



Attitudes and Challenges towards E-Learning System in Time of Covid-19 from the Perspective of Al-Istiqlal University Students

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ABSTRACT

Due to ongoing COVID-19 pandemic, higher educational institutions around the world have moved towards e-learning system. Determining the positive attitudes and difficulties facing students during the use of e-learning in times of crisis, helps teachers and the institution in taking new steps appropriate to the needs of students in such difficult circumstances. So, this study aimed to analyse the attitudes and challenges facing Al-Istiqlal University (PASS) students towards e-learning. Samples of this study consisted of 280 students who were chosen in a simple random method from PASS students between April and June of 2020. Descriptive study method was adopted, and a well-designed and pre-tested online questionnaire was used to collect primary data. Results indicated that PASS participants own a positive attitude towards e-learning and their attitude results are significantly deferent with their gender, level of computer skills, academic grade, collage and availability of computer with permanent internet. Furthermore, students face a number of challenges while using the e-learning system, and a significant difference was found between the challenges of computer skills level, gender, computer availability with permanent internet connection and academic grade of the participant students. The study showed that the learners' perception on e-learning reveals that it is valid in the time of COVID-19 pandemic and they understood that e-learning is very useful during crisis. In light of these findings, the study came up with a number of recommendations and suitable suggestions are given to overcome students' challenges towards e-learning system.

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Introduction

Education and ensuring its availability is one of the most important priorities for society in emergency situations and in conflict and post-conflict situations, despite the fact that societies lose a lot of their work and interests in those situations, therefore educational institutions in the world seek to strengthen educational systems in times of crisis in order to ensure the delivery of messages to students and their families. It states the necessity of their contribution in protecting societies from disasters and conflicts, providing physical and psychological security, and investing education in these conditions in strengthening the cohesion and resilience of societies [1]. E-learning represents a teaching solution for distance education, facilitated by the massive penetration of Internet as a form of communication. E-learning is the fourth generation in the stages of the development of distance education. multimedia, interaction and sources are used. Teaching and learning via the Internet [2]. It includes all the learning methods in which the leadership process is left to some extent by the learner, as the learner is the actor, and the trait of flexibility that overcomes this type of learning provides an opportunity for the learner to choose time, place, speed, or even study materials that suit him, in addition to that the learner has the freedom to choose a system that matches his time and material and absorptive capabilities. In other words, e-learning defined as the use of various technological tools that are either Web-based, Web-distributed or Web-capable for the purposes of education [3].

Today the whole world is facing the spread of the Coronavirus disease 2019 (COVID-19), which first infected with the disease appeared in December 2019 in the central city of Johan, China, and then the infection began to spread from one country to another, until the disease spread in most countries of the world, which made the World Health Organization (WHO) consider it and classify it as a global pandemic, what was followed by the declaration of the state of emergency in most of the countries of the world, in an attempt to limit the spread of the virus, The result of this is to disrupt businesses, companies and institutions, including educational institutions, such as schools and universities, where study was disrupted in most countries of the world . This has been recognized by the United Nations Education, Scientific and Cultural Organization (UNESCO) on March 5, 2020, that Corona virus outbreak has impacted the education sector. This pandemic and the resultant closure of educational institutions put education at a real risk, shifting and focusing attention towards e-learning, in an attempt by states and educational institutions to maintain and protect education as a societal, humanitarian and necessary priority in order to maintain the cohesion of families and societies by providing services educational [4].

In Palestine, as most of the world states declared a state of emergency on March 5, 2020, and requested the closure of all schools and universities in Palestine, as a result of COVID-19 pandemic outbreak and the registration of dozens of injuries among the Palestinians, as a protective measure to

avoid the spread of the Corona Virus. The Ministry of Education (MoE) immediately launched its National Response Plan for COVID-19 where distance learning was highlighted as an alternative solution to ensure the continuation of learning to their students [5]. PASS is very responsive to respond to this pandemic and took steps related to prevention of COVID-19 transmission by eliminating the activities on Jericho campus in time of pandemic. Officially, through the circular letter of the rector of PASS that as of March 25, 2020 the study at PASS continues to run via online learning by utilizing e-learning facilities.

