Undergraduate Students' Perception regarding Blended Learning and Their Engagement in Nursing Administration Course

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Abstract

Background: With the spread of the global epidemic of covid-19, Modern methods of learning and dispensing with traditional methods had to be used to adapt to the current developments of the global epidemic. **Aim of study**: To assess the effect of undergraduate students' perception regarding blended learning on their engagement in nursing administration courses. **Research design**: A descriptive, cross-sectional design was used. **Setting:** The study was conducted at the Faculty of Nursing-Ain Shams University. **Subjects:** The study included 204 out of 453 nursing students throughout the academic year (2021-2022) enrolled in nursing administration course. **Data collection tools:** Data were collected by Students' Views on Blended Learning Scale and its implementation process, and The Student Engagement Questionnaire. **Results:** Less than two-thirds of studied nursing students had high-level perception, while slightly more than one quarter of studied nursing students had moderate level perception regarding total perception of blended learning. Less than half of studied nursing students had moderate engagement and two fifths of studied nursing students had high engagement level. **Conclusion**: There was a highly statistically significant positive correlation between total nursing students' perception in blended learning of nursing administration course and their total engagement. **Recommendations**: Periodically making survey for nursing students' opinions and suggestions concerning blended learning application through learning management system. Further research is recommended as assessing challenges facing blended learning implementation among faculty staff.

Keywords: Blended Learning, Engagement, Students' Perception

Introduction

Education plays a key role in the process of the advancement of nations, and peoples so that all nations of the world seek to expand their education. Therefore, educational institutions seek to find quality teaching methods that aim to generate active and positive students, and the instructors are guided to achieve the educational outcomes which are accomplished through mixing traditional education with e-learning with its multiple types and technological and electronic innovations inside the classroom and outside it(**Alsalhi et al., 2021**).

Blended learning is essential for Higher Education to embed creativity and innovation in the curriculum design to a higher extent that enables students to actively participate in the process of knowledge construction through communications. Blended learning, sometimes referred to as hybrid or inverted learning, has attracted much attention as one of the most effective, and popular modes of learning. Blended learning is one of the short-term forces driving technology adoption in Higher Education which considers the characteristics of digital technology and information communication technologies that provide flexible, timely, and continuous learning to students with different learning capabilities (**Malekigorji & Hatahet, 2020**).

Student engagement is defined as "time and physical energy that students spend on activities in their academic experience" and has been conceptualized as a multidimensional construct that includes behavioral, cognitive, and emotional engagement. Each dimension of student engagement has been found to correlate positively with academic achievement and decrease drop-out rates (**Kurt et al., 2022**).

Student engagement promotes learning and achievement. Numerous studies have established the link between student engagement and positive learning outcomes, e.g., increased academic success, critical thinking, self-esteem, and persistence to complete tasks (**Kurt, Atay & Öztürk, 2022**). Specific indicators of engagement that increased as a result of technology include interest and enjoyment, improved confidence, and attitudes, as well as enhanced relationships with peers and instructors (**Bond et al., 2020**).

Students' perceptions of blended learning had a strong positive influence on both cognitive and emotional engagement. An important outcome of the engagement was the students' perceptions that they were learning and improving (**Manwaring et al., 2017**). Blended learning allows all students to simultaneously engage in multiple synchronous and asynchronous multi-modal communications with content, instructor, and peers, as well as use responsive or interactive technologies, from the classroom. Indicating that students in blended learning perform better and perceive learning as more effective than students in traditional (face-to-face) learning settings (**Bergdahl, Nouri & Fors, 2020**).

Significance of the study:

Society as a whole has become more entwined with the use of technology and computers in everyday life and work. This has increasingly influenced online learning environments to assist students in acquiring knowledge and skills. The use of technology-based training and the growing adoption of learning management systems have more than doubled in the past decade. Higher education has seen paradigm shifts from traditional classrooms and tangible learning resources to asynchronous e-learning environments. This change in thinking has fundamentally changed how learners are engaged. Technology-enhanced learning has many challenges, one of which is the learner's online engagement. Learner engagement is a primary factor in effective teaching and learning in an e-learning environment. Postulated that ''engagement is

the ultimate test'' to successful learning in an online environment (**Berman & Artino, 2018**).

