilities (IC) -

Table 1 "A correlation matrix between constructs"

Constructs	1	2	3	4	5	6
HS	.856	-				
IC	.871	.834	-			
UR	.834	.835	.862	-		
EL	.728	.918	.863	.837	-	
EA	.922	.801	.783	.884	.891	-

2-tailed p values; \*p < 0.05, \*\*p < 0.01.

Usability and Resiliency (UR) - Ease of learning (EL) - Efficiency and achievement (EA).

Table 2 discrimination validity of constructs

constructs	Cronbach's Alpha
HS	.856 **
IC	.834 **
UR	.862 **
EL	.837 **
EA	.891**

2-tailed p values; \*p < 0.05, \*\*p < 0.01.

Table 1 shows the statistical results of students' perceptions about e-learning. Responses to the first Constructs Hardware and software Components (HS) show that most students believe that they own a computer (Mean, SD 1.76±.430), have access to a dependable computer (Mean, SD 1.45±.498), approach a PC with the vital programming introduced (Mean, SD1.60±.491), A printer is joined to my computer(Mean, SD1.53±.500), they have willing to acquire admittance to a PC and Internet connection at home (Mean, SD1.841±.84), they approach a PC in campus or Internet bistros with stable Internet connection(Mean, SD1.39±.488).

Table 3 shows the statistical results of students' perceptions about e-learning. "Responses to the second Constructs about Internet services and capabilities that have

Table 3 Means, Standard deviations (SD), Chi-square and Reliability for construct (Hardware and software Components)

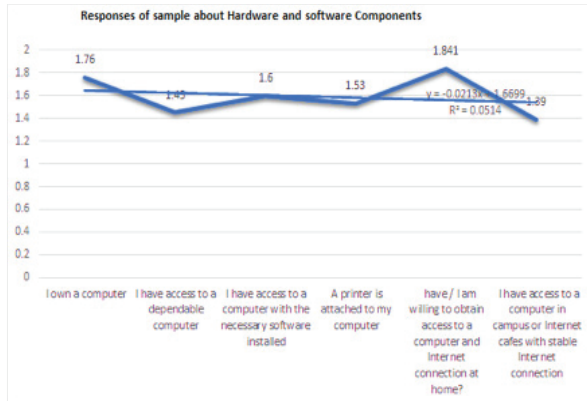
(Hardware and software (HS			
Items	Mean ± SD	Chi-squared a	P value
1. I own a computer	1.76±.430	65.536	.000
2.I have access to a dependable computer	1.45±.498	2.704	.100
3. I have access to a computer with the necessary software installed	1.60±.491	10.000	.002
4 A printer is attached to my computer	1.53±.500	.784	.376
5 . I have / I am willing to obtain access to a computer and Internet connection at home?	1.841±.84	115.600	.000
6. I have access to a computer in campus or Internet cafes with stable Internet connection	1.39±.488	12.544	.000

2-tailed p values; \*p < 0.05, \*\*p < 0.01.

one of these Java-empowered internet browsers Netscape™ 6.2 (PC and Mac), or 7.0(PC); Internet Explorer 5.0 or higher (Mean, SD 1.45±.498), that have virus protection on my PC (Mean, SD 1.45±.499), I know the essential elements of PC equipment parts (CPU and screen) including its peripherals like the printer, speaker, mouse etc(Mean, SD 1.66±.475), I realize how to save/open archives to/from a hard plate or other removable stockpiling device(Mean, SD 1.74±.230),I expertise to turn on and shutdown the PC properly (Mean, SD 1.94±.230), I realize how to determine normal equipment or programming issues, or I can get to a specialized help on the off

chance that I experience a problem(Mean, SD 1.94±.230), I can arrive at specialized help in the event that I experience a problem(Mean, SD 1.48±.500).”

Figure 1 Responses of sample about Hardware and software Components



As a result, conduct on fig1 Responses of sample about Hardware and software Components (HS) show that most students believe that they own a computer ( 1.76), have access a reliable PC ( 1.45), approach a PC with the essential programming introduced (1.60). “A printer is appended to my computer(1.53), they have willing to acquire admittance to a PC and Internet connection at home (1.841), they approach a PC in campus or Internet bistros with stable Internet connection(1.39).”

