

PERFORMANCE OF TEACHING STAFF AND STUDENTS TOWARD E-LEARNING DURING COVID-19 PANDEMIC PERIOD

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Abstract

The new learning trend has made it mandatory to equip teachers in educational institutions with the necessary skills to cope with the new challenges. Furthermore, E-learning education has recently received great attention in Saudi Arabia during the coronavirus (COVID-19) crisis. The aim of the study was to assess the performance of teaching staff and students toward E-learning during the COVID-19 pandemic period. A descriptive faculty-student-based study was conducted at Jazan University, Kingdom of Saudi Arabia. 34 teaching staff and 276 students participated in the study by responding to the online questionnaire which tested their knowledge, skills, and attitude toward E-learning. Results showed most of the teaching staff had very good knowledge and skills and a strongly agreed attitude toward E-learning. Regarding the students, quarters of them had very weak knowledge, and good skills, and were either neutral or agreed attitude on E-Learning. This fact may be evidence of the potential of this orientation in the search for continuity of new learning for students. This study recommends developing virtual statistical analysis and data mining tools to find correlations among technical ability, E-learning knowledge, E learning skills, and attitudes among university students and teaching staff.

Keywords: Performance, Teaching Staff, Students, E-learning, Coronavirus (COVID-19) Pandemic Period.

1. INTRODUCTION

Information and communication technology (ICT) has greatly impacted the education domain, especially in the 21st century. The most important developments in education have happened since the launch of the internet. Accordingly, there was a need for integration between education and technology, and such integration has in fact eased communication between students and teaching staff. However, challenges have been reported in the use of e-learning education [1] in the context of universities.

Learning Management System (LMS) comprises a platform that enables lecturers to manage material sharing, assignments, and communication, and other teaching-related elements [2]. LMS has become a crucial constituent in the educational system, and its usage is highly common in most higher learning institutions, particularly universities, because it strengthens the approaches of traditional learning in classrooms and their online activities [3].

E-learning provides students with the ability to adopt learning to their lifestyle, effectively allowing, even the busiest person to further their career and gain new qualifications. The concept and use of e-learning were adopted in the mid-1980s by several institutes in the United

States [4].

The number of people applying for e-learning courses all over the world increases at a rate of 25 percent each year. Saudi Arabia began this in the early 1990s and further grew with the expansion of the internet and technology [5]. There has been an increasing interest in e-learning in teacher training at universities during the last ten years [6].

The COVID-19 pandemic had unprecedented effects on the world, including in the education system. As a result, the majority of schools, universities, and colleges have changed the system of teaching from direct mode to distance mode as social distance is crucial to confronting the COVID-19 spread. Therefore, the trend toward distance education has strengthened. This shutdown stimulated new technologies, and different e-learning modalities like blended learning and massive open online courses were gradually spreading around the world during this pandemic [7, 8]. Hence, e-learning was deeply rooted in adequate planning and instructional design based on the available theories and models.

Saudi Arabia's ICT Strategy 2019-2023 is proof that e-learning lies at the core of the kingdom's vision. It is a nationwide plan aimed at further developing the kingdom's digital infrastructure [9].

The plan recommends the implementation of e-learning and distance learning and their prospective applications in higher education. In a major transformation of traditional education, most universities in South Africa are expected to switch to a system of e-learning in the coming years. The Saudi Ministry of Higher Education has established the National Centre of E-learning & Distance Learning, known as the ELC, to organize the change and prepare e-learning material. Nine universities have already agreed to implement.

The growth is being driven by the Saudi Ministry of Education's initiatives for the integration of Information and Communication Technology (ICT). While the demographic profile of Arabian Internet users was young. Saudi Arabia is leading among internet users in the Middle East. As per statistics, the percentage rose from 30.6% in 2018 to 34.2% in 2021 and is projected to reach 38.7% in 2028[10].

The novel coronavirus (COVID-19) pandemic forced educational institutions to conduct learning via online tools, and the importance of e-learning was widely realized all around the world. Saudi Arabia is ensuring the continuation of education through digital learning methods after closing public schools due to the coronavirus. According to previous research and considering the new circumstances [11, 12], we propose a model for explaining teaching staff and students perceived academic performance. This descriptive study aimed to study the main difference between e-learning and class-based learning on various aspects of teaching faculty, such as the way in which education is transmitted, the teacher's ability, personality, quality, adaptation to the new learning situation, and the effect of course material creation on teaching-learning performance. To understand COVID-19's impact, especially on students' learning effectiveness, we investigated students' technical ability, learning ability, general awareness, and perceptions of e-learning during this period.