With the spread of the global epidemic of covid-19, Modern methods of learning and dispensing with traditional methods had to be used to adapt to the current developments of the global epidemic. The blended learning application has therefore been activated to integrate face-to-face learning with online learning at the faculty of nursing as well as Ain Shams University. The researcher seeks to investigate the effect of blended learning on the students' engagement in nursing administration courses.

Aim of the study

This study aimed to assess the effect of undergraduate students' perception regarding blended learning on their engagement in nursing administration courses.

Research Question

Is there a relationship between undergraduate students' perception regarding blended learning and their engagement in nursing administration courses?

Subjects and methods

Research Design:

A descriptive, cross-sectional design was used to carry out this study.

Research Setting:

This study was conducted at the Faculty of Nursing-Ain Shams University. It contains eight scientific departments, namely, the Medical-Surgical Nursing department (I, II), critical nursing department, Maternity, and gynecology nursing department, Pediatric Nursing Department, Community Health Nursing Department, Psychiatric and Mental Health Nursing Department, Nursing Administration Department, and Department of the Elderly.

Subjects:

The study subjects included 204 out of 453 nurse students throughout the academic year (2021-2022). The subjects were divided into two groups. The first group (119 out of 265) students were selected from the students enrolled in the third academic year. The second group was selected from the students enrolled in the fourth academic year (85 out of 188) nursing students. Both groups studied nursing administration courses in the mentioned setting. They selected using a simple random sample technique.

Data were collected using two tools namely:

1- First tool: Students' Views on Blended Learning Scale and its implementation process: It was developed by **(Akkoyunlu & Soylu, 2008)** , and modified by the researcher. It aimed to assess undergraduate students' perception level regarding blended learning in nursing administration course. It consists of the following two parts:

A-First part: personal characteristics: this part focused on collecting data related to the personal characteristics of nursing students including age, gender, marital status, residence place, nationality, educational qualification before enrolling in the college, academic year, membership in college youth care activities, hobbies, electronic accounts, and cause of choosing to join the faculty by choice.

B-Second part:

This part consisted of 66 items which were classified into two subscales namely learners' perception of blended learning implementation in nursing administration course and learners' perception of blended learning in general in nursing administration course.

Scoring system:

Responses of participants were measured on a ten-point Likert scale anchored with notations 0 = not at all, 10=totally true. All items are summed up and a mean score is calculated. Study subjects had low perception levels if the total score was less than 60%. While it is considered moderate if the score ranged from 60-75% and it is considered high if the total score was more than 75% **(Mabuza, 2018).**

2- Second Tool: The Student Engagement Questionnaire (SEQ): It aimed to assess undergraduate student engagement levels in nursing administration. It was developed by **(Coates, 2006)** **,** and modified by the researcher. It was classified into two main components namely online scales and general scales

Scoring System:

The items in The Student Engagement Questionnaire were scored on a 4-points Likert scale ranging from never, rarely, sometimes, and often. Often was scored as "4", while never was scored as "1". For each dimension and sub-dimension and the whole scale, the items were summed up and the total was divided by the number of the items to calculate. Study subjects had low engagement levels if the total score was less than 25%. While it is considered moderate if the score was ranged from 25-75% and it is considered high if the total score was more than 75% **(Mabuza, 2018).**

Preparatory Phase:

This phase involved reviewing past and current, national and international related literature using books, articles, journals, periodicals, and the internet to be acquainted with the subjects of the study and tool.

Pilot Study:

A pilot study was conducted in January 2022. Twenty nursing students representing 10% of the total study subjects were selected randomly. The pilot study aimed to examine the clarity of language, and applicability of the tools, and to test the feasibility and suitability of the tools. It also served to estimate the time needed to complete the forms by each study

subject and identify potential obstacles and problems that may be encountered during data collection. The time for filling out the questionnaires took around 30-40 minutes. Data obtained from the pilot study was analyzed and no modifications were done to the questionnaires. The study sample in the pilot was excluded in the main study sample.

