Perception of Nursing Students towards E - Learning in Selective Private University during the Covid 19 at Khartoum State – Sudan (2022)

Thorya Mohamed Blilla Jibreel [1] , Mohamed jebreldar Abuanja Nimer[1], Amal Badawi Bushra Moukhtar[3]

[1,2] Faculty of nursing sciences International University of Africa. Sudan

[3]Faculty of nursing science Al Neelain University. Sudan

Abstract

Background: Electronic Learning has received widespread acceptance in recent years due to the outbreak of the COVID-19 pandemic. It appears that there is universal agreement that the worldwide e-learning market will show fast and significant growth over the next three years. **Aim:** The study set out to recognize the perceptions of nursing students about E-learning. In selected private nursing colleges at Khartoum State-Sudan. **Methods:** Descriptive cross-sectional design. The study includes (230) students which had been selected by stratified sampling technique. A self-administered questionnaire was used for data collection, Data analysis was done using the statistical package for social sciences (SPSS version 26) and the results were presented in descriptive and numerical forms as well as cross tables. **Results:** Findings revealed a high level of perception about online classes. The study explains that the majority of the study population has the technology to access the E - learning materials. While 85.7%of the study population knows the definition of eLearning correctly. The data indicated that a third of the study population downloaded materials of E-learning platform very easily a mean (3.88). The study justifies that less than fifty percent of the study population mentioned that the language of the module & courses is easy to understand with the mean (3.26). **Conclusion:** The study depicts that nursing students had a positive disposition toward eLearning. The study revealed that e-learning has benefited from a student's perception, it has a positive influence on their performance with a better understanding of their courses.

Keywords: E-learning, Perception, Nursing, students

Introduction

Electronic learning [e-learning] can be defined as education that integrates electronic equipment and tools and the interactivity that occurs between these and the people involved in the educational process (i.e. instructors and learners). More

and more E-Learning projects are being developed lately and some spectacular successes are recorded [1] .

Electronic learning (e-learning) is changing the way teaching and learning is taking place on university campuses. As e-learning is a relatively new phenomenon, currently both educators and students are struggling with the idea of its implementation and adaptation respectively [2] .

It is argued that the achieved outcomes from traditional education and training programs are quite often far from ideal.so the institutions have to find a new way of learning and developing a new system to manage the flow of knowledge [3,4].

E-learning facilitated and supported the learning process through information and communication technologies (ICTs). The use of Information Technology (IT) has impacted how things are done, and its influence on teaching and learning, thus becoming increasingly complex and widespread [5,6].

E-learning systems are multidisciplinary, where the success of E-learning depends on two factors (The technological factor, i.e. software and hardware that are used to build the E-learning system, And the Human factor, i.e. students and instructors [7].

Globally, online learning has become the present-day paradigm shift in higher institutions of learning [8]. These swift developments in education technology have not only altered the contemporary way of life but have deeply affected the manner of teaching and learning [9]. Studies have revealed that Students learn faster and retain about 25-60% when learning online compared with 8-10% in classroom teaching. In addition, it has been documented those learners learn at their own pace, and they were able to do personal revisions on what has been taught. Online teaching provides several opportunities to develop the learning atmosphere for different learners' populaces, and has inspired students to be more accountable for their acquisition of knowledge [10, 11].

Methodology

Study Design

Descriptive cross-sectional university-based study

Study Area:

The study was carried out at selected private nursing colleges that implemented the E-Learning program in Khartoum. The total number of private nursing colleges was 29. They found all the available colleges in Khartoum State at the time of the study. The study was conducted in three private nursing collages in Khartoum State,

Settings:

International University of Africa (IUA): It was established1966 and is located in Khartoum Madni street. It has 22 faculties The college of nursing science established in 2006, consist of 15 batches, 423 students, and graduated 11 batches.

