

Nursing Students' Readiness for e-Learning Experience

Wafaa Gameel Mohamed Ali*

Department of Medical Surgical Nursing, Mansoura University, Egypt

Corresponding author: Wafaa Gameel Mohamed Ali, Faculty of Nursing, Department of Medical Surgical Nursing, Mansoura University, Egypt, Tel: 00201016912709; E-mail: drwafaali@yahoo.com

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Abstract

This study aimed to assess readiness of nursing students for e-learning in El Dawadme Applied Medical Science, Shaqraa University.

Methodology: Cross sectional, descriptive research design was used to investigate readiness of nursing students for e-Learning among a purposive sample of 113 female nursing students. Tool; the data were collected by using two tools. The first was concerned with collecting data related to sample characteristics; the second was a self-administered questionnaire, concerned with assessing the students' readiness for the e-Learning.

Results: The study found that the majority of nursing students revealed total high score level of e-Learning readiness. Watching through each subscale, the average score was high, especially; Technology Acceptance's average score was the highest. The Motivation average score was the lowest. Further, the study found that nursing students of different academic level (3rd to 8th level) showed statistically indifferent average score of e-Learning readiness while, those with different preference to study through e-learning, showed statistically different average score of e-Learning readiness.

Recommendation and implications: The findings show that applicant nursing students are ready for e-Learning. The implementation of new technologies with instruction should be made. The e-Learning is a tool that can be used in undergraduate nursing education. Therefore, the University should develop e-Learning as a medium to enhance learning for students as they are ready to learn on their own, whether what year they are at or what age they are. There are no barriers to learning through e-Learning anymore.

Keywords: e-learning; Nursing students; Readiness for e-Learning

Introduction

The advancement in information technology and the Internet over the past decade leads to new educational delivery methods like e-Learning [1]. e-Learning is becoming a significant approach of supply education in higher education institutions. The need for a well-educated and appropriately trained staff has motivated many higher education institutions to reform their education systems [2,3]. e-Learning is becoming a worldwide delivery mode for education and training in many educational institutions. It provides a diversity of learning styles that have been broadly known in many countries and institutions. It has also become a vital and valid learning process for health care professionals in the 21st century [4].

Introducing the e-Learning in nursing curriculum is important, as it allows learners to learn in their own time and place. Moreover, while it allows learners to be self-directed, it also provides them with the ability to connect online to download resources that are essential for their educational requirements [5]. It holds a number of potential benefits for the learner, including access to learning tools and resources which include text, audio and video, e-mail, online discussions, and evaluations. It is a useful tool for enhancing the quality of teaching and learning. It is an "innovative approach to education delivery via electronic forms of information that enhance the learner's knowledge and skills. [6]. Zhang and Nunamaker [7] define "e-Learning as

learning that takes place anytime someone uses electronic means for gathering information that is acquired without another live person present". Arbaugh [8] defined e-Learning as the use of the Internet by users to learn specific content. Other researchers define it as using modern Information and Communications Technology (ICT) to deliver instruction, information, and learning content [9].

Currently the challenge in nurse education is to make programs convenient, reachable and smart to a broader cohort of students [10]. In nursing education, the move toward integrating distance education and Web-based learning into curricula continues as students and faculty experience the effects of distance education technologies on teaching and learning [11]. Just as in classroom settings, nursing programs delivered by distance education can involve students as co participants who shape learning through inquiry. IT skills and continuous student support is helpful [12]. Advantages of e-Learning for learners include an increase accessibility to information, better content delivery, personalized instruction, content standardization, accountability, on-demand availability, self-pacing, interactivity, confidence, and increased convenience [13-15]. In addition, it increased student satisfaction [16,17] and reduced staff workload [10].

In addition, students appreciate the flexibility and convenience of being able to work in their own time and location without the need to travel [18,19]. Welsh et al. [14] concluded that e-Learning has enormous benefits and can reduce costs in comparison to a traditional classroom environment after primary course establishment. It reduces

classroom and facilities cost, training cost, travel cost, printed materials cost, and labor cost [13,14]. Anywhere e-Learning initiatives necessitate significant funds in technology such as hardware costs, software licenses, development of learning material, equipment preservation, and staff training [14,20].