Therefore, the questions we address in the paper are:

- Q1. What is the knowledge, skills, and attitudes of teaching staff toward E-learning during the pandemic period of COVID-19 in the University College of Sabya?
- Q2. What is the knowledge, skills, and attitudes of students toward E-learning during the pandemic period of COVID-19 in the University College of Sabya?

General Objective:

To study the performance of teaching staff and students toward the E-learning during COVID-19 pandemic period.

Specific Objectives:

- 1. To assess the knowledge, skills, and attitude of teaching staff toward E-learning.
- 2. To identify the knowledge, skills, and attitude of students toward E-learning.

2. MATERIALS AND METHODS

2.1 Research design

The purpose of the study was to assess the performance of teaching staff and students on E-Learning during the period of the coronavirus (COVID-19) pandemic. A descriptive design was chosen with faculty - student survey.

2.2 Setting and Sample

The study was carried out at the University college of Sabya, Jazan University, Saudi Arabia, over a period of six months from March 2021 to September 2021. Teaching staff and students in the three departments, namely Nursing, Computer Sciences, and Accounts, were samples for the study. 34 teaching staff working in the 3 departments included in the data collection.

The sample size of students was estimated by the following equation:

$$n = \frac{N}{1+N(d2)} = 276$$

2.3 Tools, scoring, and interpretation

The structured questionnaire was prepared to assess the knowledge, skills, and attitudes of teaching staff and students.

Tool (I): Performance of teaching staff toward E-learning during the COVID-19 pandemic period

It is composed of four parts:

Part (1): Demographic characteristics of the Teaching staff: Academic rank, years of teaching experience, previous attendance on distance education courses, previous attendance on distance training courses and their satisfaction with E-learning experience.

Part (2): Knowledge of teaching staff toward E-learning during the COVID-19 pandemic period.

To judge knowledge of E-learning, six statements were framed in a five-point Likert scale for scoring as: 5. strongly agree; 4. agree; 3. Neutral, 2. Disagree and 1. Strongly Disagree. The total score of the questionnaire ranged from 5 to 30 points, and the obtained individual scores were converted into percentage and interpreted as;

< 50%	: Very weak knowledge
50 to 65%	: Weak knowledge
65 to 75%	: Good knowledge
75 -85%	: Very good knowledge
> 85%	: Excellent knowledge

Part (3): Skills of teaching staff toward E-learning during COVID-19 pandemic period

20 statements related to skill were made and assigned on a five-point Likert scale as: 5. strongly agree; 4. agree; 3. neutral, 2. disagree and 1. Strongly disagree. The total score of the questionnaire ranged from 20 to 100 points and obtained individual scores were classified as follows;

< 50%	: Very weak skills
50 to 65%	: Weak skills
65 to 75%	: Good skills
75 -85%	: Very good skills
> 85%	: Excellent skills

Part (4): Attitude of teaching staff toward E-learning during COVID-19 pandemic period

To judge attitude of the teachers towards e-learning, 20 statements were listed in a five-point Likert scale as: 5. strongly agree; 4. agree; 3. neutral, 2. disagree and 1. Strongly disagree. Obtained responses will be presented in the percentage.

Tool (II): Performance of students toward E-learning during COVID-19 pandemic period

It composed of four parts:

Part (1): Demographic characters of the students includes age, department and satisfaction of E-Learning mode.

Part (2): Knowledge of students toward E-learning during the COVID-19 pandemic period.

To judge knowledge of E-learning, six statements were framed in a five-point Likert scale as: 5. strongly agree; 4. agree; 3. neutral, 2. disagree and 1. Strongly Disagree. The total score of the questionnaire ranged from 5 to 30 points, and the obtained individual scores were converted into percentage and interpreted as;

< 50%	: Very weak knowledge
50 to 65%	: Weak knowledge
65 to 75%	: Good knowledge
75 -85%	: Very good knowledge
> 85%	: Excellent knowledge

Part (3): Skills of students toward E-learning during the COVID-19 pandemic period.

20 statements related to skill were made and assigned on a five-point Likert scale as: 5. strongly agree; 4. agree; 3. neutral, 2. disagree and 1. Strongly disagree. The total score of the questionnaire ranged from 20 to 100 points and obtained individual scores were classified as follows;

< 50%	: Very weak skills
50 to 65%	: Weak skills
65 to 75%	: Good skills
75 -85%	: Very good skills
> 85%	: Excellent skills

Part (4): Attitude of students toward E-learning during COVID-19 pandemic period

To judge attitude of the teachers towards e-learning, 20 statements were listed in a five-point Likert scale as: 5. strongly agree; 4. Agree; 3. Neutral, 2. Disagree and 1. Strongly Disagree. Obtained responses will be presented as percentage.

