## "Teachers and Students Attitudes towards Using Distance Learning

### among Al-Qalam University as Sample"

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Abstract- Distance learning is a method of teaching which the instructor and the students are not in the same place and they are studying far from each other such as other University online learning and Platforms. The aim of this study is to investigate students' and teachers' attitudes towards distance learning in Al-Qalam University. The research tool was a survey which was conducted among teachers and students of Al-Qalam University in different fields by preparing two questionnaires, one for students and the other for teachers, which asked several different questions about distance learning. The data was analyzed by using SPSS version 21. The study found that students and teachers were somewhat satisfied with the university's support performance in terms of providing distance learning resources, providing an appropriate platform, and asking questions and sharing information among teachers and students. However, the participants disagreed with other issues such as distance learning takes longer study time compared to on-campus study, lack of high-speed internet access and declining students' academic performance. In conclusion, the findings show that although distance learning is useful but there are still some issues especially for the pure science departments.

Key words: Learning, Distance Learning, Students' attitudes, Teachers' Attitudes,

#### 1. Introduction

Distance learning has other names such as distance education, online learning, e-learning, education which is an encompasses the essential elements of physical separation of the instructor and the learners during the process of education and also includes different types it of technological gadgets ease that the communication between the learner-the instructor and the learner -learner (Gunawardena et al., 2003). Within distance learning, all forms of learning and teaching are found which include the teachers and the learners in different places most of the time. This educational system is always activated and encouraged by policymakers, faculty members, or administrators especially at hard times.

Distance learning is defined as a teaching method in which the instructor and the learner are distant physically. And this form of education encompasses various uses of technological instruments such as audios, videos, computers and the Internet (Roffe, 2004)

In this form of educational study, the role of the instructor is a facilitator of process of education and paves the way to his/ her learners. The instructor ought to have a firm commitment to the process of training. The role of the learner is to be encouraged to be autonomous. (Akkoyunlu and Soylu, 2008).

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Researchers from a wide range of disciplines have used the phrases "distance education" and "distance learning" interchangeably to refer to a wide range of initiatives, providers, participants, and media. Its distinguishing characteristics include the separation of teacher and student in time and/or space (Simonson et al., 1999), the student's voluntary control of their learning rather than a distant instructor (Jonassen. And noncontiguous 1992). communication between the student and teacher, mediated by print or some other form of technology(Keegan, 2013).

Online education, which uses computers and the Internet as the delivery method and delivers at least 80% of the course content online, is the modern equivalent of distance learning (Allen and Seaman, 2011).

Elliott Maisie first used the term "e-Learning" in 1998 (Sari, 2020). To make education more communicative, online learning uses a variety of technologies, including the World Wide Web, emailing, chatting, the new groups, and texting. Online learning has reportedly received significant consideration in higher education, according to (Kim and Bonk, 2006). Institutions are working to make online learning influential and engaging for students. (Orlando and Attard, 2016) noted that using technology to teach students is not a one-size-fits-all strategy because it depends on the technology being utilized and the subject matter of the curriculum being taught

### 2. Literature review

Online learning is no longer considered as a trend but a mainstream. 6.7 million of the 20.6 million students enrolled in higher education in the autumn of 2012 were taking an online course, according to the 69 percent of top academic executives who said online learning was essential to their long-term strategy (Allen and Seaman, 2013). The methods by which we impart knowledge and receive it in both traditional and online classrooms will advance as educational technology advances.

Furthermore, according to (Anderson, 2008), the phrase "online learning" denotes a situation in which the students and the instructors are separated by a great distance and where the students access the course materials via technology, which is almost often done via the internet. Online learning is a process that students engage in over the internet, to put it simply. (cited in IGI Global).(Singh and Thurman, 2019), who define online learning as "learning experiences in synchronous or asynchronous environments using various technological tools such as mobile phones, laptops, computers, and so forth with internet access," further argue that it is a method that makes the learning process more student-centered, innovative, and flexible. In these settings, learners can communicate with their own tutors or instructors, other learners, and both from anywhere.

Technologies for distance learning are evolving quite quickly. Too frequently, curriculum developers and instructional designers have become enamored with the newest technologies without addressing the fundamental concerns of learner characteristics and needs, the impact of media on the instructional process, equity of access to interactive delivery systems, and the new roles of teacher, site facilitator, and student in the distance learning process (Sherry, 1995).