Despite these benefits, e-Learning has a greater drop-out rate than traditional delivered education [15]. This may be because there are disadvantages for e-Learning such as learners need to have access to a computer and the Internet. They required having computer skills with programs such as word handling, Internet browsers, and e-mail communication. Slow internet connections or older computers may make gain access to the course materials hard—this may cause the learners to get upset and give up [21]. Another disadvantage of e learning is that students may feel isolated from the instructor. Learners also need to have good writing, computer, and communication skills. When instructors and other learners are not meeting face to face, it is possible to misunderstand what was intended [22].

While registration in online courses continues to magnify, the issue of student retaining takes on importance [23]. Information system research clearly shows that user satisfaction is one of the greatest significant issues in assessing the accomplishment of system application. Student success in online course has been linked to three factors: Student readiness; Student orientation; and Student support [23]. Borotis et al. [24] define e-Learning readiness as “the mental or physical preparedness of an individual for some e-Learning experience or action.” Research has shown that it is essential to conduct a readiness assessment before the implementation of e-Learning [25].

Additionally, e-Learning teachers and designers can help their prospective learners prepare for, or at least evaluate their own readiness to learn within an online environment. Research supports that this is a critical consideration, since an individual learner's success in an online course often depend on this foundation of readiness. Learners who are arranging to take a course or program on-line are guided to measure their own readiness to effectively learn in the computer-generated situation. Readiness requires three dimensions to be evaluated: the learners' computer or technical skill, learning skills, as well as their time management behaviors [26]. Thus e-readiness evaluation allow enablers and rule producers to take appropriate policy measures and implement development plans that help in creation of informed participants in e-Learning actions. Further, such assessments offer key information to educational institutions to provide options that can tailor to the specific needs of each learning group [27].

Significance of Study

In spite of increasing numbers of educational institutions which are adopting an online approach to teaching and learning however, slight concern has been given to the pre requisite personal and technical qualities required for academic achievement and satisfaction within this environment [28]. King Saudi Arabia (KSA) needs graduates who are prepared for the place of work and who have a high level of knowledge and confidence in the use of technology to help them in their lifetime learning. Since e-Learning is conducted using the Internet and World Wide Web, the learning environment becomes more complicated [29]. In addition, little is known about why many users stop their online learning after their first experience. Questions remain regarding both the instructional accuracy of e-Learning as well as the readiness of learners to engross in online learning environments. Little is reported about students' readiness for e-Learning experience in

Saudi Arabia to date. So the aim of this study is to assess nursing student's readiness for e-learning.

Methodology

Aim of the study

The present study aimed to assess readiness of nursing students for e- learning experience in El Dawadme Applied Medical Science, female branch, Shaqraa University.

Study design

Cross sectional, descriptive research design was used to investigate the aim of this study.

Setting

The study was conducted at the nursing department in faculty of El Dawadme Applied Medical Science, Shaqraa University, Saudi Arabia.

Subjects

A purposive sample of 113 female nursing students from the department of nursing, faculty of El Dawadme Applied Medical Science, female branch, Shaqraa University was enrolled in this study. The majority of student in each level and all levels in the first semester of the academic year 2013-2014 were included in this study except the first and second levels were not represented. It comprised 9 students from 8th level 30 students from 7th level, 16 students from the 6th level, 23 students from the 5th level, 7 students from the 4th level, and 28 from the 3rd level.

Tool of Data Collection

The data were collected by using two tools.

The first tool

It is concerned with collecting data related to student academic level, if she has previous experience with e-learning, and if they prefer to use E- learning in their nursing study or not.

The second tool

It is e-Learning readiness assessment which is a self-assessment tool developed by Watkins et al. [30]. The tool is translated into Arabic language by the researcher and used in order to assess readiness of nursing student to engage in e-Learning experience. It consisted of 27 statements related to readiness for e-Learning success, which were grouped into 6 subscales: (1) technology access (3 items), (2) online skill and relationships (9 items), (3) motivation (3 items), (4) online audio / video (3 items), (5) internet discussions (4 items), and (6) importance to your success (5 items). For each statement participants completed a 5-point Likert- type scale response ranging from “strongly disagree”=1 to “strongly agree”= 5 with the statement. The average of the e-Learning readiness includes 5 levels: the average from 1.00 to 1.49 is least, average from 1.50 to 2.49 is less, average from 2.50 to 3.49 is fair, the average from 3.50 to 4.49 is high, and average from 4.50 to 5 is the highest. The reliability of the e-Learning readiness assessment tool for this study was reported to be 0.85 [30].