National University –Sudan: It was founded in 2007 and is located in the metropolis of Hama. College of nursing science established 2007 consist of 11 batches,272 students and graduated 9 batches

Nile University: It was established in 2007, located in Khartoum inside an urban campus, It has 7 faculties, the college of nursing science it established in 2007, consist of 14 batches, 360 students, and graduated 10batches.

Study population:

Nursing students in three selected private nursing colleges, they implemented E-learning in the class.

Sample size & Sampling techniques:

The sample was measured by the simple equation

n = N/1+N(d2) =539/1+539(0.05)2=230

Where n is the sample size

N=population

d is the degree of accuracy or level of precision (is usually set to 0.05).

The number of students in the above colleges is about 539=539/1+539(0.05)2=230

The sample was distributed proportionally to the actual simple size of each college.

The colleges	No of students	Percentage	Sample size
Nile university	116	21.3%	49
International University of Africa	151	28.3%	65
National University-Sudan	272	50.4%	116
Total	539	100%	230

The sample was be selected by probability sampling techniques (stratify sampling)

Variables of the study

Dependent

Student's perception of E-Learning

Independent:

Demographic characteristic

Age, gender. and level of education

Data collection and technique:

Data were collected through interviews with the study population by using A self-administered close-ended questionnaire within two months after a signed consent by the participant. The questionnaire consisted of four parts that addressed the formulated research questions.

Part one: included items on the -demographic characteristics of the study population.

Part two: consisted of questions that addressed E. learning and the effectiveness of platform uses for E. Learning.

Part three: This part measures the student's perception and knowledge about E-learning. Likert Scale was used it contains five questions including fives scales (Strongly Disagree, Disagree, neither agree nor disagree, Agree, Strongly Agree.)

Validity and reliability

The tool was examined by expertise in the field of the study and their comments about Content and context were considered. Piloting was done among 30 students and was analyzed to check for reliability. The reliability of the instrument was achieved by subjecting the questionnaire to Cronbach's Alpha test. The study finds that the coefficient of greater consistency and honesty (65%), achieves the purposes of the research.

Data analysis:

The data gathered was analyzed using Statistical Package for Social Sciences (SPSS) version 26. Based on the research questions raised at the onset of the study, the analysis was divided into two sections: demographic characteristics (which were analyzed Descriptively using frequency counts and percentage distribution) and the rest of the questionnaire (which was analyzed by mean, Standard deviation, and chi-square test) Study results were presented in form of tables

Ethical considerations:

The researcher obtained approval to conduct the research; from the following authorities:

-Alneelian institutional reviewer board

- Selected private nursing colleges

- Research purpose and objectives was explained to participants in clear simple words

- Participant has the right to agree or refused.

Results

Table (1) demographic characteristics of study population

Personal Information	Frequency	Percent
Gender		
Male	14	6.1%
Female	216	93.9%
Total	**230**	**100.0%**
Age		
18-20 year	111	48.3%
21-23 year	105	45.7%
27-30 year	13	5.7%
30 Above	1	0.4%
Total	**230**	**100.0%**
Level of study		
Level one	45	19.6%
Level two	9	3.9%
Level three	104	45.2%
Level four	72	31.3%
Total	**230**	**100.0%**

Table (2) Accessibility to E-Learning materials

	Yes		No		Total
	F	%	F	%	
I have the technology to access the material.	197	85.7%	33	14.3%	230(100%)
I have time to access the online materials.	158	68.7%	72	31.3%	
I know how to access the materials provided online by the teacher.	178	77.4%	52	22.6%	
I know how to navigate through the e-learning web-based module.	134	58.3%	96	41.7%	
E-Learning defines as any form of education that is facilitated by the internet and its technologies, to support instruction and to deliver course content.	197	85.7%	33	14.3%	

Table (3) knowledge of participant regarding definition of E-Learning

Statement	correct		incorrect		Total
	F	%	F	%	
E-Learning defines as any form of education that is facilitated by the internet and its technologies, to support instruction and to deliver course content.	197	85.7%	33	14.3%	230(100%)

