

## THE STUDENT'S PERCEPTION TOWARD THE EFFECTIVENESS OF ONLINE LEARNING DURING THE PANDEMIC OF COVID-19 KINGDOM OF SAUDI ARABIA PERSPECTIVE

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**ABSTRACT :** Distance learning does not come without drawbacks and obstacles, such as restricted network access and a lack of devices among students. We felt it was important to investigate the student's perception toward online education in Saudi Arabia due to the COVID-19. The outbreak of (COVID-19) has prompted governments to take steps to prevent the disease's spreading. Shutting down schools and universities was one of these actions. Hence, the procedures of teaching, learning, and evaluation were completely moved from face-to-face to online. Adopting physical distancing and quarantine amid the COVID-19 pandemic has left the world with schools' closure. This study examines the student's perception of Saudi higher education towards compulsory online learning university courses during the pandemic of (COVID-19). Undergraduate students were questioned to learn about their opinions on online education in Saudi Arabia. Other problems raised by higher education students were a lack of face-to-face communication with the instructor, response time, and the absence of conventional classroom socializing. Consequently, distance learning does not come without obstacles, such as restricted network access and students' lack of technical knowledge. We felt it was important to investigate the student's perception of online learning in Saudi Arabia during the COVID-19 pandemic.

**Keywords:** Online Learning, Student's Perception, COVID-19 Pandemic, Saudi Arabia

### I. INTRODUCTION

COVID-19 was designated a worldwide public health emergency of international concern by the World Health Organization [1] on January 30, 2020, and a pandemic on March 11, 2020 [2]. The first case was discovered in Wuhan, China, in December 2019. The virus has since spread to nearly every country on the planet. The disease spread so quickly that the WHO designated COVID-19 a Public Health Emergency of International Concern on January 30, 2020. Nearly 3 million positive cases had been verified worldwide as of April 2020, with approximately 200,000 deaths [1]. However, the Health Ministry confirmed the first two cases of COVID-19 in Saudi on March 2, 2020. However, on July 2, 2021, the total numbers of cases of COVID-19 in the country were 49,0464, with 7,848 deaths [3]. In reaction to the COVID-19, Saudi authorities closed all educational institutions on March 10, 2020. According to demands from the Saudi government, higher education institutions must begin planning for distant learning modalities, reschedule ongoing examinations, and provide regular online services to their students until the COVID-19 situation is resolved. This sudden change becomes a challenge for educators to quickly upgrade their skills in using technology required for distance teaching and learning. The Ministry of Education (MOE) in Saudi Arabia uses television and social media to deliver education to all ages. It has nominated about 127 administrators and teachers to provide regular instruction in 112 educational courses via 19 television channels (transmitting nationally from a classroom in Riyadh). The government offers learners five options for online education [4].

COVID-19, like so many other parts of daily life, has had a significant influence on students, educators, and educational institutions worldwide [5]. The pandemic forced schools, colleges, and institutions worldwide to close their doors so that students might practice distance learning [6]. Distance learning has transformed education, and the phrase now encompasses a wide range of educational scenarios [7] [8]. Students

are vulnerable to experiencing academics, socializing, and career failures during unusual times like the one caused by the COVID-19 pandemic. However, during the COVID-19 pandemic, using distance learning technology to keep the academic calendar running has proven to be the best make-shift alternative [9] [10] [11]. However, with the invention of the internet and online learning programs like Zoom, Microsoft Teams, Google Classroom, and others, distance learning protocols in online education have been revolutionized. Countries all around the world have been closed because of the global COVID-19 outbreak. Closure of education was the first step in limiting large meetings and imposing social distancing norms. However, transitioning effectively from a traditional academic environment to a distance and virtual learning environment is not simple. At present time, numerous barriers and problems are related to this rapid transition [9] [10] [11] [12] [13].

Since Covid's initial arrival in Saudi Arabia, the influence on each sector has grown significantly, particularly in the education sector. COVID-19 has had a significant influence on students, educators, and educational organizations worldwide. Learning standards and materials required to be taught to emerge as policy policies in the education sector. Socialization and education are important, many firms play a significant role in the education industry, but there are still two barriers to overcome. Firstly, virtually nothing is controlled on a broad scale regarding the effect and appropriateness of online training [14]. Secondly, depending on the wide range of learning goals that control our instructional and instructive demands, their capacity to educate successfully with care will most likely differ [15].