One of the characteristics of distance learning is the flexibility of schedules, which helps the learners to organize their study times and this is considered as a degree of self-discipline. Sometimes, certain courses which require online participation at specific ours or spaces, limit the flexibility of schedules.(Aladwan et al., 2018)

The employment of Information and Communication Technologies (ICT) is considered as another characteristic of distance learning in which through these online gadgets, learners have the chance to interact with one another and improving the process of education through social networks, discussion forums and virtual platforms, to tackle on different issues and attaining knowledge(Aladwan et al., 2018).

### 3. Methodology 3.1 Research design

In this study, online questionnaires were used to gather data on teachers' and learners' attitudes about distance learning at Al-Qalam University. A draft of the questionnaire was given to experts for feedback on how to make the style and nature of the issues being studied better as of the testing process. part The questionnaires' final version was created in two semesters for the academic year 2020-2021 at the university under consideration, Al-Qalam, following the completion of the necessary adjustments. A link to the survey form was sent through various official social media groups, including Messenger, Viber, and WhatsApp, or the poll was administered exclusively by email. 445 participants participated in the student surveys, while 121 participants were chosen to participate in the teacher questionnaires, which made up the study sample. Using an Excel sheet and a Google sheet, the replies from the online Google Forms were compiled and arranged. Based on the organization, qualification, and field of study, the surveys' responses were compiled.

### 3.2. Data analysis

The SPSS application was used to conduct the statistical analysis (Version 21). A Chi-square test was used to compare the row data, and the P % values from the row data were shown as tables. The University, respondent qualifications, and the type of subject in which the study samples are specialized were the variables taken into account for categorizing study data.

## 4. Result and discussion4.1. Students' attitudes

According to the results of this study conducted on students' attitudes towards distance learning, the highest participation rate was 74.2% in administrative departments, while only 24.8% participated in scientific departments. The results show that distance learning is more suitable for vocational departments that do not have practical lessons. These students also used smartphones frequently for their studies 62.2% (see Table 1).

 Table 1. Socio-demographic characteristic

	Variables		No.	%
Q1	Field of Study	Science	115	25.8 74.2
Q2	Gender	Male	280	62.9
	Fema	Female	165	37.1
	What device do	Laptop	128	28.8
Q3	you use	Desktop	16	3.6
	for distance	Tablet	24	5.4
	learning?	Smartphone	277	62.2

of the study sample (n=445)

Regarding table 2, exactly 61.1% of the students answered "no" to whether they had high-speed internet during distance learning. This means that students did not have good internet access while studying off campus. Also there is a difference significant (p=0.000) between Science and administration departments regarding faster internet, 85.5% students in administration answered with "yes" meanwhile only 14.5% of the answers were "No" (see table 2). However, about 64.3% of students spent 1-3 hours of their time daily with practicality in distance learning. In one of the questions asked how they feel about distance learning in general, a large proportion of the 132 students chose the average answer, which is 29.9%, while only 18% gave excellent answers (see table 2).

Table 2	the st	udv sam	nle	(n-445)
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	Variables		No.	%
01	Do you have	Yes	173	38.9
Q1	internet?	No	272	61.1
	How much time	1-3 hours	286	64.3
	practically spend	3-5 hours	107	24.0
Q3	each day on an	5-7 hours	30	6.7
	distance Learning?	7 and more	22	4.9
	How do you feel overall about Distance Learning?	Very Poor	90	20.2
		Below Average	35	7.9
Q4		Average	132	29.7
		Above Average	105	23.6
		Excellent	83	18.7
	Ham halafal	Not at all helpful	41	9.2
	How helpful your University	Slightly helpful	35	7.9
Q5	offering you the	Somewhat helpful	170	38.2
	teach from	Very helpful	140	31.5
		Extremely helpful	59	13.3

	How stressful is	no stress	126	28.3
	distance learning	low stress	122	27.4
Q6	for you during	moderate	123	27.6
	the COVID-19	stress		-
	pandenne ?	stress	74	16.6
		strongly	38	8.5
		disagree		
	The learning platform	Disaglee	51	11.5
Q7	provided active	Neutral	129	29.0
	incretion.	Agree	158	35.5
		strongly	69	15.5
		strongly	07	0.4
		disagree	21	6.1
	All content on	Disagree	49	11.0
Q8	the module outline was well	Neutral	151	33.9
	covered.	Agree	177	39.8
		strongly	41	9.2
		agree		
	I could ask questions to my lecturer where I did not understand	disagree	10	2.2
		Disagree	29	6.5
Q9		Neutral	55	12.4
		Agree	249	56.0
		strongly	102	22.0
		agree	102	22.3
		strongly	14	3.1
	Did you receive full answers to my questions during the lecture?	Disagree	36	8.1
013		Neutral	30	10.1
<b>Q</b> <sup>15</sup>		Agree	02	10.4
		strongly	219	49.2
		agree	94	21.1
		strongly	33	7.4
	I could complete	Disagree		
014	all the assigned	Neutral	77	17.3
Q14	classwork in the	Agree	85	19.1
	expected time	strongly	197	44.3
		agree	53	11.9
	Distance	strongly	44	9.9
	education	disagree		
Q16	opportunity to	Novtrol	50	11.2
	share	ineutral	96	21.6
	information with	Agree	176	39.6

