

A Comparative Study Between Distance and Traditional Learning Among University Nursing Students During COVID-19 Pandemic

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Abstract

The COVID-19 pandemic caused the greatest disruption of learning in history with a universal effect on learners and teachers all over the world. **Aim:** Compare distance and traditional learning among university students during COVID-19. **Methods:** a comparative cross-sectional study was implemented on 396 university nursing students at the faculties of nursing affiliated to Suez Canal University and Beni- Suef University randomly through the academic year of 2020/2021. Data was collected online using Two tools including 1): assessment sheet to assess the students' perception toward distance and traditional learning, 2): questionnaire to assess obstacles with distance learning. **Results** exposed statistically significant variances in the students' total perception toward traditional and distance learning 53.46 ± 12.21 , 56.23 ± 14.18 respectively, 41.9% of the students have moderate perception level toward distance learning, 53.2% of the students have high perception level, and 61.1% of the studied students face a high level of obstacles. **Conclusion:** the highest positive perception directed toward distance learning and traditional exam, and the priority obstacles faced by the students during distance learning concerns the Learners' characteristics dimension. **Recommendation:** a combination of both distance and traditional learning through the introduction of exclusive training to the students and instructors.

Keywords: Distance learning, traditional learning, and COVID-19 pandemic.

Introduction

The Coronavirus Disease 2019 (COVID-19) pandemic was originated and restricted only in China till February 2020, then suddenly became a global pandemic since 11th March 2020 (Koirala et al., 2020; Lu et al., 2020; WHO, 2020). This outbreak has affected physical health as well as the lifestyle, stock market, business, in addition to education system all over the world because of restraint procedures being taken for its prevention and control (Verma et al., 2020; Gautam & Sharma, 2020). In reaction to the COVID-19 widespread, the government has taken a variety of measures to avoid or diminish the spread of the epidemic especially in education to protect students (Bedford et al., 2020). At least 150 countries have closed schools and instructive

education affecting over 80% of the world's understudy population (UNESCO, 2020). In specific, the COVID-19 pandemic forced colleges to move their entire instructional traditional system to an alternative online distance one (Liguori & Winkler, 2020).

Distance learning shifts the education process from the traditional teacher-centered classroom to a student-centered one, where students become more responsible for their learning. The sudden evolution to distance learning has become a measure of organizational flexibility, where most academic institutions concentrated on moving the educational content to the digital world rather than focusing on distance teaching and ordinary delivery methods (Hanafy et al., 2021).

The traditional learning modalities were characterized by face-to-face instructional methods where the course contents and the supporting learning materials were delivered to the students in a live interaction between the students and their instructors. Traditional classroom learning is known to be teacher-centered and needs passive learning by the student, in the teacher-centered or passive learning; the instructor usually controls classroom dynamics. The teacher lectures and comments, while the learners listen, take notes, and ask questions (Paul & Jefferson, 2019; Brashear, 2020)

In distance learning, the course content is delivered over the Internet. Distance learning is often student-centered and needs active learning. In student-centered or active learning, the learners usually determine classroom dynamics as they independently analyze the information, put up questions, and ask the instructor for clarification. In this type of learning, the teacher, not the student, is listening, formulating, and responding (Paul & Jefferson, 2019; Smith & Brame, 2020).

The delivery method of distance learning can be synchronous or asynchronous. In the synchronous method, distance learning occurs simultaneously, and there is live interaction between students and instructors, as in video conferencing and live chats. While the asynchronous method incorporates electronic media facilitation of distance learning through emails, discussion boards, or text messages and it does not occur at the same time (Brashear, 2020). Distance learning occurs through synchronous methods across the included nursing faculties. The students here study through blended learning which means that study some topics with distance learning and others with traditional learning. So, the researchers were attracted to compare the students' perceptions regarding both learning methods.

Significance of the study:

The COVID-19 Pandemic had a serious impact on schools, teachers, learners, and all the educational establishments all over the world (Adnan & Anwar, 2020; Almanthari et al., 2020) as confirmed cases accounts

globally from the pandemic's beginning until now August 22, 2021, around 212,348,831 with 4, 441,210 deaths, In Egypt, from 14 Feb 2020 to 22 August 2021, there have been 286,168 confirmed cases with 16,663 deaths (WHO Health Emergency Dashboard, 2021). This pandemic forced schools, colleges, and universities to close their campuses from March 2020 to July 2020 for performing final exams, then postpone the beginning of the study to the new academic year for October 2020, and with the beginning of the second wave of the pandemic, the study also was stopped for two months that started at January 2021 until the end of February 2021 to allow learners to follow the social distancing policies (Toquero, 2020) and promoting the academic experts to take distance learning as a viable option instead of the traditional ways of face-to-face learning to overcome the problem and complete courses that should be taught through the academic year (Kaur, 2020).

The practical training was affected by the pandemic, as the training periods for the students in the hospital were reduced, shrunken, then disappeared. The university teaching campuses that accounts for 73 universities and institute either governmental or special (Egypt Ranking Web of Universities-Webometrics, 2021); compensated for this by making case scenarios and increasing the practical periods in the laboratories, which affected the academic level of the graduates and appreciated the presence of obstacles with learning and education. Some students prefer distance learning to avoid the hardship of travel and the others prefer the traditional as it is a usual way for learning.