Table 4 displays the statistical results of students’ perceptions about e-learning. Re-

Table 4 Means, Standard deviations (SD), Chi-square and Reliability for construct (Internet services and capabilities)

Internet services and capabilities			
Items	Mean ± SD	Chi-squared a	P value
1. I have one of these Java-enabled web browsers? Netscape™ 6.2 (PC and Mac), or 7.0(PC); Internet Explorer 5.0 or higher	1.45±.498	2.704	.100
2. I have a virus protection on my computer	1.45±.499	2.304	.129
3.I know the basic functions of computer hardware components ( CPU and monitor) including its peripherals like the printer, speaker, mouse etc.	1.66±.475	25.600	.000
4. I know how to save / open documents to/ from a hard disk or other removable storage device.	1.74±.230	55.696	.000
5. I know how to turn on and shutdown the computer properly.	1.94±.230	197.136	.000
6. I know how to resolve common hardware or software problems or I can access a technical support in case I encounter a problem.	1.94±.230	.576	.448
7. I can reach technical support in case I encounter a problem.	1.48±.500	128.815	.000

2-tailed p values; \*p < 0.05, \*\*p < 0.01.

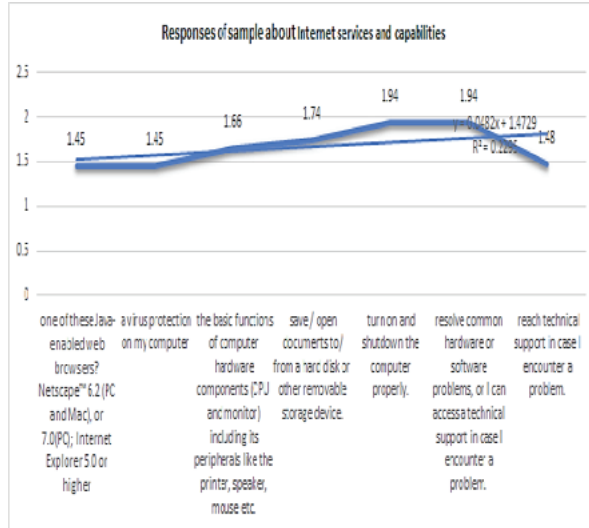
sponses to the third Construct about Usability and Resiliency, “I have an email address (Mean, SD 1.88±.330) “I can open/send an email with document attachments(Mean, SD 1.60±.492), I realize how to sign in to the network access supplier (ISP) (Mean, SD 1.69±.464), I realize how to explore the site pages (go to straight-

way, or past page) (Mean, SD 1.57±.496), I realize how to download records utilizing any programs (Internet voyager, maxilla)(Mean, SD 1.80±.398), I know how to resolve common errors while surfing the Internet, for example, ‘page not found’ or ‘association planned out’ (Mean, SD 1.80±.398), I realize how to get to a web-



based library and other resource databases (Mean, SD 1.53±.500).

Figure 2 Responses of sample about Internet services and capabilities



Furthermore, it on figure 2 Responses of a sample about Responses Internet services and capabilities that have one of these Java-empowered internet browsers Netscape™ 6.2 (PC and Mac), or 7.0(PC); Internet Explorer 5.0 or higher ( 1.45) , that have infection assurance on my PC (1.45), I know the fundamental elements of PC equipment parts (CPU and screen) including its peripherals like the printer, speaker, mouse, and so forth( 1.66), I realize how to save/open reports to/from a hard plate or other removable stockpiling gadgets ( 1.74), I realize how to turn on and shut down the PC appropriately( 1.94), I know how to resolve common hardware or software problems, or I can get to specialized help on the off chance that I experience an issue ( 1.94), I can arrive at specialized help in the event that I experience an issue( 1.48).

Table 5 displays the statistical results of

Table 5 Means, Standard deviations (SD), Chi-square and Reliability for construct (Usability and Resiliency)

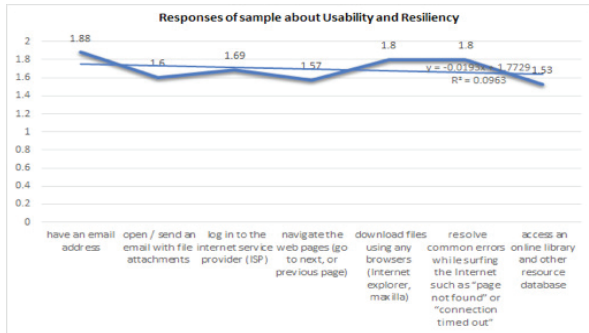
Usability and Resiliency			
Items	Mean ± SD	Chi-squared a	P value
1. I have an email address	1.88±.330	141.376	.000
2. I can open / send an email with file attachments	1.60±.492	9.216	.002
3. I know how to log in to the internet service provider (ISP)	1.69±.464	53.344	.000
4. I know how to navigate the web pages ( go to next, or previous page)	1.57±.496	5.184	.023
5. I know how to download files using any browsers ( Internet explorer, maxilla)	1.80±.398	4.096	.043
6. I know how to resolve common errors while surfing the Internet such as “page not found” or “connection timed out”	1.80±.398	92.416	.000
7. I know how to access an online library and other resource database	1.53±.500	1.024	.312

2-tailed p values; \*p < 0.05, \*\*p < 0.01.

students’ perceptions about e-learning. Responses to the fourth construct about Ease of learning, I have attended online classes before (Mean, SD 1.85±.356), have recently participated in internet based conversations and online forums(Mean, SD 1.83±.378), “I know what PDF documents are and I can download and see them (Mean, SD 1.41±.493), I know about word preparing and use it serenely (Mean, SD 1.49±.501),” I am able to have a few ap-

plications opened simultaneously and move effectively between them(Mean, SD 1.49±.501).