There are a number of studies on e-learning so far especially in the fields of student attitudes and challenges. However, none of the studies was conducted in Palestine, especially in terms of students' attitudes on the use of e-learning in time of covid-19 pandemic. Several researches conducted to measure the influence of demographic on students' attitude towards e learning. Furthermore, previous researches reports that the primary factors participating in internet usage are socio-demographic characteristics such as gender, rather than socio-economic characteristics like monthly salary, level of education, or another psychological factors [6]. Another qualitative study conducted on the learners of English study program at the Universitas Kristen Indonesia (UKI) Toraja. This study not only report that online learning is good in the midst of COVID-19 pandemic but also spotted the light on the availability of internet access, financial issue, and online learning implementation [7]. Other study conducted by Shahmoradi *et. al.*, (2018), to investigate the challenges of e-learning system at Tehran University of Medical Sciences, according to the findings of this study, about half of the participants had problems accessing the technology, and only 26.4% of the participants had good preparation for the use of e-learning system. Furthermore, a significant difference was found between the challenges of skill and culture of the participants [8].

In order to accelerate the acceptance of e-learning and implementation in colleges, it is more significant to recognize attitude of students and accordingly plan for managing the modulation process. Positive attitudes can help students to deal with the new situation with lesser stress and so enable them to take steps appropriately in tune with the need of the society. Otherwise, if students are not comfortable with the technology, new generation may suffer, leading to a poor reputation for the program and the university. However, the major important question is here: Does PASS university and students are willing to choose e-learning system during Coronavirus outbreak and through their progress? So, this study aimed to analyse the attitudes and challenges facing PASS students towards e-learning in times of COVID-19 pandemic.

Methodology

This study was a descriptive cross sectional one, which used a 5-point Likert scale questionnaire to evaluate students' attitudes and challenges towards e-learning implementation at PASS university in Jericho, Palestine. The target group of this study consisted of all students from five faculties of PASS (Table 1), who enrolled in e-learning for different online courses during Spring semester of 2019/2020 due to ongoing pandemic of *coronavirus* disease. 280 male and female students were chosen in a simple random method from the study population.

By conducting a thorough online resources and using the information obtained from literature review [9-16] an item-

based questionnaire was developed and used as a tool to assess e-learning attitudes and challenges from the perspective of PASS students during COVID-19 pandemic. The content validity of the initial questionnaire was measured through a peer review approach online according the pre-test method [9]. during the spring semester 2019/2020. Three peer reviewers were faculty staff members responsible for e-learning in their universities. To ensure the reliability of the questionnaire, it was determined by internal consistency reliability ($\alpha = 0.838$).

The final questionnaire for this study consisted of 3 parts contained a total of 38 items, with 37 closed questions (yes/no and 5-point Likert scale) and one open-ended question. The items were grouped into the following three main areas: Personal and demographyc variables (7 questions), students' attitudes for using e-learning system (20 questions), and determining the challenges of e-learning system (10 questions). The questionnaire was delivered to 280 students using the online program SurveyMonkey® (SurveyMonkey, Oregon, USA). Access to the questionnaire was provided by an email link. The survey started in April 2020 and after 3 reminders, data collection ended in June 2020.

The data obtained from the statistical population ($n=280$) were analysed using SPSS version 19 (SPSS Inc., Chicago, Illinois, USA), descriptive statistics (frequency distribution and mean reports) and inferential statistics (ANOVA variance analysis and t-test), significance level was set at $P < 0.05$ and student's responses to the open-ended question were quantitatively and independently analysed by the author for repetitive themes and then summarized.

Results and Discussion

The demographic characteristics of the participants are summarized in Table 1. Data indicates that 65.4% are male and 34.5% are female. As for the place of residence, it was found that most of the participant students are residents of villages 60%, and 31.1 % of them lives in cities, while the lowest percentage of them were residents of camps 8.9 %. The overall sample was fairly evenly distributed by academic level of bachelor students (1st, 2nd, 3rd, and 4th years) 19.6%, 18.9%, 17.5%, 16.4% respectively and 20% for intermediate diploma students, while the lowest percentage of them were 7.5% for master degree. The participants consisted of 45% from faculty of law, 19.3% from faculty of humanities, 8.9% students from administrative sciences faculty, 6.9% from graduate studies collage and 20% from intermediate college of security studies. Among participants 53.6% said yes for the availability of computer with internet network and 46.4% said no, while 16.1% had high degree of computer skill, 58.2% with intermediate and 25.7% had low degree of computer skills.