2.4 Data Collection Procedure

Approval for this study was obtained from Dean of the University college of Sabya and Deanship of Scientific Research, and the Research Ethics Committee of Jazan University, Saudi Arabia. The questionnaires were shared as Google Forms through online to teaching staff and students separately. The first part of the questionnaire explained the nature of the study requested voluntary participation followed by questions to assess knowledge, skills, and

attitude.

2.5 Data analysis

The collected responses were coded in the master data sheet and analyzed with SPSS 20.0 software. Results were presented with tables and figures based on the specific objectives of the study.

3. RESULTS

Table 1: Frequency distribution of demographic variable of teaching staff and students

S. No	Demographic Variables	Frequency	Percentage
Teaching staff (N= 34)			
1	Academic rank		
	Assistance professor	6	17.6
	Lecturer	19	55.9
	Teaching assistant	6	26.5
2	Years of teaching experience		
	<5 years	15	44.1
	5-10 years	17	50
	>10 years	2	5.9
3	Previous attendance on distance education courses		
	Yes	15	44.1
	No	19	55.9
4	Previous attendance on distance training courses		
	Yes	25	73.5
	No	9	26.5
5	Satisfaction with E - learning experience		
	Yes	29	85.3
	No	5	14.7
Students (N= 276)			
1	Age in years		
	18 - 21 years	134	48.6
	22 - 25 years	131	47.5
	>25 years	11	3.9
2	Department		
	Computer	58	21
	Nursing	139	50.4
	Accountancy	79	28.6
3	Students' satisfaction with E - learning experience		
	Yes	202	73.2
	No	74	26.8

Table 1 showed that around half of the teaching staff (55.9%) were lecturers; 50% had 5 to 10 years of teaching experience; more than half (55.9%) did not have previous attendance on distance education courses; nearly three- fourths(73.5%) had attended distance training courses; and the majority(85.3%) were satisfied with their E - learning experience. In regard to

the students, nearly half (48.6%) of them were in the age group of 18-21 years; 50.4% belong to the nursing department; and most (73.2%) were satisfied with their E-learning experience.

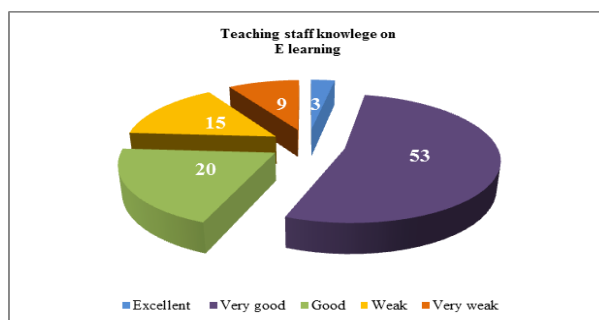


Figure 1: Teaching staff knowlege on E-Learning

Figure 1 reveals majority (53%) had very good knowledge; only 9% very weak knowledge.

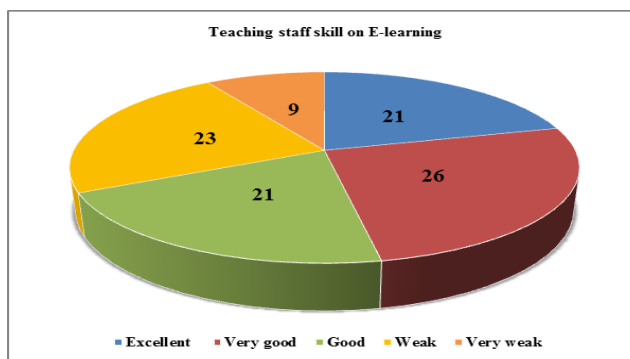


Figure 2: Teaching staff skill on E-Learning

Figure 2 revealed majority (26%) had a very good skill; least (9%) had weak skill.

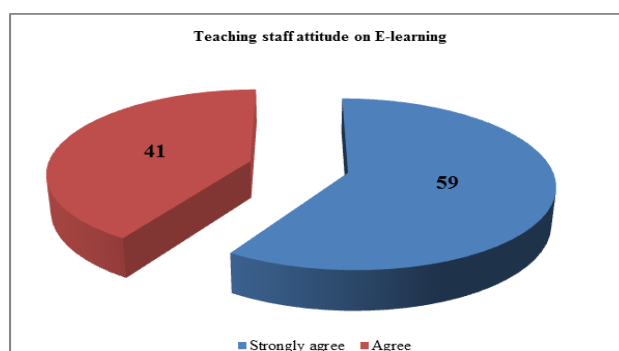


Figure 3: Teaching staff attitude on E-learning

Figure 3 points out that most of them (59%) had strongly agreed attitude; 41% had agreed attitude towards E-learning.