Figure 3 Responses of sample about Usability and Resiliency



As a result, conduct on figure 3 Responses of a sample about Responses Usability and Resiliency, I have an email address ( 1.88), I can open/send an email with document connections ( 1.60), I realize how to sign in to the web access supplier (ISP) ( 1.69), I realize how to explore the site pages (go to straightaway, or past page) ( 1.57), I realize how to download records utilizing any browsers (Internet pilgrim, maxilla) (1.80), I know how to resolve common errors while surfing the Internet, for example, “page not found” or “association planned out”( 1.80), I realize how to get to a web-based library and other resource data sets ( 1.53).

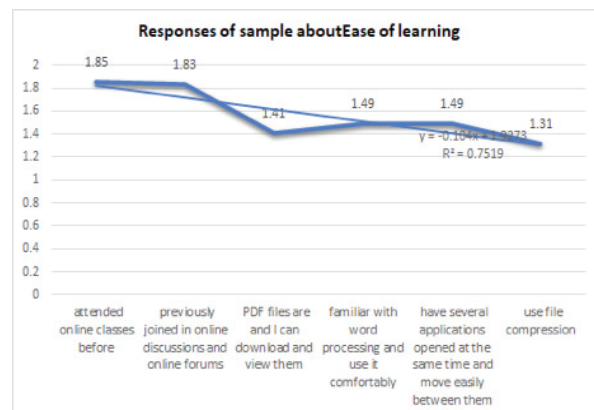
Table 6 Means, Standard deviations (SD), Chi-square and Reliability for construct (Ease of learning)

Ease of learning			
Items	Mean ± SD	Chi-squared a	P value
1. I have attended online classes before	1.85±.356	1123.904	.000
2. I have previously joined in online discussions and online forums	1.83±.378	3.600	.058

Ease of learning			
Items	Mean ± SD	Chi-squared a	P value
3. I know what PDF files are and I can download and view them	1.41±.493	107.584	.000
4. I am familiar with word processing and use it comfortably	1.49±.501	7.744	.005
5. I am able to have several applications opened at the same time and move easily between them	1.49±.501	.064	.800
6. I know how to use filecompression	1.31±.463	36.864	.000

2-tailed p values; \*p < 0.05, \*\*p < 0.01.

Figure 4 Responses of sample about Ease of learning



As a result, conduct on figure 6 Responses of a sample about Ease of learning, I have attended to online classes previously (1.85), have recently participated in internet based conversations and online discussions (1.83), “I know what PDF documents are and I can download and see them (1.41), I know about word handling and use it serenely (1.49), I am ready to have a few applications opened simultaneously and move effectively between them (1.49).”

Table 7 Means, Standard deviations (SD), Chi-square and Reliability for construct (Efficiency and achievement)

Efficiency and achievement			
Items	Mean ± SD	Chi-squared a	P value
1. When I have an important assignment , I get it done ahead of time	3.781±.481	198.040	.000
2. I prefer to figure out instructions for assignment by myself / I prefer to study or work alone	3.741±.553	190.360	.000
3. I look forward to leaning new skills and master them quickly	3.591±.581	178.360	.000
4. As a learner, I an highly independent	3.651±.493	199.320	.000
5. I am able to refrain from distractions and stay on task while working or studying	3.541±.503	211.880	.000
6. When asked to learn new technologies, I do not put it off or avoid it.	3.201±.628	197.000	.000
7. I can analyze class materials and formulate opinions on what I've learned.	3.471±.492	232.360	.000
8. I am determined to stick to studies despite challenging situations	3.521±.658	171.960	.000
9. I do not need direct lecture to understand materials	3.331±.712	166.840	.000
10. I am able to express my thoughts and ideas in writing	3.671±.533	186.920	.000

2-tailed p values; \*p < 0.05, \*\*p < 0.01.