The overall score for the attitudes towards e-learning system and challenges facing students using it in PASS came with an average of (3.55) and a standard deviation of (0.364), this indicates a high degree of this two fields of e-learning in the university of national success according to the responses of the population of the study, while the means of difficulties faced by students in using e-learning system came first with a mean (3.63), and the field of student attitudes toward e-learning came second with a mean (3.47) (Table 2).

As illustrated in Table 2. In general, the means and standard deviations indicate positively the students' attitudes towards the implementation of e-learning at PASS. And the total mean of challenges faced by students is found to be high.

Table 1. Distribution of the respondent community according to the independent variables of the study

Variables	Category	Frequency	Percentage %
Gender	Male	183	65.4
	Female	97	34.6
Living location	City	87	31.1
	Village	168	60
	Camp	25	8.9
Faculty	Law and Forensics	126	45
	Humanities	54	19.3
	Administrative sciences	25	8.9
	Graduate Studies	19	6.8
Academic grade	Intermediate College	56	20
	1 st Year	55	19.6
	2 nd Year	53	18.9
	3 rd Year	49	17.5
	4 th Year	46	16.4
	2-year Diploma	56	20
Degree of computer skill	Master	21	7.5
	High	45	16.1
	Intermediate	163	58.2
	Low	72	25.7

It is clear from the results of the questionnaire analysis of this study, that all paragraphs means were more than (3), which clearly indicates that the directions of PASS students towards this type of education were positive and this clearly indicates that PASS students face a number of challenges while using the e-learning system.

Table 2. Descriptive statistical analysis of PASS students' attitudes and challenges towards e-learning system

Field	Mean	Std.
Students attitudes towards e-learning system.	3.4666	0.74
Challenges facing students in using e-learning system	3.625	0.68
Total	3.546	0.36

Results of this study indicated that there are significantly positive attitudes towards e-learning from the perspective of PASS students in the time of COVID-19 pandemic, in terms of e-learning increases students' motivation to learn and study, flexibility in time and place to access e-learning and opens the way for learners to communicate outside of office

hours. These results are similar to the Nassoura, (2012) [6] study that showed positive attitudes of respondents towards e-learning, and with the study of Hantouli, (2016) [17] which showed that 74.6% of students have clear positive attitudes towards e-learning, and they admitted that the role of e-learning in the achievement of the interaction between the learners came to the highest degree (78.2%), and with the results of the Orora *et al.*, (2014) [18] study that the use of e-learning encourages creativity among learners, this is also accompanied by a high level of achievement.

Moreover, the results of this study showed, a significant difference between the averages of the responses of students in mean of their attitudes towards e-learning, according to individual characteristics like gender, level of computer skills, academic grade, collage and availability of computer with permanent internet network. Many researches investigate the influence of demographic profiles such as computer ownership, age, gender, education, personal skills

Table 3. Averages, standard deviations and Onaway ANOVA analysis of PASS students' attitudes and challenges towards e-learning system according to gender variable.

Field	Gender	N	Average	Std.	(t)	(Sig)*
Difference in attitude towards e-learning system	Male	183	3.6437	0.66	5.843	0.000
	Female	97	3.1325	0.76		
Difference in challenges facing students using e-learning system	Male	183	3.5536	0.65	-2.43	0.016
	Female	97	3.7598	0.72		
Total	Male	183	3.5986	0.33	3.399	0.001
	Female	97	3.4461	0.41		

* $p < 0.01$; degrees of freedom (df) = 278.

Table 4. Averages, standard deviations and Onaway ANOVA analysis of PASS students' attitudes and challenges towards e-learning system according to living location variable.