This study is considered as a nucleus for identification of the students' concept and trend toward different types of learning that affected teaching for students, in addition to obstacles facing students with learning, which in turn affect the students' academic level. Hence teachers will teach students in the way that is most applicable to different kinds of learning according to the direction of the state and the supreme council of universities. So, this study could work as a base to plan training courses for students, and the faculty members to maximize benefits from and improve the educational process.

In the light of the current technological development of the world especially in education; improving methods of teaching and promoting the usage of innovative and approved learning methods in the health field can allow universities to pinch globally and produce graduates with a high degree of efficiency and overcome the obstacles of learning.

Aim of the Study

This study aimed to compare distance and traditional learning among university students during COVID-19 through the following objectives:

Research Objectives:

- Assess the university nursing students' perception toward distance and traditional learning.
- Explore obstacles faced by the universities nursing students with distance learning.
- Identify the correlation between obstacles faced by nursing students and their perception of distance learning.

Research Questions:

- Are there significant differences in the universities' nursing students' perceptions toward distance and traditional learning?
- What are the obstacles faced by the universities nursing students with distance learning?
- Is there a correlation between obstacles faced by nursing students and their perception of distance learning?

Research Hypothesis

H₁: The universities nursing students will have a high perception toward distance learning as a new strategy used in learning during the COVID-19 pandemic although facing obstacles with the application.

Operational definitions:

Distance Learning: In the study, this type of learning is identified as learning that occurs online either live or through

recorded videos or power points, without face-to-face meetings.

Traditional Learning: It is the learning that occurs through face-to-face contact between lecturer and students at the classes

Subjects and Method

Research Design:

The present study used a comparative cross-sectional study, as the study compared the nursing students' perception toward blended learning (distance and traditional) through (Suez-canal and Beni- Suef) university in Egypt.

Setting

The data was collected from different two Faculties of nursing; the first one is at Suez Canal University in Ismailia City, and the other one is at Beni- Suef University in Beni- Suef city, Egypt, in June 2021.

Subjects and Sampling:

A convenience sampling technique was used for the selection of the students in each of the two nursing faculties affiliated to Suez Canal and Beni- Suef Universities during the academic year 2020/2021. The sample size included students registered for the baccalaureate nursing program at this academic year with a total sample consisted of 396 students. The sample classified as well as 219 students from Suez Canal university who were studied in the first and second year out of 496 students enrolled in these classes at this academic year, in addition to 177 students from Beni- Suef university out of 316 students; all of them were in the third year. The sample included all male and female undergraduate university nursing students who accepted to play a part in the study at the above-mentioned settings. In this study, the sample included from faculty of nursing, Suez-Canal University, Ismailia city, were from the students studying at the first and second year only as they are studying medical-surgical nursing. At the faculty of nursing, Beni- Suef University, the researchers included only students from the third year only as they are studying the course of maternal and neonatal health nursing. The

tools for data collection were sent to the students and the researchers continue to receive online answers for the survey until the desired sample number was completed; after that, the online link to receive answers was closed by the researchers. The sample was calculated using the formula of $n=N/1+N(e)^2$, where:

n =sample size

N =total students

e =0.05

Data Collection tools

Data was collected using an online questionnaire to fulfill the aim of the study and answer the study questions. It consists of two tools:

Tool I: Assessment Sheet to assess the students' perception toward distance and traditional learning. It included three parts.

The first Tool: Part I: Socio-demographic characteristics of nursing students. It was designed based on relevant literature (Akimanimpaye, & Fakude, 2015; Diab and Elgahsh, 2020) by the researchers. It included ten points asked about demographic characteristics related to the nursing students as age, gender, residence, marital status, academic years, devices for distance learning activities, internet facility at home, computer use by years, receive enough training, and accessibility of internet computer skill.

The first Tool: Part II: Perception of students on distance and traditional learning. It was modified by the researchers from (Kumar et al., 2020; Hanafy et al., 2021). The distance and traditional learning questionnaire were composed of the same 17 questions, asked about the university students' perception toward each type of the used blended learning. The questions were classified as well as the importance of each learning type that included five questions ask about each type of learning concerning the ability to (improve the students' collaboration and share in teamwork actions on the assigned tasks?, improve student mode and make the education behavior better?, improve brainstorming and critical thinking?, increase the students' sense of guidance and support?, and help in solving of administration problems?); the cooperation

that included four questions about (improve the student share in learning and student activities? improve student shares in community activities and volunteer work during curfew? the time consuming and decrease the time lost during learning? a belief that a complete course can be given by on learning method without difficulty?), benefits of each learning type that included four questions ask about (believe that learning whether learning inside or outside the class is more motivating ?, students motivated by the material inside the class, or in distance learning, material in the class is better prepared than a distance class or vice versa, and sharing ideas with colleagues is easy or no), students' motivation for each type that included two questions ask about (the ability of the students to ask their teachers questions and receive a quick response during the class?, and which type of class cost low?), and obstacles faced each learning type, that was included two questions ask about (Lack of concentration occurs most common with which type of learning?, and which Learning environment is better in learning than other ?).

The scoring system: the students' response was rated on a five-point Likert Scale from "1" (strongly disagree) to "5" (strongly agree). The score of the items was summed up and the total points divided by the number of the items, giving a mean score for part of the traditional learning and part of the distance learning were calculated, and mean overall scores were calculated as well. These scores were transformed into a percentage score. The minimum score was 17.00, and the maximum score was 85.00. The scores of less than 60% were considered as low perception, while the scores ranged from 60% to 80% were considered as moderate perception, and scores of more than 80% were considered as high perception toward each type of learning.