Pilot Study

A pilot study was carried out on 10 students to test the clarity and simplicity of the questions. Necessary modifications were done. Students who shared in pilot study were excluded later from the main study sample.

Methods

- A review of national and international related references was carried out to get acquainted with the various aspects of the research problem and the study tools.
- Data were collected through interviewing the respondents. Each respondent took 5-10 minutes to complete the questionnaire.
- The study questionnaire was distributed at the first semester of the academic year 2013-2014.

Statistical Analysis

The Statistical Package for the Social Sciences (SPSS) version 15 was used to analyze the data. Frequencies and percentages were calculated for study sample characteristics. Descriptive statistics, including, measures of central tendency and means were calculated for each subscale and total score of e-Learning readiness scale. One way analysis of variance was used to compare e-Learning readiness among different students groups. The students were grouped according to their academic levels and their preference to study through e-Learning.

Table 1 shows the distribution of subjects according to their demographic characteristics. As shown the sample consisted of 113 students; more than the quarter of the sample (26.4%) from the 7th level and the majority of the sample 90.3% did not have past experience with e- learning. Slightly less than half (42.5%) of the sample not prefers to use E learning in their nursing study while about the third (31.9%) prefer.

Table 2 represents the mean and standard deviation of e-Learning readiness for all nursing students participated in the study. As shown the majority of nursing students demonstrated total high score level of e-Learning readiness (3.75 ± 0.67). Looking through each subscale, the average score was high, especially; Technology Acceptance's average score was the highest (4.1 ± 0.89). The Motivation average score was the lowest (3.4 ± 0.88).

Table 3 represented the analysis of differences in readiness for e-Learning among different student levels. As shown the participant nursing students of different academic level (3rd to 8th level) showed statistically indifferent average score of e-Learning readiness (F=2.325 and P=.103). While, those with different preference to study through e-learning, showed statistically different average score of e-Learning.

Characteristics	Frequency	Percent
Student Level		
Third level	28	24.8
Fourth level	7	6.1
Fifth level	23	20.4
Sixth level	16	14.2
Seventh level	30	26.5

Eighth level	9	8.0
Total	113	100.0
Past Experience with e- Learning		
Yes	11	9.7
No	102	90.3
If they prefer to use e-learning in their nursing study		
Yes	36	31.9
No	48	42.5
I don't know	29	25.7

Table 1: represent frequency and percentage of study sample characteristics.

e-Learning readiness	X	S.D	Degree
Technology Acceptance	4.1	0.89	High
Relationship and Online Skill	3.77	0.83	High
Motivation	3.4	0.88	Fair
Online Audio / Video,	3.73	0.94	High
Internet Discussions	3.69	0.93	High
Importance to your success	3.81	0.78	High
Total average	3.75	0.67	High

Table 2: Mean and standard deviation of e-Learning readiness for all nursing students participated in the study (n=113).

Student level	DF	SS	MS	F	P Value
Between Groups	2	2.051	1.025	2.325	.103
Within Groups	110	48.520	.441		
Total	112	50.571			

Table 3: The Analysis of differences in readiness for e-Learning among different student levels.

Table 4 represented the analysis of differences in readiness for e-Learning among different student groups according to their preference to study through e-learning.

Preference to study through e-learning	DF	Sum Squares	of Mean Square	F	P Value
Between Groups	2	3.044	1.522	3.522	.033
Within Groups	110	47.527	.432		
Total	112	50.571			

Table 4: The Analysis of differences in readiness for e-Learning among different students groups according to their preference to study through e-learning.

As shown the participant nursing students of different preference to study through e-Learning, showed statistically different average score of e-Learning ($F=3.522$ and $P=.033$).

Discussion

Nowadays, e-Learning is a common transport media for education and training within many organizations. Yet, while both the supply and demand for e-Learning opportunities has increased in recent years, many professionals are beginning to inquire whether e-learners are prepared to be successful in an online learning environment [31,32]. After all, a learner's demonstrated success in a conventional education and training classroom may not be an adequate predictor of success in an e-Learning classroom. One way of measuring a potential online learner's readiness is through self-assessment. So this study aimed to assess readiness of nursing students for e-learning experience in El Dawadme Applied Medical Science, Shaqraa University.