Field	living location	N	Average	Std.	F	(Sig)*
Difference in attitude towards e-learning system	City	87	3.5138	0.70	0.260	0.771
	Village	168	3.4438	0.76		
	Camp	25	3.4560	0.69		
	Total	280	3.4666	0.74		
Difference in challenges facing students using e-learning system	City	87	3.6299	0.65	.477	0.477
	Village	168	3.6458	0.70		
	Camp	25	3.4680	0.65		
	Total	280	3.7598	0.68		
Total	City	87	3.5718	0.36	.885	0.414
	Village	168	3.5448	0.37		
	Camp	25	3.4620	0.33		
	Total	280	3.5458	0.36		

* Statistically significant at $p < 0.05$, degrees of freedom (df) 279.

and computer and internet on university students' attitude towards e-learning [19, 20]

It is clear from Table (3) that there is a significant difference ($P < 0.01$) between the averages of the responses of students according to the gender among PASS students. In the mean of total fields and in the field of student attitudes towards e-learning, males' attitude was more positive than females, while in the field of difficulties facing students in electronic education, females' challenges were more positive.

According to the findings of this study, There were no statistically significant differences ($P < 0.05$) between the averages of the responses of students according to the variable of living location for PASS students in the field of student attitudes towards electronic education, in the field of difficulties facing students in electronic education, and in the overall field Table (4).

As illustrated in Table 5. a significant difference between the averages of student's responses were found according to college variable among PASS students.

In the field of student attitudes towards e-learning and in the overall field diploma students own more positively attitudes compared with other studied faculties, while there are no statistically significant differences ($P < 0.05$) in the field of difficulties facing students in e-learning according to college.

It is clear from Table 6. that a significant difference was found between averages of student's responses according to the variable of the academic level of Al- Istiqlal University students. In the field of student attitudes towards e-learning, diploma students own more positively attitude, and significant differences ($P < 0.05$) were found in the field of difficulties facing students in e-learning for a third year in the bachelor's degree and for the total field.

Significant differences at ($P < 0.05$) was found between the averages of student's responses according to the availability of computer with a permanent internet at home for PASS students. In the field of student attitudes towards e-learning, those who have an internet network and a computer

Table 5. Averages, standard deviations and Onaway ANOVA analysis of Al-Istiqlal University students' attitudes and challenges towards e-learning system according to Faculty

Field	Faculty	N	Average	Std.	F	(Sig)*
Difference in attitude towards e-learning system	Law and Forensic sciences	126	3.2437	.78661	7.257	0.000
	Humanities	54	3.5287	.57794		
	Administrative Sciences	25	3.7840	.48856		
	College of Graduate Studies	19	3.4316	.84594		
	Intermediate College of Security Studies	56	3.7786	.65177		
	Total	280	3.4666	.73686		
Difference in challenges facing students using e-learning system	Law and Forensic sciences	126	3.6944	.69963	1.785	0.132
	Humanities	54	3.6296	.56489		
	Administrative Sciences	25	3.7000	.62583		
	College of Graduate Studies	19	3.6737	.72176		
	Intermediate College of Security Studies	56	3.4143	.73223		
	Total	280	3.6250	.68167		
Total	Law and Forensic sciences	126	3.4690	.37614	3.745	0.006
	Humanities	54	3.5792	.36455		
	Administrative Sciences	25	3.7420	.30701		
	College of Graduate Studies	19	3.5526	.38926		
	Intermediate College of Security Studies	56	3.5964	.31128		
	Total	280	3.5458	.36395		

* Statistically significant at $p < 0.01$, degrees of freedom (df) 279.

Table 6. Averages, standard deviations and Onaway ANOVA analysis of PASS students' attitudes and challenges towards e-learning system according to academic level variable

Field	Academic Level	N	Average	Std.	F	(Sig)*
Difference in attitude towards e-learning system	1 st Year	55	3.4191	.60196	4.403	.001
	2 nd Year	53	3.1896	.83576		
	3 rd Year	49	3.3571	.76567		
	4 th Year	46	3.5554	.65771		
	Intermediate Diploma	56	3.7973	.65411		
	Master	21	3.4690	.81217		
	Total	280	3.4666	.73686		
Difference in challenges facing students using e-learning system	1 st	55	3.6982	.57235	5.520	.000
	2 nd	53	3.5057	.74715		
	3 rd	49	3.9796	.52360		
	4 th	46	3.6326	.61862		
	Intermediate Diploma	56	3.3375	.75355		
	Master	21	3.6571	.68744		
	Total	280	3.6250	.68167		
Total	1 st	55	3.5586	.28080	4.781	.000
	2 nd	53	3.3476	.46485		
	3 rd	49	3.6684	.32599		
	4 th	46	3.5940	.34157		
	Intermediate Diploma	56	3.5674	.31250		
	Master	21	3.5631	.37246		
	Total	280	3.5458	.36395		

* Statistically significant at $p < 0.01$, degrees of freedom (df) = 279.