The first Tool: Part III: Perception of students toward traditional and distance exams. It was modified by the researchers from (Hanafy et al., 2021). The distance and traditional exam questionnaires were composed of the same 5 questions, asked about the university students' perception toward each type of the used exams as (easy access to the exam, get immediate feedback, the exams have a sufficient time limit, time was not wasted

once the test was started since it had to be completed within a set time, the risks of cheating and fraud would higher in which type of exams?

The scoring system: The students' response was rated on a five-point Likert Scale from "1" (strongly disagree) to "5" (strongly agree). The score of the items was summed up and the total points were divided by the number of the items, giving a mean score for part of the traditional exam and part of the distance online exam were calculated, and mean overall scores were calculated as well. These scores were transformed into a percentage score. The minimum score was 5, and the maximum score was 25. The scores of less than 60% were considered as low perception, while the scores ranged from 60% to 80% were considered as moderate perception, and scores of more than 80% were considered as high perception toward each type of exam.

The Second Tool: questionnaire to assess obstacles with distance learning. It was adopted from (Diab & Elgahsh, 2020). It consisted of 35 questions to identify obstacles confronting the university nursing students during using distance learning throughout the COVID-19 pandemic. The tool was tested for reliability by measuring its internal consistency using Cronbach's alpha coefficient method. It contains five dimensions

Dimension I was concerned with the Learners' characteristics and included (7 items) ask about sufficient knowledge and skill, devices to use for learning, lack confidence and shyness, no internet connection, lack time management skills to keep up with the pace of the course, Lack of interaction with colleagues through the distance -learning platform, and Lack language and typing skills for distance learning.

Dimension II concerned with the Technical and Management support and included (7 items) ask about the system errors, the slowness of network during learning ,lack of support services such as tutors, the system is unavailable most of the time, technical support from the college for using distance -learning, compatibility of the university books with the use of distance -learning and lack technical assistance to handle technological problems.

Dimension III concerned with the infrastructure and technology and included (7 items) ask about bandwidth connections with breakdowns, proper training before using distance -learning platform, the cost of internet fees/charges, counseling during taking courses, the flexibility of system design to use, erratic power supply at home, and the difficulty of rules and program directions in using distance discussion.

Dimension IV concerned with the curriculum content and included (7 items) ask about the accordance of the available learning resources with the curriculum, ability to access distance -resources at the platform when being at home, ability to learn the contents of subjects using distance -learning, ability to understand the contents of the subject through distance-learning, the disproportion of distance-learning with curriculum content, concerns about the practical nature of some courses are not offered electronically, and lecture notes are supported by multimedia tools (flash animations, simulations, videos, audios, etc.).

Dimension V is concerned with the instructors' characteristics and included (7 items) ask about sufficient knowledge and skill to use distance -learning, confidence in using distance -learning, clear instructions from the teacher, timely feedback from teachers, teachers prefer traditional ways of learning and research, teacher's delay submitting courses distance on time and its effect on students' performance, and Difficulty contacting with academic staff when at home.

Scoring system: The nursing students' responses were rated on a five-point Likert Scale from "1" (strongly disagree) to "5" (strongly agree). The score of the items was summed up and the total divided by the number of the items, giving a mean score for each dimension of the obstacles of distance learning. The minimum score was 35.00, and the maximum score was 175.00. These scores were converted into a percent score. The scores of less than 60% were considered as low obstacles, while the scores ranged from 60% to 80% were considered as moderate obstacles, and scores of more than 80% were considered

as high obstacles faced by the nursing students during usage of distance learning.

Validity:

Tools of data collection were translated into Arabic, then English, and Arabic again through back-to-back translation; and reviewed for their content validity by seven experts in the specialty. The panel included three experts from the Medical-Surgical Nursing department, two experts from the Maternal and Neonatal Health Nursing department, and two experts from the Nursing Education department (Cairo University). Necessary modifications were done to reach the final valid version of the tools.

Reliability:

The tools were tested for reliability by measuring their internal consistency using Cronbach's alpha coefficient method. This turned to be ($\alpha = 0.923$) for perception toward traditional and distance live learning tool, and ($\alpha = 0.931$) for distance learning obstacles tool. This indicates a high degree of reliability for the study tools.

Pilot study

A pilot study was implemented on ten percent of the two included faculties of nursing students to assess clarity and feasibility, in addition to the time needed to complete the used tools. It is implemented in December 2020. No modifications were made, so the pilot was included in the main study sample.

Fieldwork description

At first, the researchers prepared for the study by reviewing the recent literature searched the same research problem national and worldwide. The searched resources included books (printed and online), articles and periodicals, evidence-based online libraries as Cochrane, in addition to digital electronic databases, journals, PubMed, EBSCO, since Direct, and Ovid to develop tools of data collection.

The first phase of the actual work was implemented by delivering an approval letter by the researchers from the included and previously listed faculties of nursing and requesting permission to conduct the study.

The researchers met primarily the students' leader for every studying level at each faculty and explain the nature and aim of the study, and what is the effect of the data obtained from the present study on the students as well as the faculties, and universities.

The data was collected from the end of Jan 2021 to the end of March 2021 as well as the end of the first semester exams, as the exams were postponed by the supreme council of higher education through an online Arabic questionnaire. Consent through MS message was obtained by the researchers from the students to participate in the study, that is because the link of the online questionnaire was sent to each leader via electronic communication media (email, Imo, or WhatsApp messenger), then they send the link to their colleagues through their educational electronic communication groups. The students' leaders are responsible to convey the aim and objectives of the study in addition to its significance to their colleagues. Then, students who accept to participate in the current study complete the questionnaire through the link by identification of their formal university email.