	colleagues?	strongly agree	79	17.8
	I need face to	strongly disagree	24	5.4
	to clarify some	Disagree	44	9.9
Q17	and help me revise and	Neutral	102	22.9
		Agree	153	34.4
	examination.	strongly agree	122	27.4

Moreover, the university (Al-Qalam) has helped to have home teaching offers and resources that were "Somewhat helpful", the highest number of students responded (38.2%) and the lowest was 7.9%, which was "slightly helpful". This means that the university has not adequately assisted students in identifying and providing resources for teaching and learning purposes. Also, the majority of students answered "No stress" 28.3% to the question "Was COVID-19 stressful during distance learning" while, only 16.6% of the participants believe that COVID-19 was "high stress" during distance learning (See table 2).

Regarding the learning platform of the university was active and available for students. 35.5% of the participants responded "agree", however 8.5% answered with "strongly disagree". According to the results of this study, concerning whether the content modules outline was well covered? (39.8%) of the learners indicated that they chose "agree", meanwhile a small number of students (6.1%) chose "Strongly disagreed". There is a difference significant (p=0.000), in Science department all content on modules outline have been covered better than administration departments (see table 3). Several studies have shown that universities administered a platform for distance learning that covered contents and modules (Bauer et al., 2021)

Table 3 shows that there is a significant difference between student's science and administration departments which was (P= 0.003) regarding received full answer for your questions during lectures, 50% of the learners in both departments chose "strongly disagree". On other hand, mostly students can ask their lecturer during distance learning when they did not understand of their lectures. The data showed that 56% of the answers were "agree" and only 2.2% were "strongly disagree". However, the majority of the students have received full answers to their questions from the lecturers during lecture, 49% of the participants responded with "agree" and 3.1% responded with "strongly disagree". The result of the study reported there is a significant difference (P < 0.05) to both science and administration departments regarding the students can ask question to lecturers when they do not understand of the lectures, the students in the science departments asked more than the students of administration departments (see table 3).

Table 3. Association between field of study and demographic characteristics among study sample (n=445)

Warishlar		Field of s	Chi-square	
v anables		Science	Administration	(p-value)
		Gender		
Male	%	24.3	75.7	0.955
Female	%	28.5	71.5	(0.370)
What de	evice d	lo you use for distan	ce learning?	
Laptop	%	17.2	82.8	
Desktop	%	25.0	75.0	9.181**
Tablet	%	41.7	58.3	(0.027)
Smartphone	%	28.5	71.5	
	Do you	1 have high -speed inte	ernet?	 T
Yes	%	14.5	85.5	19.166***
No	%	33.1	66.9	(0.000)
How much time do you pra	acticall	y spend each day on a	n average on distance Le	earning?
1-3 hours	%	23.4	76.6	
3-5 hours	%	29.9	70.1	5.605**
5-7 hours	%	40.0	60.0	(0.133)
7 and more	%	18.2	81.8	1
How do	you fe	el overall about Distan	nce Learning?	
Very Poor	%	37.8	62.2	
Below Average	%	48.6	51.4	
Average	%	25.0	75.0	24.808***
Above Average	%	17.1	82.9	(0.000)
Excellent	%	15.7	84.3	
How helpful your Universit	ty has t	been in offering you th	e resources to teach fror	n home?
Not at all helpful	%	51.2	48.8	
Slightly helpful	%	48.6	51.4	
Somewhat helpful	%	26.5	73.5	33.421***
Very helpful	%	17.1	82.9	(0.000)
Extremely helpful	%	13.6	86.4	
How stressful is dista	ance lea	arning for you during t	the COVID-19 pandemi	c?
no stress	%	18.3	81.7	
low stress	%	25.4	74.6	10.678**
moderate stress	%	26.0	74.0	(0.014)
high stress	%	39.2	60.8	