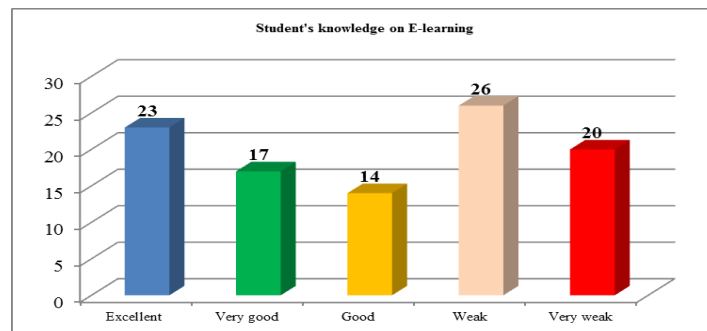


Figure 4: Student's knowledge on E-learning

Figure 4 showed majority (26%) had weak knowledge; 23% had excellent knowledge.

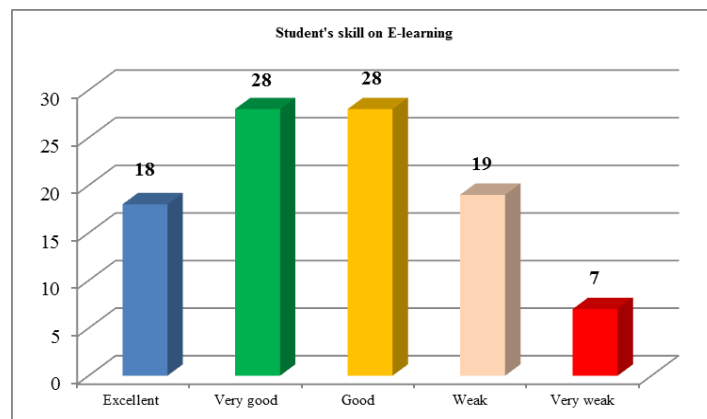


Figure 5: Student's skill on E-learning

Figure 5 figures out 28% had very good and good skills respectively.

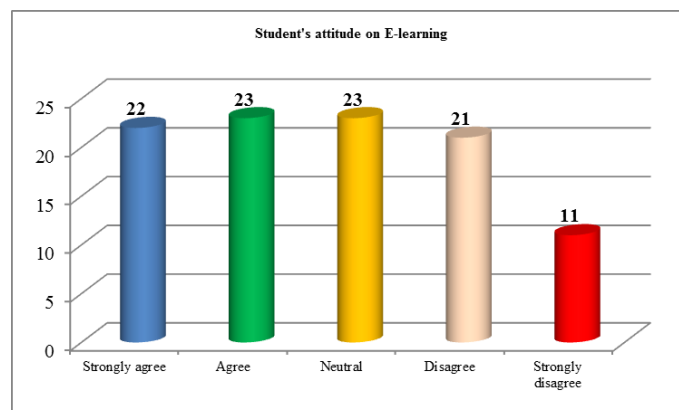


Figure 6: Student's attitude on E-learning

Figure 6 showed majority (23%) had either agree or neutral attitude towards E-learning.