At the beginning of the questionnaire, there was a statement informed the students about the aim and objectives of the study and the significance of the study. Then, there was another statement that includes the researchers' names and contact details through E-mail, phone numbers, Facebook messenger, or WhatsApp to allow students to contact the researchers if they had any concerns regarding the questionnaire.

All nursing students at this academic year through the two universities were studying through blended learning in which they studied all courses either theory or practice half by half (50% traditional learning through face-to-face contact with lecturers, and 50% distance learning through online live contact). Moreover, the exams were implemented by both methods (traditional and distance) which help the goal of the study and make all included students equal in the experience to answer the questionnaire and express their perceptions regarding learning methods and

exam methods, in addition to obstacles faced them through distance learning.

Ethical Considerations

The study was steered with careful attention to ethical standards of research and rights of the participants to accept or refuse participation in the study and that their information will be treated confidentially and for research only. Also, the students' anonymity was maintained no names were required to be mentioned.

Before actual data collection, the aim and objectives of the study were explained to all participants. They were assured that there were no risks or complications will attack them by participating in this study before obtaining verbal consent from the included nursing students. The telephone number and WhatsApp application number, in addition to the electronic professional emails of the researchers, were available to all the study participants. Ethical approval for the study was obtained from the faculty of the Nursing Institutional Review Board.

Statistical Analysis:

The data were collected, coded, and tabulated into the computer of the researchers. Statistical analysis was done using Statistical Package for Social Science (SPSS/version 21). Quantitative data were expressed as mean and standard deviation ($X \pm SD$). Qualitative data were expressed as numbers and percentages. A comparison was performed using a t-test. Correlation between variables was evaluated using Pearson's correlation coefficient (r) a P-value at 0.05 was used to determine the level of significance.

Results

Table 1 shows, the socio-demographic characteristics of the studied nursing students. It shows that the student's age ranges from 19 to 29 years old with Mean \pm SD 21.16 ± 1.84 , as well as 43.2% of the students aged ≤ 20 , followed by 32.8% aged from 21 to 22 years, then 24.0 % of the studied students aged ≥ 23 years old. 59.3% are female nursing students, 50.8% live in urban areas, 87.1% of the students are single. Academic years: 46.0%

studying in the third year, 45.2% study in the first year, then 8.8% study in the second year. Regarding devices used for distance learning activities; 73.2% used their personnel mobile, followed by 22.0% of the students use stable computers. 76% of the students have internet facilities at home, with 62.4% of them use a computer for $<$ five years. The studied students were classified as 55.3% from Suez-Canal university, and 44.7% are from Beni-Suef University. 54.5% of the studied students receive enough training on computer skills before starting blended learning. 66.1% of the studied students have moderate accessibility of internet, followed with 23.7% have high accessibility of internet, and finally, 10.2% have low accessibility of the internet.

Table 2 expresses, the perception of the studied nursing students regarding traditional and distance learning. It shows statistically significant variance between the students' total perception toward traditional and distance learning (53.46 ± 12.21 , 56.23 ± 14.18) respectively, with the high perception Mean \pm SD directed toward distance learning. But regarding the importance of learning; the two types of learning either traditional or distance are around the same Mean \pm SD (15.52 ± 4.20 , 15.44 ± 4.88) respectively without significant variance. There is a highly statistically significant variance between the students' total cooperation with Mean \pm SD (16.00 ± 3.51) and total benefits Mean \pm SD (13.51 ± 3.93) through the two types of learning with the high perception directed toward distance learning. Moreover, there is a statistically significant variance between the students' total motivation toward learning with high perception directed toward traditional learning with Mean \pm SD (7.95 ± 2.11). In addition, there is a statistically significant variance between the students' total obstacles toward learning with high perception directed toward traditional learning with Mean \pm SD (5.94 ± 1.46).

Figure 1 reveals, the percentage distribution of the studied nursing students regarding their total perception toward distance and traditional learning, as there is a significant variance between the two types in the students' perception with the high perception is directed toward distance learning. The figure shows that

41.9% of the students have a moderate perception level toward distance learning, 29.3% of the studied students have a high perception level, and 28.8% of the students have a low perception level. Regarding traditional learning, 42.7% of the students have low perception levels, followed by 36.4% of the students who have high perception levels, and 21% of the studied students have moderate perception levels.

Table 3 illustrates, the perception of the studied nursing students regarding traditional and distance exams. It shows high statistically significant variance between the students' total perception toward traditional and distance exams (16.2702 ± 17.5505 , 3.76190 ± 3.76190) respectively, with the high perception Mean \pm SD directed toward the traditional exam. The students' reported increased perception toward traditional exams at all items.

Figure 2, indicates the percentage distribution of the studied nursing students regarding their total perception toward distance and traditional exams, as there is a significant variance between the two types in the students' perception with the high perception is directed toward traditional exams. The figure shows that 53.2% of the studied students have high perception levels, 28.1% of the students have moderate levels, and 18.7% have low perception levels toward distance exams. Regarding the traditional exams, 43.3% of the students have high perception levels, followed by 32.8% of the students who have moderate perception levels, and 23.9% of the studied students have low perception levels.