The learning platform provided active incretion.					
strongly disagree	%	50.0	50.0		
Disagree	%	41.2	58.8		
Neutral	%	24.0	76.0	23.604***	
Agree	%	20.9	79.1	(0.000)	
strongly agree	%	15.9	84.1		
All conte	nt on tl	ne module outline was	well covered.		
strongly disagree	%	66.7	33.3		
Disagree	%	36.7	63.3		
Neutral	%	26.5	73.5	34.596***	
Agree	%	19.2	80.8	(0.000)	
strongly agree	%	12.2	87.8		
I could ask qu	estions	to my lecturer where	I did not understand		
strongly disagree	%	60.0	40.0		
Disagree	%	48.3	51.7		
Neutral	%	25.5	74.5	16.594***	
Agree	%	24.9	75.1	(0.002)	
strongly agree	%	18.6	81.4		
Did you receive	e full a	nswers to my question	s during the lecture?		
strongly disagree	%	50.0	50.0		
Disagree	%	44.4	55.6		
Neutral	%	30.5	69.5	15.675***	
Agree	%	22.8	77.2	(0.003)	
strongly agree	%	18.1	81.9		
I could comple	te all th	e assigned classwork	in the expected time		
strongly disagree	%	57.6	42.4		
Disagree	%	41.6	58.4		
Neutral	%	30.6	69.4	43.149***	
Agree	%	14.7	85.3	(0.000)	
strongly agree	%	17.0	83.0		
Fe	edback	from the lectures was	s given.		
strongly disagree	%	61.5	38.5		
Disagree	%	38.9	61.1		
Neutral	%	38.0	62.0	26.461***	
Agree	%	25.1	74.9	(0.000)	
strongly agree	%	12.9	87.1		
Distance education prov	vides ar	opportunity to share	information with colleag	ues?	
strongly disagree	%	45.5	54.5	13.350***	

Disagree	%	30.0	70.0	(0.010)
Neutral	%	22.9	77.1	
Agree	%	25.6	74.4	
strongly agree	%	16.5	83.5	
I need face to face interactions to clarif	fy some	e module content and l	help me revise and prepa	are for examination.
strongly disagree	%	29.2	70.8	
Disagree	%	20.5	79.5	
Neutral	%	20.6	79.4	6.332***
Agree	%	24.2	75.8	(0.176)
strongly agree	%	33.6	66.4	

In general, the students have completed assignments at lecture time which they answered 44.3% with "agree" and only 7.4% responded with "strongly disagree". Likewise, the results show that there is a significant difference (P < 0.05) between two departments regarding students in science department completed their assignments on time, however the students in administration department completed less than them (see table 3).

Besides, the students believed that "Distance education provides an opportunity to share information with colleagues" which showed that 39.6% chose "agree" and % 21.6 chose "neutral". There was a significant difference (P< 0.05) between administration and pure science departments regarding distance education given opportunity to share instruction among colleagues (see table 3). The priority was given to administration departments as the students shared their information while science departments shared less than the others. Several studies used distance learning to distribute instruction among students and students to teachers (Vlasenko and Bozhok, 2014). Hence, the study illustrated that the large number of students need face to face interaction to clarify module contents and help them revise to prepare for examinations.

### 4.2. Teachers' attitudes

This study indicates that most of the teachers who participated in this research to be exact 83.5% were in the field of administration while only 16.5% were teachers in the science departments. Around 50.4% of the teachers were females whilst 49.6% were males. However, the largest number of teachers participating in this study had a bachelor's degree, in practical subjects, followed by a master's degree and a PhD degree (76.9%, 12.4% and 10.7%) respectively. The data showed that there was no relationship between field of teaching. gender and level of education. It means there is no significant difference among them. (See table 4)

	Variables		No.	%
01	Filed of	Science	20	16.5
teachi	teaching	Administration	101	83.5
Q2 Gender	Male	61	50.4	
	Gender	Female	60	49.6
	Laval of	Ph.D.	13	10.7
Q3	education	Master	15	12.4
		Bachelors	93	76.9

Table 4. Socio-demographic characteristic	
of the study sample (n=121)	

The result of the study showed that teachers have different opinions about attitudes towards distance learning. Regarding the question "are you satisfied with the technology and software you are using for distance" that were recorded (43% answered with "yes", 36.4% answered with "No" and 20.7% were neutral). However, there is no significant difference.