## II. LEARNING ONLINE

Online learning refers to information and communication technology to give lectures and share educational content. In contrast, distance education refers to an approach to education in which learners and lecturers are relatively isolated in time and place with no in-person interaction [16]. Web learning is an important part of distance learning, intending to improve users' knowledge and learning quality [17]. According to [17], one of the most important aspects of e-learning is personalizing it. E-learning efforts also give learning tools to make technology material and interactions more accessible [18]. Online learning communities occur due to e-learning interactions, where individuals, including friends, families, communities, and organizations, could easily share information. In this regard, software platforms, as [19] point out, play a critical role in promoting knowledge sharing in online communities. Teachers might also utilize it in online learning, according to [20]. However, online learning can be effective in digitally advanced countries [21]. The learning process can run efficiently due to the rapid development of technology nowadays. There are various examples of online learning platforms, such as e-learning, Google Class, WhatsApp, Zoom, and other online platforms and internet networks that can connect lecturers and students. That would allow the learning process to run it effectively as it should despite the coronavirus pandemic. Covid-19.

## III. Problem Statement and Research Gap

During the past few years, Saudi Arabia has accomplished a very good improvement in using advanced technologies. Most of the processes and procedures are done through the application, even the legal transaction. That gave Saudi people advantages in using technologies in their daily lives, but the situation changes regarding education. During the online learning procedures in Saudi Arabia, some issues had been faced by the students and the instructor. The sudden change of the educational processes made students suffer, especially when that change happens surprisingly where there is not enough time to train them on using the online platforms. According to the ministry of education in Saudi Arabia, many issues have been raised during the first weeks, which have been handled accordingly.

Several educational institutions largely concentrated on transmitting educational content to the digital world rather than focusing on online teaching and delivery techniques, as the unanticipated transition to online learning became a measure of organizational agility [22]. Nonetheless, it acts as a reminder of academic institutions' lack of resources and students' social exclusion, and insufficient awareness of internet access and the latest technology, which hindered overall organizational responsiveness and students' ability to participate in digital learning [23]. Another major issue with online learning is the lack of adequate interaction with teachers. Concerns about any online course's material are generally handled with the appropriate course teacher through the online platforms, which requires a response time [24]. Students who are physical learners will not be interested in virtual classes. Another important gap in online learning is traditional classroom interaction. Students only connect online and never meet one another in person. Therefore, a real-time exchange of ideas, knowledge, and information is limited in the digital learning environment [25].

Before the COVID-19 pandemic, previous literature has discussed the broader context of distance online studies, such as economic shifts, political climate, and advances in information and communication technology as some of the significant factor's major role in the growth and usage of innovative distance education [26]. During the COVID-19 epidemic, however, online education/distance learning became the only option for educational institutions to continue their academic activities. Various studies have been carried out

regarding online learning while pandemic COVID-19 occurs. They Analyzed the Usage of Information Technology in Distance Learning in the middle of the Covid-19 Pandemic [27]. Other studies have been conducted regarding online learning during the covid-19 epidemic, such as [23] who examined students' perceptions of online learning. The results indicated that students were unprepared for the new learning method and that their devices did not support the abrupt high-tech changes. Moreover,

[28] conducted a study entitled "Effectiveness of Online Learning During the Covid-19 Pandemic Period: An Online Survey" of home learning policy by adopting online learning utilizing the Zoom application for face-to-face meetings and WhatsApp to give lecture materials and assignments for online learning media. According to the findings, online learning using Zoom, and WhatsApp is only beneficial for theoretical and conceptual courses and practical. However, it is less successful for online lecture practice and course subjects. However, this learning still has some flaws, such as messages that are difficult to effectively reach students due to lack of training to how to fully depend on the online platform as an essential method to learn. [29] suggest future study to conduct a study in a different country than Pakistan to test the stunt attitudes or perception toward online learning during the COVID-19 pandemic since their results could not be generalized to all educational sectors all over the world due to the small sample size.