Table 4 discusses, the perception and ranking of the studied nursing students regarding obstacles with distance learning. The table shows that the Mean \pm SD of the obstacles faced by the students during distance

learning is (105.69 ± 20.67), which means a high level of obstacles. The obstacles faced by the students is ranked as the first ones concerns the Learners' characteristics dimension, the second ones concerned the infrastructure and technology dimension, the third ones concern the Technical and Management support dimension, the fourth one's concerns with the curriculum content dimension, and the fifth and final one is related to the instructors' characteristics dimension.

Figure 3 shows, the distribution of the studied students regarding total distance learning obstacles. The figure shows that 61.1% of the studied students face a high level of obstacles, followed by 26.5 % of the students who faced a moderate level of obstacles, then 12.4% of the students faced a low level of obstacles.

Table 5 illustrates a positive statistically significant correlation between total perception score and total obstacle score among studied students for distance learning.

Table 6 shows, positive and significant correlation between total perception of the studied nursing students regarding traditional learning and demographic characteristics concerning the students' age, sex, residence, and marital status; but there is a positive and non-significant correlation between the academic year of the students and their perception toward traditional learning. The same table also shows a positive and significant correlation between total perception of the studied nursing students regarding distance learning and demographic characteristics concerning the students' sex, residence, marital status, and academic year; but there is a negative and non-significant correlation between the age of the students and their perception toward distance learning.

Table (1): Frequency distribution of studied students regarding their socio-demographic characteristics (N=396).

Items	No	%
Age		
≤ 20	171	43.2
21- 22	130	32.8
≥ 23	95	24.0
Min- Max	19-29	
Mean ±SD	21.16±1.84	
Gender		
Male	161	40.7
Female	235	59.3
Residence		
Rural	195	49.2
Urban	201	50.8
Marital status:		
Married	51	12.9
Single	345	87.1
Academic years:		
First-year	179	45.2
Second-year	35	8.8
Third-year	182	46.0
Devices for distance learning activities:		
Computer	87	22.0
Mobile	290	73.2
Laptop	11	2.8
Tablet	8	2.0
Internet facility at home:		
No	95	24.0
Yes	301	76.0
Years of computer using		
< 5	247	62.4
≥ 5	149	37.6
University		
Suez-Canal	219	55.3
Beni-Suef	177	44.7
Do you receive enough training in computer skills?		
Yes Trained	216	54.5
No Untrained	180	45.5
Do you have accessibility to the internet?		
High accessible	94	23.7
Moderate accessible	262	66.1
Low accessible	40	10.2

Table (2): Perception of the studied nursing students regarding traditional and distance Learning (N=396).

Variables	Min	Max	Traditional learning	distance learning	t-test	p-value
			Mean ± SD	Mean ± SD		
Total importance	5	25	15.52±4.20	15.44±4.88	.086	.931
Total cooperation	4	20	13.37±3.43	16.00±3.51	4.326	.000**
Total benefits	4	20	12.65±3.28	13.51±3.93	3.473	.001**
Total motivation	2	10	7.95±2.11	5.64±2.38	2.838	.006*
Total obstacles	2	10	5.94±1.46	5.62±1.97	2.431	.016*
Total	17	85	53.46±12.21	56.23±14.18	2.076	.040*

Figure (1): Percentage distribution of the studied nursing students regarding their total perception toward distance and traditional teaching (N=396).

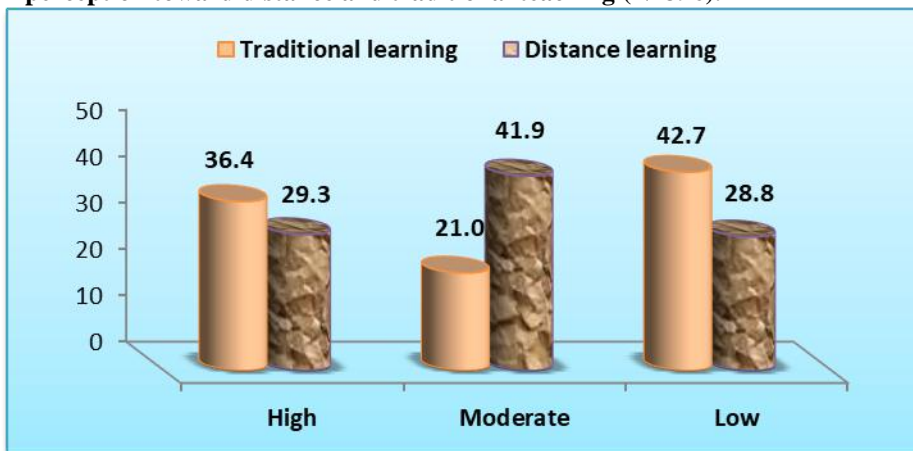


Table (3): Perception of the studied nursing students regarding traditional and distance exams (N=396).

Items	Min	Max	Traditional Exam	Distance Exam	t-test	p-value
			Mean ± SD	Mean ± SD		
The exam is easy to access.	1.00	5.00	3.3182±3.5253	1.14156±1.14156	2.741	.006*
The exam gets immediate feedback.	1.00	5.00	3.0101±3.4874	1.20014±1.20014	6.052	.000**
The exam has a sufficient time limit.	1.00	5.00	3.4773±3.5480	1.17795±1.17795	0.908	.364
Time was not wasted once the exam was started.	1.00	5.00	3.4116±3.4621	1.16753±1.16753	0.658	.510
The risks of cheating and fraud are high.	1.00	5.00	3.0530±3.5278	1.13483±1.13483	6.027	.000**
Total	5.00	25.00	16.2702±17.5505	3.76190±3.76190	4.939	.000**

Figure (2): Percentage distribution of studied students regarding their total perception toward distance and traditional exams (N=396).