Table (4) The effectiveness of platform of E-learning

Items		Very Easily	Easily	Undecided	will try	I can't	Mean
Post messages	**F**	82	85	30	20	13	3.88
	%	35.7%	37.0%	13.0%	8.7%	5.6%	
Attach files to e-mails	**F**	57	82	31	40	20	3.50
	%	24.8%	35.6%	13.5%	17.4%	8.7%	
The student form	**F**	64	77	45	35	9	3.66
	%	27.8%	33.5%	19.6%	15.2%	3.9%	
Downloading materials	**F**	88	78	24	27	13	3.87
	%	38.3%	33.9%	10.4%	11.7%	5.7%	

Table (5) The perception of nursing students about online learning

Items		Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	mean
The language of the module is easy to understand.	F	23	112	27	37	31	3.26
	%	10.0%	48.7%	11.7%	16.1%	13.5%	
	%	10.4%	38.7%	19.6%	22.6%	8.7%	
It is easy to do my tasks with the e-learning web-based module.	F	18	86	57	47	22	3.14
	%	7.8%	37.4%	24.8%	20.4%	9.6%	
Internet connection is not a problem for me.	F	25	54	36	71	44	2.76
	%	10.9%	23.5%	15.6%	30.9%	19.1%	
The online forums case my interactions with colleagues and the teacher.	F	23	78	53	50	26	3.10
	%	10.0%	33.9%	23.0%	21.7%	11.3%	
I often encounter technical problems with the e-learning web-based module.	F	22	93	43	48	24	3.18
	%	9.6%	40.4%	18.7%	20.9%	10.4%	
There is flexibility in time and space for learning.	F	41	82	49	41	17	3.39
	%	17.8%	35.7%	21.3%	17.8%	7.4%	
It is easy and quick to access and share educational material.	F	40	96	37	38	19	3.43
	%	17.4%	41.7%	16.1%	16.5%	8.3%	
It improves collaboration and interactivity among students.	F	30	79	38	60	23	3.14
	%	13.0%	34.5%	16.5%	26.1%	10.0%	
Do you motivated and enthusiastic about learning through online.	F	33	83	42	45	27	3.22
	%	14.3%	36.1%	18.3%	19.6%	11.7%	

Table (6) The student perception towards the role of teacher in facilitating E-learning

Items		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean
The teacher's online instructions are easy to understand.	F	20	93	45	46	26	3.15
	%	8.7%	40.4%	19.6%	20.0%	11.3%	
The teachers conduct question and answer activities about the learning material through online Learning.	F	14	98	35	57	26	3.07
	%	6.1%	42.6%	15.2%	24.8%	11.3%	
The teachers explain material well through online Learning.	F	24	89	45	52	20	3.20
	%	10.4%	38.7%	19.6%	22.6%	8.7%	

Table (7) Relationship between platforms and Student's perception about E-learning by Level

		Sum of Squares	df	Mean Square	F	P.value
The effectiveness of platform for E-learning	**Between Groups**	6.896	3	2.299	2.887	0.036*
	Within Groups	179.925	226	0.796		
	Total	186.822	229			
Student's perception about E-learning	**Between Groups**	5.141	3	1.714	3.117	0.027*
	Within Groups	124.233	226	0.550		
	Total	129.374	229			
	Within Groups	72.426	226	0.320		
	Total	72.783	229			

Table(8) The relationship between platform and Student's perception about E-learning by Gender

Gender		N	Mean	SD	T	df	P.value
The effectiveness of platform uses for E-learning	Male	14	3.64	1.277	-0.950	228	0.343
	Female	216	3.88	0.876			
Student's perception and about E-learning	Male	14	2.86	1.099	-2.043	228	0.042*
	Female	216	3.28	0.720			
	Female	216	2.39	0.568			

Discussion

This thesis set out to analyze the perceptions of students about e-learning, as they are the main beneficiaries of this technology-enabled learning. Perceptions were sought concerning how students understand e-learning and their views on its uses. The study covers the effectiveness of platforms in e-learning and students can use the various technologies and tools that enable them to successfully participate in e-learning. Regarding personal information, the study revealed that (45.2%) of the study population was in level three and most of them were female (93.9%) while less than half (48.3%) of the study population belong to the 18-20 age group.