#### IV. The Impact of COVID-19 on Education

COVID-19 has not only caused public health problems but has also affected schooling around the world. Closing schools and switching to online platforms may have slowed the spread of the virus, but they also caused significant disruptions and disadvantages in the educational activity. [30] suggest that continuous disruption and school closures may severely impact students' engagement and performance, particularly those with learning disabilities. Individuals have suffered emotionally and mentally [31], with high anxiety levels among students, instructors, and parents in particular [32]. The pressure on students to navigate and manage their learning is one of the major causes of anxiety. At the same time, educators have had to transition from a specific set of pedagogical knowledge and instruction abilities to understanding digital technologies they are unfamiliar with [32]. When forced to move to online media, [33] warn of the harmful impact of information overload on unfamiliar or inexperienced individuals with digital learning platforms. According to [34], school closures have the following primary negative effects on education: 1) disruption of learning, 2) loss in nutrition, 3) uneven access to digital learning portals, 4) greater pressure on schools and school systems that stay open, and 5) social isolation.

#### V. Research Aim

This study aims to test the student's perception of their (skills, beliefs, self-directed, and interaction) toward online learning. The present study examines the student's enthusiasm about attending lectures and eventually impacted their outcomes, especially at universities that have implemented an online learning system during the COVID-19 Pandemic. In addition to knowing effective learning platforms for undergraduate and postgraduate students at the Saudi universities, namely, (King Abdulaziz University, King Fahd University of Petroleum and Mining, King Saud University, Um Al-Qura University). Those universities were chosen as the top five universities in Saudi Arabia according to the latest report of world university rankings in 2021. The data collection was shown in Table 1

#### VI. Methodology

This research is a quantitative descriptive study using survey methods conducted online (Google Form) and translated to Arabic. The sample techniques were simple random sampling, where the sample of this study is an active student in four Saudi Universities, as shown in Table 1. Primary data collection in this study was carried out by distributing questionnaires online, and two hindered, and thirteen (213) returned questionnaires which were all usable with no missing values. The research instruments were adopted from [35] with 22 items on a 5-point Likert scale. The data collection used the electronic platform "Google Forms" questionnaires were sent to four different universities in Saudi Arabia. The questionnaires were targeted directed to a student from different faculties. Questionnaires were conducted from July 2021 to September 2021.

**Table 1: Response Rate**

No	University Name	No of respondents	Percentage (%)
1	King Abdulaziz University	50	23.5
2	King Fahd University of Petroleum and Mining	61	28.6
3	King Saud University	72	33.8
4	Um Al-Qura University	30	14.1
<b>Total</b>		<b>213</b>	<b>100</b>

## VII. Data Analysis and Results

The results of an online survey were evaluated and expressed in percentages based on the frequency of common student replies. The five-Likert scale was used to collect demographic data, given as a percentage of students' replies. The researcher analyzed the data using the number of answers on each scale and its percentage based on the data obtained. The descriptive analysis was also used to know the demographical information of the respondent in terms of gender, age, academic year, and faculty. However, Table 2 and Table 3 show the results.

**Table 2: Descriptive Analysis**

Demographical	Criteria	Number of Respondents	Percentage (%)
<i>Gender</i>	Male	112	52.6
	Female	101	47.4
	<b>Total</b>	<b>213</b>	<b>100</b>
<i>Age</i>	18-20	90	42.3
	21-25	123	57.7
	<b>Total</b>	<b>213</b>	<b>100</b>
<i>Academic Year</i>	First Year	50	23.5
	Second Year	61	28.6
	Third Year	88	41.3
	Fourth Year	14	6.6
	<b>Total</b>	<b>213</b>	<b>100</b>
<i>Faculty</i>	Islamic Studies	44	20.7
	Languages	19	8.9
	Educational Studies	35	16.4
	Human Science	19	8.9
	Computer Science	30	14.1
	Economic and Management	51	23.9
	Medical	3	1.4
	Engineering	12	5.7
<b>Total</b>	<b>213</b>	<b>100</b>	
<i>Preferences</i>	Online Teaching	165	77.5
	Traditional Teaching	48	22.5
	<b>Total</b>	<b>213</b>	<b>100</b>