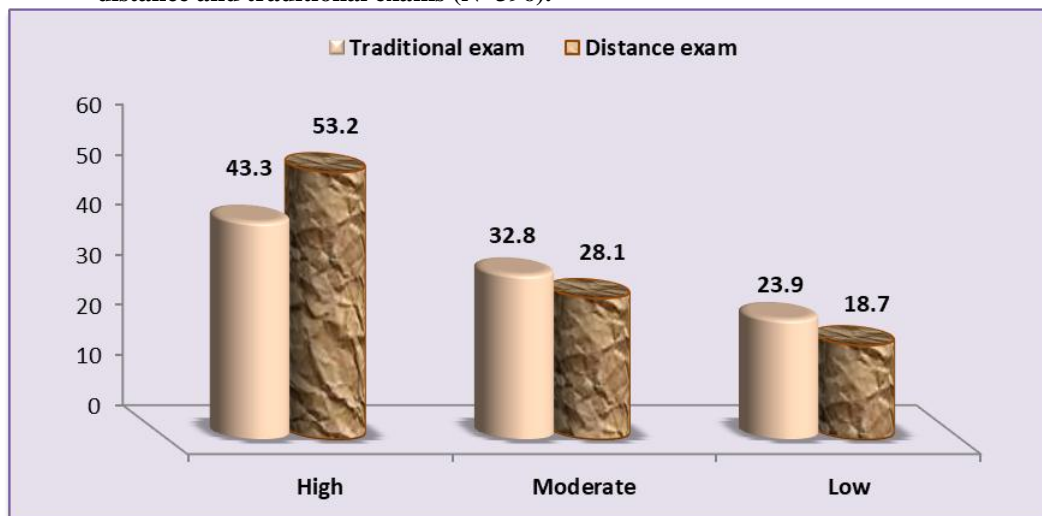
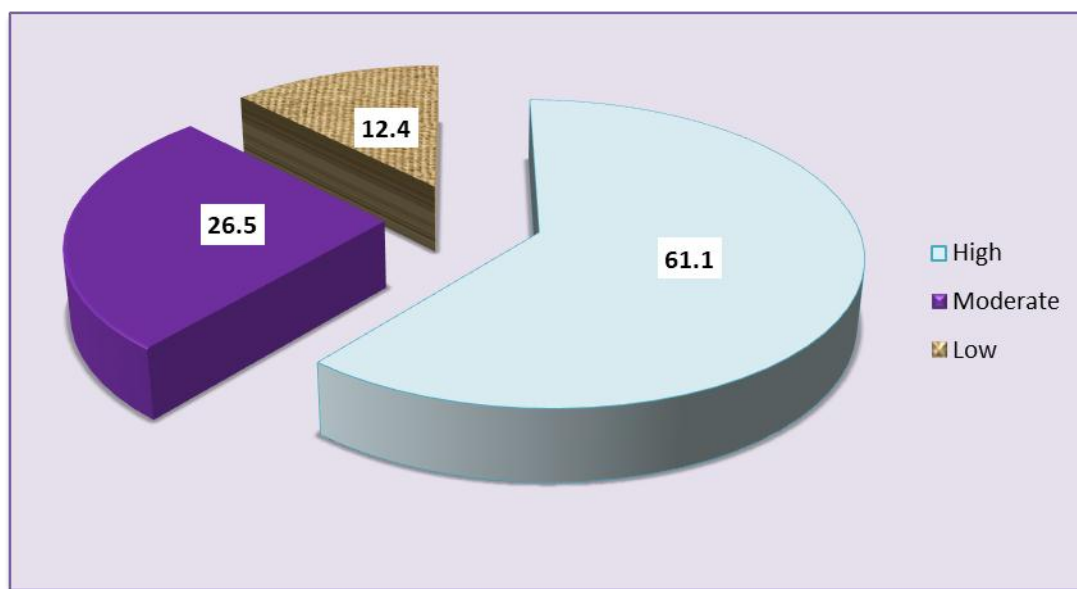


Table (4): Perception and ranking of the studied nursing students regarding obstacles of distance learning (N=396).

Items	Minimum	Maximum	Mean \pm SD	% Score	Ranking
Learners' characteristics dimension	7.00	35.00	22.46 \pm 5.70	64.2	1
Technical and Management support dimension	7.00	35.00	21.15 \pm 5.66	60.4	3
Infrastructure and technology dimension	7.00	35.00	22.42 \pm 5.56	64.1	2
Curriculum content dimension	7.00	35.00	20.59 \pm 5.35	58.8	4
Instructors' characteristics dimension	7.00	35.00	19.05 \pm 5.47	54.4	5
Total	41.00	175.00	105.69\pm20.67	60.4	

Figure (3): Percentage distribution of the studied students regarding total distance learning obstacles (N=396).**Table (5): Correlation between total perception score and total obstacle score among studied students for distance learning**

	Total perception	
	r	p-value
Total obstacle	0.734	0.017*

Table (6): Correlation between total perception and demographic characteristics among studied students for traditional and distance learning

Demographic characteristics	Traditional learning	p-value	Distance learning	p-value
	r		r	
Age	.269	.000**	-.078	.119
Sex	.314	.023*	.215	.022*
Residence	.609	.031*	.542	.005*
Marital status	.410	.005*	.350	.003*
Academic year	.690	.058	.299	.000**

Discussion

As the COVID-19 pandemic starts to grow by March 2020, with an inability to know when it will end; educational institutions all over the world had to use and improve online and distance learning with all academic field's students (**Kaur, 2020**). The pandemic caused numerous challenges leads to rapid transition towards distance and online learning with different obstacles faced in its use (**Crawford, et al., 2020**).