Table 7. Averages, standard deviations and Onaway ANOVA analysis of PASS students' attitudes and challenges towards e-learning system according to availability of computer with permanent internet at home

Field	Availability of Computer with Internet Network	N	Average	Std.	F	(Sig)*
Difference in attitude towards e-learning system	Yes	150	3.5507	.67012	4.254	0.040
	No	130	3.3696	.79870		
	Total	280	3.4666	.73686		
Difference in challenges facing students using e-learning system	Yes	150	3.5073	.62467	9.935	0.002
	No	130	3.7608	.72084		
	Total	280	3.6250	.68167		
Total	Yes	150	3.5290	.32352	.688	0.408
	No	130	3.5652	.40606		
	Total	280	3.5458	.36395		

* Statistically significant at $p < 0.05$, degrees of freedom (df) = 279.

at home, own more positively attitude, and significant differences ($P < 0.05$) were found. While, in the field of difficulties facing students in e-learning for whom don't have, and there were no differences on the total field (Table 7).

Table 8. shows a significant difference at ($P < 0.05$) between the average responses of students according to the level of computer skills. In the field of student attitudes toward e-learning, those whose average skill levels were high and intermediate own more positively attitude, and significant differences ($P < 0.05$) were found in the field of difficulties facing students in e-learning, among those whose skill level was low, and did not exist any significant differences over the total field according to level of computer skills among PASS students.

According to the findings of this study, PASS students faced a number of challenges while using the e-learning system, 46.4% of the students had problems accessing the technology such as computer availability and permanent internet connection, and only 16.1% of the participants had good skills for the use of e-learning system. Furthermore, a significant difference was found between the challenges of computer skills level, gender, computer availability with permanent internet connection and academic grade of the participant students. These results are agreed with study conducted by Shahmoradi *et. al.*, (2018), that found about half of the participants had problems accessing the technology, and only 26.4% of the participants had good preparation for the use of e-learning system, and a significant difference was found between the challenges of skill and culture of the participants. [8]

From the results of this study, male students possess more positively attitude towards e-learning than their female counterpart. Literature suggests that gender represents critical part in realizing the variation in perceptions towards technology skills and attitudes on e-learning. Many studies confirmed that student's male owns more positively attitudes towards e learning than female students [21, 22]. But these

results not support the study of Dhiman *et al.*, (2014) [23], who found that gender did not significantly affect student's attitude towards e-learning. Furthermore, the results showed more positively attitude towards e-learning among students with high level of computer skills than others with intermediate and low levels. Papaioannou and Charalambous (2011) [24] study identified a positive correlation between computer experience and attitudes toward e-learning. Moreover, students of Administrative Sciences faculty own more positive attitude towards e-learning compared with students from other studied faculties. These results agreed with Zabadi, & Al-Alawi, (2016) study [25]. Results of this study showed that difficulties faced by females are slightly more than those faced by male students towards e-learning. Students with high level of computer skills facing less challenges than others with intermediate and low levels. These results are similar to the Islam, *et al.*, (2015) [26] study that reviewed the challenges facing users of e-learning system.

Results related to the open question, and after the researcher reviews the students responses about the open comment at the end of the questionnaire, which gives them the opportunity to add any notes or comments regarding the attitudes and challenges of e-learning at PASS during the time of COVID-19 pandemic, Based on the answers of participants to the open question from this study, the learners' perception on e-learning reveals that it is good in the time of COVID-19 pandemic. They perceived online learning is very helpful in the time of crisis. This study not only report that e-learning is good in the time of COVID-19 pandemic but also highlighted the availability of financial issue, internet access, and e-learning implementation. In the light of the availability of internet access, they said that individual tasks are better to keep the distance physically due to pandemic, they need group tasks to help friends who do not have an internet pulse and access. These results are consistent with those of previous studies [7, 27].