4. DISCUSSION

As a matter of course, COVID-19 is leaving new lessons for all spheres of life and across all sectors. The education sector is no exception. With the eruption of COVID-19 being acknowledged as a pandemic by the World Health Organization (WHO), people are facing a key challenge all over the world. It has drastically influenced our lifestyles. Moreover, it is testing our adaptability and flexibility in response to a major crisis like COVID 19. We are dealing with unusual methods of working, studying, etc. Virtual shopping and social media are not novel to us, nor is online education. Nevertheless, COVID-19 is stimulating the need to deeply investigate the prospects of virtual education [13]. Besides, educational institutions shut down in various nations for the period of COVID-19 around 1,524,648,768 students barred from the usual learning practices. Substitute methods, like e-learning at home, were utilized to ensure uninterrupted education. To survive in insecure and challenging world, learners ought to be ready to excel in 21st century skills to work out troubles vigorously. Self-discipline plays a vital role in learners' accomplishments. For the period of learning disturbance, it is an excellent chance to uphold learners' active learning at home to train self-discipline skills [14]. In addition, the current pandemic (COVID-19) has altered the methods of teaching and learning forever. Therefore, learning has altered significantly, with the huge increase in e-learning. Similarly, in the Kingdom of Saudi Arabia, the Ministry of Education (MOE) is using TV and social networks to transmit education for all grades. It has nominated around 127 administrators and instructors to offer regular teaching in 112 enlightening courses through 19 TV channels (transmitting nationally from a classroom in Riyadh). Learners are presented with five choices by the ministry for online education [15]. The result of this study indicates that staff teachers developed a more favorable attitude towards online teaching than the students did during the lockdown. However, this finding is different from the finding of Moghavvemi et al. [16] who found that teacher' perceptions of e-learning are more positive than those of students. The finding of this study is similar to the finding of Mahmoud et al. [17] study that proved that faculty members who had less teaching experience had a stronger perception than those who had been teaching for more than 10 years. This study revealed that there was no significant difference in the attitude of secondary school teachers towards online teaching based on academic qualifications during the lockdown. A similar view expressed by Olum et al. [18] found no significant relationship between a faculty members' academic degree and his or her perception of e-learning. According to a survey by Jabali et al. [19] the level of education seemed to have some effect on faculty members' perceptions of e-learning, but to a lesser extent. Regarding the students' knowledge was weak and neutral attitude, on the other hand, their practice was at a good level. Although several experts consider that the unintended and quick shift to e-learning with no guidance, inadequate bandwidth, and no homework may end in an unsatisfactory user experience that is unfavorable to persistent development, others consider that a novel fusion model of teaching may appear, with noteworthy advantages. According to Chen et al. [20] President of the User Experience with Online Education Platforms, who considered e-learning an ultimately turn out to be an essential part of education. Dhawan. [7] Pointed out that online education had been successful shifts among various educational institutes. For instance, virtual education is the most preferred mode of education,

and post COVID-19 education seemed to be an education with widely accepted online/virtual education, which may perhaps be a parallel system of education [21]. Instead of telecommunications and technology companies scrambling (i.e., Zoom, a virtual conferencing software changed from paid to free) to “support” the COVID-19 crisis, they ultimately are beholden to their bottom line [22]. Google Classroom would nevertheless be an innovation in the educational system of the nation, but on the other hand, some factors have made the adoption of Google Classroom unsuccessful for science education in Nigerian schools [23]. The educators have to keep some considerations in mind while teaching, like taking continuous feedback from students and improving their teaching online, avoiding long lectures or text only learning material to retain the attention of students while teaching online [24].

Some students had demonstrated a natural positive attitude toward eLearning. The authors also found great interest in and increasing use of these eLearning programs for academic purposes. However, they only like virtual learning over face-to-face learning or traditional learning [7]. Yet many courses used different platforms, and many students wanted to return to school as soon as possible because the efficiency of learning from home was quite low. Many also said that it was nearly impossible to focus at home, and that there was nothing better than face-to-face academic activities [25]. Peters et al. [25] revealed that the students affirmed that eLearning/distance learning are unhealthy because of the long hours spent in front of the computer. They associated it with the lack of physical activity to which they are accustomed. Another negative side is the lack of living contact, which limited all non-verbal communication and atmosphere, not only between teachers and students, but also between the students themselves. In this respect, Ilieva-Sinigerova. [23] concluded that e-learning itself did not offer special opportunities for feedback not only from students to teachers, but also back; both sides said it was difficult to get it because of the indirect way of communication. Nevertheless, Bao. [26] Focused on the principle of sufficient support: Faculty and teaching assistants need to provide students with timely feedback, including online video tutoring and email guidance after class. The present situations that exist due to the widespread COVID-19 pandemic have caused a lot of problems for learners and for higher educational institutions. However, institutions should take some strategic initiative, both individual and institutional levels to combat the situation. Alshehri et al. [27] study also revealed, there is a strong relationship between coronavirus disease (COVID-19) and its impact on educational activity.

5. CONCLUSION & SUGGESTIONS

In conclusion, findings of the present study highlighted the strength & weakness prevailed among teaching staff & student’s knowledge, skills and attitude in a numerical way. Specific strategies like periodic workshops, conferences and training session should be conducted periodically to fill up the existing gaps in lagging areas. In a nation like Saudi Arabia where education is one of the highest priorities of the administration, there is a burning requirement to investigate the teachers’ insights concerning online education. The prospect of online education will be dogged by the intensity of satisfaction among its most vital stakeholders, and the teachers. Consequently, it is extremely important to seriously assess the teaching staff and students’ views and opinions concerning E-learning, which would be constructive in making

education more attractive and efficient.

Conflicts of Interest

The authors report no financial or any other conflicts of interest in this work.

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Ethical Approvals

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