Distance learning is effective and highly applicable in technologically advanced nations (**Basilaia and Kvavadze, 2020**). However, (**Zhong, 2020**), stated that the insufficiency of academic institutions' funds hindered the students' ability to engage in electronic distance learning, because of the inadequate internet coverage, as well as the lack of advanced technologies. Discussion of university entail answer to the research questions that asked about universities nursing students' perception toward distance and traditional learning, obstacles faced by the nursing students with distance learning, in addition to the correlation between obstacles faced by nursing students and their perception towards distance learning.

Regarding the socio-demographic characteristics of the studied university nursing students; the current study showed that the students' age ranged from 19 to 29 years old with a Mean \pm SD 21.16 \pm 1.84, as well as slightly less than half of the students aged \leq 20 and more than half are female and live at urban areas. The majority of the students were single, less than half studied in the third year and the first year. Most of the students used their personnel mobile in learning and had internet

facility at home, with slightly more than three-fifths of them used a computer since $<$ five years. More than half of the students received enough training on computer skills before starting blended learning and have moderate accessibility to the internet.

These results could be related to the high demand of the persons who live in urban areas to join faculties of nursing as well as it has a bright future with getting a good and qualified professional, especially among female students. The high percentage of students studying in the first year could be related to the curiosity of these students to know more about the university study systems. Using the personal mobile in distance learning could be the availability of mobiles with advanced services with the majority of the students and ability to use these services earlier as the pre-university study was recently based on using tabs. Most universities across Egypt were trained all these students on using computers and models used in distance online live learning.

In the same line, a study implemented in Egypt by (**Diab and Elgahsh, 2020**), assess the Obstacles Faced with E-learning During COVID-19 Pandemic and its effect on students' attitudes. It showed that more than half of the studied students were aged \leq 20 years, female, from a rural area with most of the students were single. More than three-fifths of the students used their mobiles for their e-learning and had an Internet facility at home. more than half of the students using a computer \leq for five years.

According to the perception of the studied nursing students regarding traditional and distance Learning; the present study found a statistically significant variance between the

students' total perception toward traditional and distance learning with high perception toward distance learning. Two-fifths of the students had a moderate level of perception toward distance learning and a low perception toward traditional learning. This could be related to easy accessibility of getting the distance learning, and availability of distance learning resources and media at any time. This result could be related to the fear and anxiety of the students from being contacted with each other during the pandemic and the past positive feedback of the students about distance learning from their earlier study.

In the same line, a systematic review was implemented by **(Betihavas et al., 2016)** who assessed the evidence for 'flipping out in nursing education at the classroom. In addition to a meta-analysis by **(Hew and Lo, 2018)** evaluated the effect of the Flipped classroom on student's learning; and found that e-learning produces neutral or positive academic outcomes in undergraduate nurses and health professional education.

In contrast, a study implemented at Gothenburg, Sweden on 96 nursing students to evaluate the students' experiences of a pedagogical transition from campus learning to distance learning by **(Langegård et al. 2021)**, found that two-thirds of the students reported they preferred regular campus-based education to distance learning, and approximately one-third of the students appeared to prefer distance learning using digital tools. Another study in Egypt on 450 undergraduate students by **(Kaoud et al., 2021)**, explores the attitudes and challenges faced by students in online learning throughout the COVID-19 pandemic; and found that more than three-fifths of the undergraduate students from the schools of business in three different universities in Egypt believed that learning in class was not the same as learning at home on the internet and they cannot complete an online course without difficulties. Another study in Nepal on 133 Nursing students at a Medical College of Kaski by **(Koirala et al., 2020)** to assess Perception towards Online Classes during COVID-19, found that almost half of the students had a negative perception towards online learning.

Regarding the importance of learning, the two types of learning either traditional or distance are perceived as the same by the students without significant variance. The students' total cooperation and total benefits from distance learning were higher than traditional learning with highly statistically significant variance. Moreover, motivation and obstacles toward learning were highly perceived in traditional learning than in distance learning with statistically significant variances.

These results could be related to the availability of distance learning as the same as traditional learning with less time spent in waiting for traditional lectures and traveling to get it, and the availability of resources everywhere. Total benefits and cooperation were high in distance learning that may be caused by the need of the students to be more involved in the process of learning which gave them more chances to have an elevated level of usefulness from the studied courses. But with traditional learning, motivation was high as well as there was face-to-face contact between the teacher and students with immediate feedback, but many students couldn't attend lectures by being ill, having COVID-19, or being afraid of being infected.

In the same line a study by **Amir et al. (2020)** on 301 students in Indonesia to evaluate the undergraduate dentistry students' perspective of distance learning paralleled to classroom learning; and stated that the efficiency, suitability, preference, sustainability, communication, satisfaction, and motivation were significant factors with the students' positive perception towards distance learning. But slightly higher than three-fifths of the students disagreed that distance learning had similar satisfaction as well as classroom learning. Also, a systemic review and meta-analysis by **(He et al., 2021)** to examine the effectiveness and acceptance of synchronous distance education paralleled to traditional education and explore the potential moderators that could impact the results, stated that Synchronous distance education was not significantly different from traditional education in effectiveness and importance to the students and had higher satisfaction ratings among students.