Undergraduate students were the targeted respondents for this study. However, based on the results shown in Table1, 52.6% of the respondents were male, while 47.4 were female. 57.7% of the respondents were from the age group of 21-25, while 42.3% were from the age group of 18-20. Moreover, most of the respondents were in their third and second year 41.3 and 28.6 respectively, while the lowest percentage represented the fourth-year student with only 6.6 %. According to the respondent's faculties, most of the respondents studied economics and management with 23.9, while the second-highest percentage was 20.7% for Islamic studies. The lowest number of respondents were from the medical studies, with only (3) responders at 1.4%. Lastly, the student's preference regarding the learning techniques, 77.5% preferred online learning while only 22.5% preferred traditional learning (face to face).

**Table 3: Data Analysis**

<i>Indicators / Scales</i>	<i>Strongly Disagree</i>		<i>Disagree</i>		<i>Natural</i>		<i>Agree</i>		<i>Strongly Agree</i>	
	<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>
I can easily access the Internet as needed for my studies	14	6.5	21	9.9	25	11.7	87	40.9	66	31
I am comfortable communicating electronically	5	2.3	15	7.1	17	7.9	93	43.7	83	39
I am willing to actively communicate my classmates and instructors electronically	12	5.6	23	10.8	6	2.8	101	47.4	71	33.4
I feel that my technological background and experience	7	3.3	19	8.9	11	5.2	134	62.9	42	19.7

will be beneficial to my studies										
I am comfortable with online written communication	24	<b>11.3</b>	34	<b>16</b>	17	<b>8</b>	100	<b>46.9</b>	38	<b>17.8</b>
I possess sufficient computer keyboarding skills for doing online work	4	<b>1.9</b>	7	<b>3.3</b>	6	<b>2.8</b>	109	<b>51.2</b>	87	<b>40.8</b>
I feel comfortable composing text on a computer in an online learning environment	2	<b>0.9</b>	5	<b>2.4</b>	9	<b>4.2</b>	88	<b>41.3</b>	109	<b>51.2</b>
<b>Beliefs</b>										
I am motivated by the material in Internet activity outside of class	7	<b>3.3</b>	10	<b>4.7</b>	25	<b>11.7</b>	106	<b>49.8</b>	65	<b>30.5</b>
Learning is the same in class and at home on the Internet	20	<b>9.4</b>	35	<b>16.5</b>	19	<b>8.9</b>	88	<b>41.3</b>	51	<b>23.9</b>
I feel that I can improve my listening skills the same using the Internet and in class	34	<b>16</b>	64	<b>30</b>	35	<b>16.4</b>	71	<b>33.3</b>	9	<b>4.3</b>
I believe that learning on the Internet outside of class is more motivating than a regular course	11	<b>5.2</b>	29	<b>13.6</b>	24	<b>11.3</b>	77	<b>36.1</b>	72	<b>33.8</b>
I believe a complete course can be given by the Internet without difficulty	12	<b>5.6</b>	34	<b>16</b>	19	<b>8.9</b>	93	<b>43.7</b>	55	<b>25.8</b>
I could pass a course on the Internet without any teacher assistant	20	<b>9.4</b>	17	<b>8</b>	9	<b>4.2</b>	65	<b>30.5</b>	102	<b>47.9</b>
I believe that material in an Internet course is better prepared than a traditional class	64	<b>30.1</b>	71	<b>33.3</b>	22	<b>10.3</b>	44	<b>20.7</b>	12	<b>5.6</b>
<b>Self-Direction</b>										
When it comes to learning and studying, I am a self-directed person	7	<b>3.3</b>	4	<b>1.9</b>	22	<b>10.3</b>	80	<b>37.6</b>	100	<b>46.9</b>
In my studies, I am self-disciplined and find it easy to set aside reading and homework time	8	<b>3.8</b>	22	<b>10.3</b>	11	<b>5.2</b>	98	<b>46</b>	74	<b>34.7</b>
In my studies, I set goals and have a high degree of initiative	2	<b>0.9</b>	20	<b>9.4</b>	4	<b>1.9</b>	107	<b>50.2</b>	80	<b>37.6</b>
I can manage my study time effectively and easily complete assignments on time	10	<b>4.7</b>	19	<b>8.9</b>	10	<b>4.7</b>	56	<b>26.3</b>	118	<b>55.4</b>
<b>Interaction</b>										
As a student, I enjoy working with other students in groups	11	<b>5.2</b>	8	<b>3.8</b>	20	<b>9.4</b>	79	<b>37</b>	95	<b>44.6</b>
I feel that face-to-face contact with my instructor is necessary for learning to occur	67	<b>31.5</b>	71	<b>33.3</b>	65	<b>30.5</b>	6	<b>2.8</b>	4	<b>1.9</b>
I can discuss with other students during Internet activities outside of class	7	<b>3.3</b>	8	<b>3.8</b>	10	<b>4.7</b>	119	<b>55.8</b>	69	<b>32.4</b>
I can collaborate with other students during Internet activities outside of class	5	<b>2.3</b>	10	<b>4.7</b>	9	<b>4.2</b>	88	<b>41.3</b>	101	<b>47.5</b>