Additionally, the question asked to teachers was "How much the university had helped in providing resources for home teaching?" The results showed that the university had helped them "somewhat helpful", with 53.7% also 6.6% answered that the university had not helped in providing resources for home teaching" (See table 5) Most of the teachers believe that the COVID-19 had "moderate stress" to themselves 33.1% during distance learning" while 19% believe that COVID-19 was "no stress" during distance learning and there appears no significant difference.

Approximately 76% of teachers in the university reported that teaching students with distance learning were totally different when compared to teaching on campus. A large number of teachers were able to balance their lives while teaching distance learning, with more than 60% answering to "somewhat". And also, more than 50% of teachers enjoy being away from students during distance learning but 15.7% of teachers do not like this type of distance learning. However, only a quarter of the students per class attended lectures during the semester (see Table 5

	Variables		No.	%
	Are you satisfied with the	Yes	52	43.0
01	technology and	110	44	36.4
×-	software you are	Neutral	25	20.7
	teaching?			
		Not at all	8	6.6
	How halpful your	Slightly	-	
	University has	helpful	15	12.4
02	been in offering you the resources	Somewhat	65	F2 7
×-		helpful	05	55.7
	home?	very helpful	25	20.7
		Extremely		
		helpful	8	6.6
		No Stress	23	19.0
	How stressful is	Low	32	26.4
Q4	for you during the	Stress Moderate		
	COVID-19	Stress	40	33.1
	pandemic?	High	26	21.5
		Stress		
05	How stressful is	ino Stress	24	19.8
	for student during	Low	33	27.3
L	8	511035		

Table 5. the study sample (n=445)

	the COVID-19 pandemic?	Moderate Stress	38	31.4
		High Stress	26	21.5
		No difference	5	4.1
	How was your	A little difference	17	14.0
Q6	teaching students from as compared to teaching at	difference ( online is better )	9	7.4
	campus?	Totally difference (Campos is better)	90	74.4
		Not at All	12	9.9
	How well could	Very Little	19	15.7
Q7	work-life balance while teaching remotely?	Somewhat To a	73 17	60.3 14.0
		Extent		
	Are you enjoying	Yes	64	52.9
Q8	your students	No	19	15.7
		Neutral	38	31.4
09	How many	All	10	8.3
×-	students (ratio)	More than	41	33.9

	participated per	half		
	class during semester?	a quarter	43	35.5
		less than a quarter	27	22.3
Q10	Do you better in class of online examination?	Yes	40	33.1
		No	64	52.9
		Neutral	17	14.0
Q11	The learning platform provided active incretion.	strongly disagree	13	10.7
		Disagree	21	17.4
		Neutral	38	31.4
		Agree	45	37.2
		strongly agree	4	3.3
Q12	All content on the module outline was well covered.	strongly disagree	9	7.4
		Disagree	13	10.7
		Neutral	38	31.4
		Agree	53	43.8
		strongly agree	8	6.6
Q13	I could ask questions to my	strongly disagree	8	6.6

The finding of the study illustrates the teachers 37.2% agreed the distance learning takes more time than on-campus learning while 4.1% answered with "strongly disagree". One of the most important questions asked to teachers was whether distance education system would lower students' academic performance. Most teachers believed it would and 43.8% "strongly responded with agreed" meanwhile 1.7% responded with "Strongly disagree". This type of education had an impact on students' scientific performance. And there is no significant difference among them. (See Table 5).

# 4.3. Teachers' and students' attitudes

	lecturer where I	Disagree	16	13.2
	understand	Neutral	29	24.0
		Agree	56	46.3
		strongly agree	12	9.9
Q14	Distance learning takes more time than on-campus learning.	strongly disagree 5		4.1
		Disagree	28	23.1
		Neutral	24	19.8
		Agree	45	37.2
		strongly agree	19	15.7
Q15	Distance education leads to lowering the academic level of students	strongly disagree	2	1.7
		Disagree	11	9.1
		Neutral	16	13.2
		Agree	39	32.2
		strongly agree	53	43.8

According to the study both teachers and students attitudes towards distance learning regarding field of study. There is a significant difference (P< 0.05) for both teachers and students considering that university was extremely helpful to offer resources to teach at home for administration departments were 86.6% while for scientific departments were13.4% (see Table 6). One of the barriers to learning that cannot be provided for resources for scientific departments is the practical aspects such as surgical practice and is actually necessary for them when compared administrative to departments(Mirkholikovna, 2020).