Table 8. Averages, standard deviations and Onaway ANOVA analysis of PASS students' attitudes and challenges towards e-learning system according to level of computer skill.

Field	Degree of computer skill	N	Average	Std.	F	(Sig)*
Difference in attitude towards e-learning system	High	45	3.4767	.78925	8.158	0.000
	Intermediate	163	3.5905	.58722		
	Low	72	3.1799	.91765		
	Total	280	3.4666	.73686		
Difference in challenges facing students using e-learning system	High	45	3.5956	.64946	6.844	0.001
	Intermediate	163	3.5239	.59222		
	Low	72	3.8722	.82363		
	Total	280	3.6250	.68167		
Total	High	45	3.5361	.35777	.201	.818
	Intermediate	163	3.5572	.31310		
	Low	72	3.5260	.46558		
	Total	280	3.5458	.36395		

* Statistically significant at $p < 0.05$, degrees of freedom (df) = 279.

Most of the students' attitudes were towards e-learning in these difficult conditions, they state that e-learning saves time and effort and helps to keep the information constantly. While, some students were worry about electronic exams, others supposed that e-learning is not suitable for all courses and majors, and a few of them claimed that some teachers have problems in using the computer, Internet and their skills are insufficient. On the other hand, given the special circumstances of the Palestinian people, many students stated that there are logistical problems while using e-learning system; such as weak internet and sometimes power outages, where most of the students are residents of camps and villages away from cities. The presence of the Israeli occupation that controls the Internet and electricity in Palestine and dominate it, all these factors constitute additional obstacles towards electronic learning from the point of view PASS students.

Conclusion

The results of this study revealed a good effect of e-learning in a time of crisis, as students' attitudes were positive in general and differed significantly according to their individual variables. Positive attitudes can assist teachers to deal with the new difficult conditions with less stress and so enable them to take proceedings appropriately in tune with the need of the students and PASS. In spite of a number of challenges facing the students while using e-learning system. So, we recommend to conduct evaluation studies for the electronic courses offered, to study the negatives after application, in order to develop procedural solutions to improve them at the college and university level. Hence, the author suggests to the policy makers and governments that they are intended to reorder the curriculum and to prepare infrastructure according to the new model. moreover, orientation to the teachers on e-learning will realize them to accept the new technological methods of teaching.

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References

A. Sun, & X. Chen. "Online education and its effective practice: A research review". *Journal of Information Technology Education: Research*, (2016), pp: 157-190.

J.C. Taylor, "Distance Education Technologies, The Fourth Generation," *Australia Journal of Education Technology*, 11 (2), 1995.

Online Journal: <http://www.ascilite.org.au/ajetll/taylor.html>.

P. Berteau, "Measuring students' attitude towards e-learning: A case study," *Proceedings of 5th International Scientific Conference on e-Learning and Software for Education*, Bucharest, April, 2009.

United Nations Education, Scientific and Cultural Organization (UNESCO), April, 2020.

<https://en.unesco.org/covid19/educationresponse>

United Nations Education, Scientific and Cultural Organization (UNESCO), "COVID-19 in Palestine: How Distance Learning Will Help Student Continue Education", UNESCO Article, April, 12, 2020,

<https://en.unesco.org/news/covid-19-palestine-how-distance-learning-will-help-student-continue-education>

A. B. Nassoura, "Students' acceptance of mobile learning for higher education in Saudi Arabia," *American Academic & Scholarly Research Journal*, 4(2), 2012.

M.D. Allo, "Is the online learning good in the midst of Covid-19 Pandemic? The case of EFL learners," *Jurnal Sinestesia*, Vol. 10, No. 1, April 2020.

L. Shahmoradi, V. Changizi, E. Mehraeen, A. Bashiri, B. Jannat and M. Hosseini, "The challenges of E-learning system: Higher educational institutions perspective," *J Edu Health Promot*, 2018;7:116.

D. Collins, "Pretesting survey instruments: an overview of cognitive methods," *Qual Life Res.* 2003, 12, pp:229-38.

Z. Hoseyni, M. Salehi, "Student blog design and impact on students' attitudes to optimize the learning process and its relation to dimensions of Total Quality Management in Education (TQM in teaching) -Modular MPH students of Tehran University" *Iranian Journal of Medical Education*, 2009, pp: 3114.