The funding of the current study documented that, only less than the third of participants prefers to use E learning in their nursing study inspite of they scored high in their total score for e-learning readiness. This may be due to lack of information and awareness related to e-learning process and requirement among study participants and the majority of them had no previous experience in using e-learning and may be scared to pass with uncertain experience. This was in contrast with the results of Iwata et al. [33] they have been conducting surveys to investigate their medical and nursing students' needs and readiness for e-learning. Their result found that most of the participant students prefer to use computers or the Internet for their English study. While, Abdelaziz et al. [34] reported that lack of computer skills of students affected their abilities to communicate effectively with the instructor and failed to participate in a diversity of online communication methods. Students in the study group were satisfied with the e-Learning program as a teaching method, but they did not wish to take another e-Learning program except if they had computer and Internet at home.

Wattakiecharoen et al. [35], found in their study that, the mean score of Ph.D. students who are ready for e-Learning is high and as the analysis of each aspect is high, whereas technology acceptance is the highest and the motivation average score was the lowest. This was in agreement with the findings of the current study in which the majority of nursing students demonstrated total high score level of e-Learning readiness. Looking through each subscale, the average score was high, especially; Technology Acceptance's average score was the highest while the Motivation average score was the lowest. This also may be due to the availability of computer, cell phone, and internet in their home and using it in searching and chatting. Also introduction of computer courses in preparatory and secondary school may be contributing factors. In addition, the more experience a student has in using basic computer skills (use of networks, word processing and other software applications, ability to upload and download files, use of the world wide web and email, accessing online library and other resource databases, and experience with online forums and other discussion applications), the more ready they are to take an online course. Other foundational requirements include access to a stable Internet connection and dependable computer and printer.

Additionally, the findings of the Tibi, [36] supported the present study findings. Also current study findings partially supported with Coopasami and Knight, 2014 findings. They had conducted study to assess the readiness of nursing students to make the shift from

traditional learning, to the technological culture of e-Learning. They found the following; the psychological readiness score was noted to be high in the "could be worse" category (pre-72%, post- 64%). The technological readiness score was noted to be in the "dig deeper" category (pre- 58%, post- 65%) whilst the equipment readiness score fell in the e-Learning "not ready category" (pre- and post- 68%).

Furthermore, the study found that nursing students of different academic level (3rd to 8th level) showed no statistically different average score of e-Learning readiness while, those with different preference to study through e learning, showed statistically different average score of e-Learning readiness. These findings were supported to some extent with the findings of Wattakiecharoen et al. [35-39]. They found that PhD. students of different year (1st year, 2nd year and 3rd to 6th year), different ages, different gender, different discipline (nursing management, hospital management, public and private management, educational administration) and different experiences in using computers (with experience-no experience) showed statistically indifferent average score of e-Learning readiness.

Conclusion

The findings show that participant nursing students are ready for e-Learning. The implementation of new technologies with instruction should be made. The e-Learning is a tool that can be used in undergraduate nursing education. Therefore, the University should established e-Learning as a tool to enhance learning for students as they are ready to learn on their own, whether what year they are at or what age they are. There are no obstacles to learning through e-Learning anymore.

Study Limitations

Small sample size and data were collected only from female nursing students are the major limitations of this study because it hinder the generalizability of the findings.

Relevance to Practice

An appraisal of e-Learning readiness is essential for its successful application. Success in e-Learning can be achieved by understanding the needs as well as the readiness of students in a specific e-Learning environment. This study aimed to assist lecturers to prepare students for the shift to e-Learning in the classroom.

Recommendations

- The motivation subscale mean was the lowest among others subscales yet; it was fairly acceptable which indicate that the faculty administrators and faculty staff need to apply approaches and strategies to improve and magnify the internal and external motivation of nursing students.
- It is healthier to assess student readiness for e-Learning before starting any on-line program.
- Students need clear guidelines and preparation prior to starting any on-line program.
- The establishment of on-going technical support could be regarded as a critical service to enable continuing success of learners in e-Learning environment.

- Further studies needed to investigate why nursing students not motivated to engage in e-learning in spite of their high level of their readiness for this experience.

Ethical Considerations

An official permission was obtained from the faculty vice dean. Oral informed consent was taken from potential participants after explanation the purpose and procedure of the study. Students were informed that their participation is voluntary and assured that their responses will be confidential, will not affect them, and used only for the research purpose.

Conflicts of Interest

The authors declared no conflict of interest.

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