In addition, the results revealed that there is a significant difference between administration departments and scientific departments for all students and teachers. The results showed that (P=0.003) regarding providing platform learning, administration

department recorded 83.6% "strongly agree" and scientific departments recorded 16.3%.

Fable 6. Association between field of study and demographic characteristics among study	y
sample (n=566)	

Variables	Field of study		Chi-square					
variables	Science		Administration	(p-value)				
How helpful your University has been in offering you the resources to teach from home?								
Not at all helpful	%	44.9%	55.1%					
Slightly helpful	%	40.0%	60.0%					
Somewhat helpful	%	23.8%	76.2%	27.436***				
Very helpful	%	17.0%	83.0%	(0.000)				
Extremely helpful	%	13.4%	86.6%					
The learning platform provided active incretion.								
strongly disagree	%	41.2%	58.8%					
Disagree	%	33.3%	66.7%					
Neutral	%	20.4%	79.6%	15.852*** (0.003)				
Agree	%	21.7%	78.3%					
strongly agree	%	16.4%	83.6%					
All content on the module outline was well covered.								
strongly disagree	%	55.6%	44.4%					
Disagree	%	32.3%	67.7%	26.811*** (0.000)				
Neutral	%	22.8%	77.2%					
Agree	%	19.1%	80.9%					
strongly agree	%	16.3%	83.7%					

### 5. Conclusion

This study concluded that although to a great extend the students and teachers were satisfied with distance learning but despite that they disagree with the study time from distance learning when it is compared with on-campus learning. The participants also had some issues such as lack of high-speed of the internet. It can be stated that most of the students in administrative departments have only some minor issues while the students of the pure science departments have more issues since they believe that they can be taught better inside the labs and they feel that they understand the subjects more easily when they are taught on-campus.

### References

- AKKOYUNLU, B. & SOYLU, M. Y. 2008. A study of student's perceptions in a blended learning environment based on different learning styles.
- ALADWAN, F., AL-SHBOUL, M. & AWAMRAH, A. 2018. Distance education, blended learning and e-learning predictions and possibilities. *Modern Applied Science*, **13**, 192.
- ALLEN, I. E. & SEAMAN, J. 2011. Going the distance: Online education in the United States, 2011, ERIC.
- ALLEN, I. E. & SEAMAN, J. 2013. Changing course: Ten years of tracking online education in the United States, ERIC.
- ANDERSON, T. 2008. *The theory and practice of online learning*, Athabasca University Press.
- BAUER, T., IMMITZER, M., MANSBERGER, R., VUOLO,
  F., MÁRKUS, B., WOJTASZEK, M. V.,
  FÖLDVÁRY, L., SZABLOWSKA-MIDOR, A.,
  KOZAK, J. & OLIVEIRA, I. 2021. The making of a joint E-learning platform for remote sensing education: Experiences and lessons learned. *Remote sensing*, 13, 1718.
- GUNAWARDENA, C. N., WILSON, P. L. & NOLLA, A. C. 2003. Culture and online education. Handbook of distance education, 753-775.
- JONASSEN, D. Applications and limitations of hypertext technology for distance learning. Distance Learning Workshop, Armstrong Laboratory, San Antonio, TX, 1992.

- KEEGAN, D. 2013. Foundations of distance education, Routledge.
- KIM, K.-J. & BONK, C. J. 2006. The future of online teaching and learning in higher education. *Educause quarterly*, 29, 22-30.
- MIRKHOLIKOVNA, D. K. 2020. Advantages and disadvantages of distance learning. *Наука и образование сегодня*, 70-72.
- ORLANDO, J. & ATTARD, C. 2016. Digital natives come of age: The reality of today's early career teachers using mobile devices to teach mathematics. *Mathematics Education Research Journal*, 28, 107-121.
- ROFFE, I. 2004. *Innovation and e-learning: E-business for an educational enterprise*, University of Wales Press Cardiff.
- SARI, I. F. 2020. Online learning for English language teaching. *EDUKASIA: Jurnal Pendidikan Dan Pembelajaran,* 1, 216-230.
- SHERRY, L. 1995. Issues in distance learning. International journal of educational telecommunications, 1, 337-365.
- SIMONSON, M., SCHLOSSER, C. & HANSON, D. 1999. Theory and distance education: A new discussion. *American Journal of Distance Education*, 13, 60-75.
- SINGH, V. & THURMAN, A. 2019. How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education*, 33, 289-306.
- VLASENKO, L. & BOZHOK, N. 2014. Advantages and disadvantages of distance learning.