Furthermore, the study explains that the majority of the study population has the technology to access the material. wihle85.7% of the study population know the definition of eLearning correctly. These findings agreement with the study done in Ghana it was found that more than fifty percent of respondents in the sample were comfortable using information technology for various activities, while less than fifty do not [(12)]. another study was done in Chennai it was found that the maximum

number of students are aware of E-Learning and the technology as an important part of their daily activities [13].

The data indicated that a third of the study population downloaded materials with a mean (of 3.88). This is justifying that less than fifty percent of the study population understands the language of the module with their mean (3.26)

The study revealed that no significant relationship between platform uses for E-learning and students' perception of E-learning.

There was a significant relationship between the Level of study population and platform uses for E-learning P. (0.036)

Regarding The student perception towards the role of teacher in facilitating E-learning, The study revealed that students agree the teachers explain material well through online Learning mean (3.20). this finding reflects the ability of teachers to communicate via the internet, accessing and publishing information is very diverse.

References

1. Dobre I. (2007). Evaluation of Students Knowledge – An Experiment in E-Learning. LIX(2):43–8 [Google Scholar] Accessed December 2020.

2.Ahmed HMS. (2010). Hybrid E-Learning Acceptance Model: Learner Perceptions. Decis Sci J Innov Educ.;8(2):313–46. . https://scholar.google.com Accessed December 2020

3. Chen, R. S., & Hsiang, C. H. (2007). A study on the critical success factors for corporations embarking on knowledge community-based E-learning. Information Sciences, 177 2, 570–586. https://ir.nctu.edu.tw/bitstream/11536/11228/1/000242509400017. Accessed December 2020

4. Liu,Y., & Wang, H. (2009). A comparative study on E-learning technologies and products: from the East to the West. Systems Research & Behavioral Science, 26(2), 191–209. http://dx.doi.org/10.1002/sres.959. Accessed December 2020

5. Jenkins, M. & Hanson, J. (2003). E-learning series: A guide for senior managers, Learning and Teaching Support Network (LSTN) Generic Centre, United Kingdom. . https://scholar.google.com Accessed February 2020

6. Engelbrecht, E. (2005). Adapting to changing expectations: Postgraduate students'

experience of an e-learning tax program. Computers and Education, 45(2), 217–229www.sciepub.com/reference/181206. Accessed February 2020

7.Ozkan, S. &Koseler, R. (2009) Multi-dimensional students' evaluation of e learning systems in the higher education context: An empirical investigation. Computers & Education (53) p. 1285–1296. http://dx.doi.org/10.1016/j.compedu.2009.06.011. Accessed February 2021

8. Tucker, J. P., & Neely, P. W. (2010). Unbundling faculty roles in online distance education programs. International Review of Research in Open and Distance Learning, 11(2), 20–32.

9.Kotoua, S., Ilkan, M., & Kilic, H. (2015). The growth of online education in sub-Saharan Africa: Case study Ghana. Procedia - Social and Behavioral Sciences, 191, 2406–2411. www.sciepub.com/reference/345513 Accessed February 2022

10. Blake, H. (2009). Staff perceptions of e-learning for teaching delivery in healthcare. Learning in Health and Social Care, 8(3), 223–234. Accessed February 2022

11.Keengwe, J., & Kidd, T. T. (2010). Towards best practices in online learning and teaching in higher education. MERLOT Journal of Online Learning and Teaching, 6(2), 533–541. https://www.semanticscholar.org Accessed September 2022

12. Raymond Selorm Mamattah. (2016)Students' Perceptions of E-Learning Linköpings Universitet SE-581 83 Linköping.

13. Mehandi Vinayak Mahajan et al.(2018) A study of students' perception about e-learning Indian Journal of Clinical Anatomy and Physiology.5(4):501-507.