Regarding the perception of the studied nursing students toward traditional and distance exams; the current study showed a high perception toward the traditional exam with highly statistically significant variance. But in detail, more than half of the studied students had high perception levels toward traditional exams, and less than half of the students have high perception levels toward distance exams. This result could be related to the psychological stress associated with distance exams and the student's belief about high cheating levels associated with this type of exam, in addition to the usual beliefs of the students about commitment to the written traditional exam with a pre-specified time and strict rules and principles.

In the same line a comparative cross-sectional study by (**Hanafy et al., 2021**) on 230 students and 20 staff at the Faculty of Medicine, Al-Imam University, Riyadh, Saudi Arabi that aimed to explore the attitude and perception of the undergraduate students and their staff towards the conventional against online educational methods; reported that most of the statements related to conventional examination attained a good response where students and their staff reported a negative perception toward online examination. Students and staff favored online examination as it gives immediate feedback.

In the same line (**Watson and Sottile, 2010**) who examined 635 undergraduate and graduate students for cheating behaviors in online against face-to-face examinations found that it was very difficult to make sure that students did not cheat on online exams. Elsewhere, (**Kumar et al., 2013**) who assessed the perception of the medical students about the advantages and disadvantages of electronic examination; found that the highest advantage of online examination is that students were exposed to new evaluation methods with immediate feedback.

Regarding obstacles faced the students with distance learning; The current study showed that there was a high level of obstacles faced by three-fifths of the students. The priority ranked obstacles concerns the Learners' characteristics dimension, the second ones concerned the infrastructure and technology

dimension, the third ones concerned the Technical and Management support dimension, the fourth ones concerned with the Curriculum content dimension, and the fifth and final one is related to the instructors' characteristics dimension. These results could be related to the inefficient preparedness of the students for using models and programs for the application of distance learning assigned by the ministry of higher education, also the staff was prepared from the past year to use these programs and trained well on its application with instructions to prepare the courses and curriculums electronically before the beginning of the academic year that gives sufficient time to the educational staff to prepare and revise courses well.

There are many studies discussing obstacles with distance and online learning, in which a study by (**Vershitskaya et al., 2020**) found that lack of infrastructure and poverty are the main challenges of e-learning. Also, (**Aljaraideh and Al Bataine, 2019**) found that the major barrier with distance learning is the poor infrastructure. In addition, (**Ali et al., 2018**) reported that the main barriers of e-learning are technical difficulties including lack of technical support, inefficient computer systems, and connectivity issues. Moreover, (**Mohammadzadeh et al., 2017**) found that technical support services can motivate, or hinder the continuity of e-learning based on its efficiency. Also, (**Al-Azawei et al., 2016**) found that around two-thirds of the students in Iraq stated that low internet hindering successful e-learning process. Finally, (**Touray et al., 2013**) stated that teachers should have a positive attitude towards the implementation of new technologies as e-learning if they want to use technologies in their classes to avoid obstacles with e-learning.

The current study showed a positive statistically significant correlation between total perception score and total obstacle score among studied students for distance learning. There was a positive and significant correlation between total perception of the studied nursing students regarding traditional learning and demographic characteristics concerning the students' age ,sex, residence, and marital status; but there is a positive and non-significant correlation between the academic year of the

students and their perception toward Traditional learning. Moreover, there was a positive and significant correlation between total perception of the studied nursing students regarding distance learning and demographic characteristics concerning the students' sex, residence, marital status, and academic year; but there was a negative and non-significant correlation between the age of the students and their perception toward distance learning.

A study by (Diab and Elgahsh,2020) stated that there was a highly statistically significant negative correlation between attitudes of the nursing students toward e-learning and obstacles facing them during its use. Also, there was statistically significant variance between the studied students' attitudes toward online learning and their all-demographic data except for residence and marital status. Moreover, there was no statistically significant variance between the studied students' demographic data, and the obstacles faced them with e-learning except age and gender.

Conclusion:

The current study concluded that there is a statistically significant variance between the students' total perception toward traditional and distance learning and exams; with the highest perception directed toward distance learning and traditional exam. As well as slightly less than half of the university nursing students have a moderate perception toward distance learning and a high perception toward traditional exams. The priority obstacles faced by the students during distance learning concern the Learners' characteristics dimension, as well as slightly less than two-thirds of the studied students face a high level of obstacles.

There is a positive statistically significant correlation between total perception and obstacles for distance learning. Moreover, there is a positive and significant correlation between total perception regarding traditional learning and the student's age, sex, residence, and marital status. Also, a positive and significant correlation is found between total perception regarding distance learning and the students' sex, residence, marital status, and academic year.

Recommendations:

Since distance learning is a new experience in Egypt, the current study recommends a combination of both distance and traditional learning through the introduction of exclusive training to the students and instructors on how to use distance learning and improve self-confidence in their use, with the training divided into several parts completed in a short time with additional prospects for social interaction. Medical educational institutions should follow a systematic strategy to implement distance learning, by cooperation with other universities proceeded in this type of learning. Implementation of extra research to investigate attitudes and perception of faculty members toward distance learning and barriers for implementation. Moreover, assessing the impact of distance learning on students' academic performance is very important.

Conflict of Interest: The authors haven't any conflicts of interest.

Funding Sources: No funding was received.

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