Figure 5 Responses of sample about Efficiency and achievement

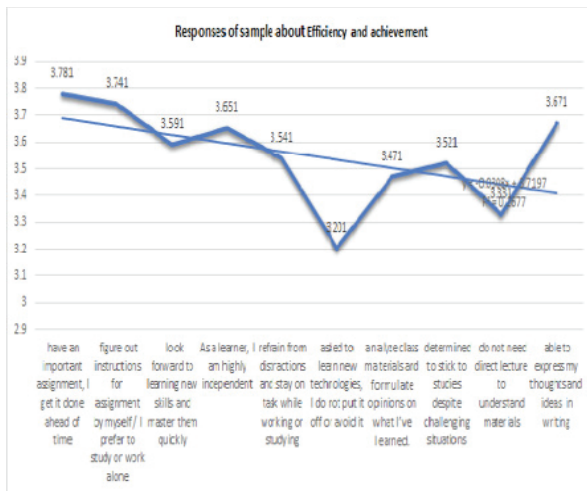


Table 7 displays the statistical results of students' perceptions about e-learning. Responses to the fifth construct about Efficiency and achievement, At the point when I have a significant task, I get it happen ahead of time (Mean, SD 3.781±.481), I like to sort out guidelines for task without anyone else/I like to study or work alone (Mean, SD 3.741±.553), I anticipate acquiring new abilities and master them

rapidly (Mean, SD 3.591±.581), As a student, I am exceptionally independent (Mean, SD 3.651±.493), I can forgo interruptions and remain focused while working or studying (Mean, SD 3.541±.503), "When requested to learn new advancements, I don't put it off or keep away from it (Mean, SD 3.201±.628), I can analyze class materials and formulate opinions on what I've learned. (Mean, SD 3.471±.492), not really set in stone to adhere to examines regardless of testing circumstances (Mean, SD 3.521±.658), I don't require direct talks to comprehend materials (Mean, SD 3.331±.712), I am ready to offer my viewpoints and thoughts recorded as a hard copy (Mean, SD 3.671±.533)."

As a result, conduct on figure 5 Responses of a sample about Efficiency and achievement, At the point when I have a significant task, I get it done ahead of time ( 3.781), I like to sort out guidelines for task without anyone else/I like to study or work

alone( 3.741), I anticipate acquiring new abilities and expert them rapidly ( 3.591), As a student, I am profoundly independent (3.651), I can cease from interruptions and keep focused while working or contemplating( 3.541), “When requested to learn new innovations, I don’t put it off or stay away from it ( 3.201), I can analyze class materials and formulate opinions on what I’ve learned. (3.471), I can still up to adhere to examines in spite of testing circumstances (3.521), I don’t require direct talks to get materials (3.331), and I am ready to express my thoughts and ideas in writing (3.671).”

The study revealed that the five constructs have a positive impact on the university readiness. The findings showed that most students can access a computer, the computers are equipped with important components such as java empowered internet browsers and virus protection, the students are have basic computer skills such as opening and shutting down the computer, the students also have prior experience with virtual learning, and they have willingness to participate in e-learning.

The degree of readiness for most institutions to use e-Learning systems experienced some struggles, especially in the Kingdom of Saudi Arabia during the COVID-19 pandemic. For instance, most students did not have access to digital infrastructures such as mobile devices and the internet to facilitate them in conducting distant learning. Some students came from a poor background that halted them from accessing e-Learning systems during

the onset of the pandemic. Some developing countries with no access to computers or online learning services opted to radio as an instrument to provide a learning experience to most learners. UNESCO’s study has shown that more than 830 million learners had no access to computers and the internet, especially in low-income countries. This made the closure of schools and country lockdowns significantly impact education as there was no smooth transition to distance learning.

The availability of digital infrastructure in Qassim University facilitated more students to enroll in distant learning. Most students did not have access to IT technology and e-Learning systems during the pandemic, which made the institution invest more in digital infrastructure until the ISP has given all student access to the internet for free with Government support. When IT technology was incorporated in the institution, there was a significant jump in e-Learning technology that made more students access education. Some institutions consider mobile learning as a way to curb the effects of COVID-19 on education. Students could use various mobile devices such as tablets, smartphones, and e-Books to participate in distance learning. The study’s responses on various variables identified what needs to be done for institutions to facilitate distant learning. The institutes need to consider multiple hardware and software components to facilitate remote learning, internet services, and an excellent digital learning experience. Other variables that need to be considered in-



clude efficiency, ease of learning, usability, and resiliency of the e-Learning systems. Therefore, it is high time for institutions to have IT technology and infrastructure to improve their e-Learning capabilities to facilitate distance learning.

### 3.3.Conclusion:

In conclusion, readiness for Qassim university for e-learning is quite well. Despite the problems foreseen in developing countries where availability of computers is very low in the students population, in Qassim university, most students have computers are rather can assess computers. The computers are also well maintained in terms of browsers and virus protection. Additionally, the students are also computer literate and are willing to be involved in e-learning. Therefore, the university can introduce e-learning to the students to save the curriculums which have been affected by closure of learning institutions due to Covid-19 pandemic. However, studies should also be done to show the readiness and willingness of the professors to be involved in e-learning. Frequent studies should also be done to assess the efficacy of e-learning to the students.

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