Based on Table 2, the results show the student's perception toward skills during online learning in the pandemic of COVID-19. However, most of the respondents agreed on the accessibility to the internet as needed (n=87) 40.9%, (n=31) 66% for fourth and fifth scale respectively. Around 16% of the respondent disagree on that. (n=93, 83) with 43.7% and 39% for the respondents who agreed with the comfortability of communicating electronically. The majority of the respondents also agreed with effectively communicating with their classmates electronically (n=202, 71), representing 47.4% and 33.4%. Moreover, most students think that their technical background and experience will benefit them during their online study, with 62.9% (n=134) agreeing on those statements. Furthermore, the students feel comfortable regarding their online writing communication with 46.9% (n=100) and 17.8% (n=38), and their computer keyboarding skills for doing their work with 51.2% (n=109) agreed, and 40.8% (n=87) strongly agreed. However, most of the students feel comfortless in composing an online text, with 41.3% (n=88) agreed, and 51.2% (n=109) strongly agreed. Overall, students feel more confident and positive regarding their online platforms skills and face no issues in communicating with their classmates or instructors. This will enhance their educational performance during online learning and improve their computer skills.

According to the student's beliefs, the results show a highly positive perception of their beliefs which eventually made their online learning journey very easy. However, the student's motivation toward the online materials is positively high, were 49.9% (n=106) agreed, and 30.5% (n=65) strongly agreed. Moreover, the student thinks that online learning is the same as face-to-face learning with 41.3% (n=88) agreed and 23.9% (n=51) strongly agreed. Students agreed that listening skills could be improved during online learning with 33.3% (n=71). On the other hand, some students think the opposite and stated that online learning would not improve the listening skills as the presence learning with 30% (n=64). The undergraduate student believes that online learning is more motivated than presence learning which is a very interesting statement with a high percentage agreed 36.1% (n=72) and 33.8% (n=72) strongly agreed.

Since online learning took a longer time than everybody thought, the researcher wanted to know the student's perception toward the complete courses given online, and the results show a high percentage of the students agreed that the courses given via online platforms are provided without difficulties with 43.7% agreed and 25.8% strongly agreed. 47.9% strongly agreed that courses could be passed using the online platforms without the instructor's assistance. However, 30.1% strongly disagree, and 33.3% disagree that the teachers prepare materials well during online learning, which gives us the fact that teachers tend to be more committed to preparing the materials in the presence classes than the online classes.

Additionally, the student's perception toward their self-direction is presented in Table 2 above. The results show that most of the students are self-directed during online learning, where 37.6% agreed, and 14.6% strongly agreed with (80 and 100) respondents, respectively. The students have a firm belief in themselves regarding their disciplines during online learning, with 46% agreed and 34.7% strongly agreed that students are self-disciplined and found it easy to set aside reading and homework time. On the other hand, students have a high perception toward their goals and initiative level where 50.2% agreed, and 37.6% strongly agreed that their goals set and initiative level is high during the online learning. Lastly, students are highly engaged in their management skills during online learning, such as time management and task commitments. 55.4% of the respondents agreed, and 26.3% agreed that they could manage their study time effectively and completed their assignments on time.