A. Shahnavaei, E. Mehraeen, S. Bagheri, Z. Miri, M. Mohammad ghasemi, "Survey of Students Readiness to Use of E-learning Technology," *Journal of Paramedical Science and Rehabilitation*, 6, 2017, pp:60-66.

B. Ahmad, "Instructors 'and learner' Attitudes towards teaching and learning online: King Fahd University of petroleum and Minerals (KFUPM) Saudi Arabia-Case Study," *International Journal of Arts & Sciences*, Vol. 11, No. 6, 2016, pp:223-241.

A. Majidi, "E-Learning: History, features, infrastructure and barriers", *National Studies of Library and Organized information*, 78, 2009, pp:9-26.

M. Rezaee rad, "Review the readiness of teachers to use e-learning Payam Noor University," *Research in lesson plan*, 9, 2012, pp: 110-116.

J. Tarus, D. Gichoya, A. Muumbo, "Challenges of Implementing E-Learning in Kenya: A Case of Kenyan Public Universities," *The International Review of Research in Open and Distributed Learning*, 16, 2015, pp:120-141.

A. Andersson, "Seven major challenges for e-learning in developing countries: Case study eBIT, Sri Lanka," *Int J Educ Dev Using Inf Commun Technol*, 4, 2008, pp:45-62.

T. Hantouli, "The reality of E-learning at An-Najah Un. and its role in achieving the interaction between learners from the point of view of students of the faculty of graduate studies faculty of education programs and faculty members," Master thesis, faculty of Graduate Studies, An-Najah National University. Retrieved February 23, 2016.

W. Orora, F. N. Keraro, & S. W. Wachanga, "Using Cooperative E-Learning Teaching Strategy to Enhance Students' Creativity in Secondary School Biology: A Study of Selected Schools in Nakuru County, Kenya," *International Journal of Education and Practice*, 2(6), (2014), pp:137-146.

P. G. Paris, "E-Learning: A study on Secondary Students' Attitudes towards Online Web Assisted Learning," *International Education Journal*, 5(1), 2004, pp: 98-112. Retrieved January 20, 2013 from <http://aasrc.org/aasrj/index.php/aasrj/article/download/248/188>

K. I. Sebnmen, "Investigation of Students' Attitudes towards e-learning interms of different variables," *Journal of Educational Research and Reviews*, 10(1), 2015, pp: 81-91.

S.S. Liaw, & H.M. Huang, "A study of investigating learners' attitudes toward e-learning" *International Conference*, 673. *5th International Conference on Distance Learning and Education*, 673. IPCSIT vol.12, IACSIT Press, Singapore, 2011.

A.S. Bhubaneswari & T. Padmanaban, "Attitude of senior secondary students towards e-learning," *Elixir Educational Technology*, 51, (2012), 10886-10888.

K. Dhiman, S. Birbal, C. M. Bhim, "Attitude of University Students towards E-learning in West Bengal," *American Journal of Educational Research*, 2(8), 2014, 669-673. <http://dx.doi.org/10.12691/education-2-8-16>.

P. Papaioannou, & K. Charalambous, "Principals' attitudes towards ICT and their perceptions about the factors that facilitate or inhibit ICT integration in primary schools of Cyprus," *Journal of Information Technology Education*, 10, May, 2013, 349-369. Retrieved from

<http://www.jite.org/documents/Vol10/JITEv10p349-369>

[Papaioannou958.pdf](#)

A.M. Zabadi, & A.H. Al-Alawi, "University Students' Attitudes towards E-Learning: University of Business & Technology (UBT)-Saudi Arabia-Jeddah: A Case Study,"

International Journal of Business and Management, 11(6), (2016), 286. <https://doi.org/10.5539/ijbm.v11n6p286>

N. Islam, M. Beer, & F. Slack, "E-Learning Challenges Faced by Academics in Higher Education: A Literature Review," *Journal of Education and Training Studies*, 3(5), (2015), pp: 102–112. <https://doi.org/10.11114/jets.v3i5.947>

M.P.A. Murphy, "COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy," *Contemporary Security Policy*, 41(3), (2020). 492–505.

<https://doi.org/10.1080/13523260.2020.1761749>.