Based on the results regarding the student's perception toward their interaction during their studying online. The majority of the students agreed in enjoying working online with other groups, with 44.6% strongly agreed, and 37% agreed. Nevertheless, many students think face-to-face interaction with teachers is unnecessary for the learning process to be accomplished, where 31.2% strongly disagree, and 33.3% disagree. Moreover, students believe that online learning does not burden the discussion or collaboration with other students with 55.8% and 41.3%, respectively.

## VIII. Discussion

The majority of the surveyed higher education students have a positive perception of online/digital learning. The present research has addressed skills, beliefs, self-direction, and interaction to see whether these aspects are considered an issue to the undergraduate students in Saudi universities or not. The results show that students feel good about their online learning, and few issues have been faced during the online learning process that could be immediately solved. The sudden shift from traditional classrooms and face-to-face learning to online learning has resulted in students' completely different learning experiences. Fortunately, most Saudi students have access to high-speed or reliable internet services and a good technological experience or background, which helps in smoothing online learning. According to [36], students from underdeveloped areas are deprived of internet facilities.

On the other hand, Saudi Arabia is considered as a developing country. Saudi states have easy access to the internet in all areas. They face no issues regarding the internet power to facilities that make the online learning process much easier than other countries. The majority of the universities were able to introduce effective online classes during the initial months of COVID-19. Survey participants also reported that traditional classroom learning is similar to online learning or distance education in terms of communication or knowledge.

Thus, it can be concluded that online learning can produce effective results in developing countries like Saudi Arabia, where a vast majority of students could access the internet due to high technical awareness. The COVID-19 pandemic showed the importance of the internet and its technological role in our lives, both in business and educational areas. To ensure an effective and productive online program, students must know how to cope with the fast-paced online classes, but they also need to have technological skills to learn from online lectures. For such students managing the study, time is possible, and they do not face any difficulty.

### IX. Conclusion

COVID-19 has an influence on academic institutions all over the world, especially the traditional learning methods. As an alternative to resuming education, school, college, and university administrations have chosen online lessons. Online learning is proving helpful in safeguarding students' and faculty's health amid the COVID-19 pandemic; however, it is as effective as conventional learning. Online learning can produce desired results for undergraduate students in Saudi Arabia, where a vast majority of students are able to access the internet due to the high support by the government to provide all the needs to the students in terms of financial or technical support. This study addressed the effectiveness of online teaching, especially for higher education students in four big universities in Saudi Arabia. As per this study, 77.5% of students preferred online learning platforms over traditional learning methods, which might be due to the support of the government, universities, and families during the pandemic. The other possible reasons for that, students were excited and motivated to experience a new way of learning.

On the other hand, 22.5% of the respondents were referring to the traditional face-to-face classes. The researcher believes that some specialties such as medicine or engineering must be present while taking the class. Despite the positive results regarding the student's perception of online learning, educational institutes need to design more appropriate and effective arrangement delivery systems and provide digital literacy training to students who faced difficulties during online learning for better learning outcomes to be achieved. Our findings can aid the government and other public educational managers with the acceptance, behavior, and trust of their populace concerning distance learning, and in turn, suggesting the best strategies to help the education sector to improve more during a public health emergency.

### X. Limitation and future suggestions

This study is not free from limitations. Firstly, a small sample size and non-random selection were the major limitations of this study. The study was not able to generalize the results due to the non-random selection. The present study suggested increasing the sample size (considering more universities or including post-graduate) or randomly selecting the respondents from all Saudi universities. Moreover, further studies are needed to explore more sides of the student's perception toward online learning during the pandemic of COVID-19, such as motivation and family support. The study's conclusions are mainly based on students' opinions from higher-ranked universities of Saudi Arabia; analyzing the opinions of low-ranked universities with limited skills and less access to the latest digital technologies might produce more critical results.

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