Content Validity:

Forms were validated for both tools by translating to Arabic followed by reverse translation back to English to ensure matching of the original and Arabic versions of both tools. Then testing of the validity of both tools including face and content validity was judged by a panel of experts (five experts in the field of nursing). The expert panel consisted of two Assistant professors of nursing administration, one Assistant professor from the psychiatric mental health nursing department, one Assistant professor from community health nursing, and one professor affiliated to the faculty of education at Ain Shams University. The panel asked to judge the validity of the tools of data collection.

Reliability:

Cronbach's alpha coefficient was used to assess the internal consistency of both tools.

Scale	o of Items	ronbach Alpha
Students' Views on Blended Learning scale and its implementation process	66	0.92
The Student Engagement Questionnaire (SEQ)	67	0.90

Fieldwork:

The fieldwork of the study started at the beginning of February 2022 after securing the official approvals for conducting the study to the end of March 2022. The researcher arranged with the head of the scientific department and nursing administration course coordinators of each grade to decide the suitable time to collect the data. The researcher introduced herself to nurse students in the classroom and then explained the aim and components of the questionnaire sheets. The researcher divided each grade into groups to collect data in their classrooms or during break time. Data was collected for 2 days/week and every day collected around 20-25 sheets after administration lectures from each grade. The researcher checked each filled questionnaire sheet to ensure its completion.

Ethical Considerations

Before the study's conduction, ethical approval was obtained from the Scientific Research Ethical Committee of the Faculty of Nursing, Ain Shams University. The subjects were informed about their rights to withdraw at any time without giving any reason and the collected data was kept confidential and used for scientific work only. Oral informal consent was obtained from each participant in the study.

Administrative Design:

Before starting the study, letters were issued from the Dean of the Faculty of Nursing, Ain Shams University to the head of the scientific department. The letter explained the aim of the study to facilitate the data collection phase.

IV. Statistical Design:

The collected data were organized, categorized, computerized, tabulated, and analyzed using the Excel program and SPSS software version 20. For quantitative data, the range, mean, and standard deviation were calculated. For qualitative data, the number and percent were calculated, and Chi-square was used. The one-way ANOVA procedure produced a one-way analysis of variance for a quantitative dependent variable by a single factor (independent variable). Correlation between variables was done using Pearson correlation for parametric data. For all above mentioned statistical tests done, the threshold of

significance is fixed at a 5% level (p-value). A p-value of ≤ 0.05 indicates a significant result.

Results

Table (1): Shows that the majority of studied nursing students (83.33%) had ranged from 20 to 22 years with a total mean of 21.60± 0.56 years, more than half of nursing students were females (56.37%), and related to marital status, more than two thirds of studied nursing students (76.47%) were single. Also, the majority of them had secondary education (92.65%). Regarding the academic year, slightly less than two thirds of them (58.33%) were in the 3rd year, Also, less than two-thirds of them (65.79%) are not participating in college youth care activities. Moreover, more than two-thirds of them (70.59%) haven't hobbies. All of them have electronic accounts (100%). Likewise, slightly more than one- fifth of study subjects (21.8%) entry to a college based on their desires and scores.

Figure (1) Demonstrates that less than two-thirds (63.2%) of studied nursing students had high level perception of total blended learning perception. While slightly more than one quarter (25.5%) of studied nursing students had moderate level perception.

Table (2): Illustrates that the majority (85.9%) of fourth year nursing students had high perception level regarding blended learning in nursing administration course. While slightly less than half (47.1%) of third year nursing students had high perception level regarding blended learning in nursing administration course.

Table (3): shows that more than three quarters (75.3%) had a high level among fourth-academic year nursing students regarding learning management system. while slightly less than two-thirds (62.2%) had high level among third-academic year nursing students regarding learning management system.

Table (4): Presents that slightly less than two thirds (64.7%) of studied nursing students among fourth academic year had high engagement level regarding online scales. While slightly more than half (55.46%) among third academic year had high engagement level regarding online scales.

Table (5): Shows that the majority (76.48%) of fourth-academic year of nursing students had high engagement level regarding total level engagement in general scales of a blended nursing administration course. While less than three quarters (71.42%) of third year of nursing students had moderate engagement level regarding total level of engagement in general scales.

Table (6): Illustrates that more than three-quarters (76.6%) of the fourth academic year of nursing students had high engagement level regarding blended learning in nursing administration course. While slightly less than three-quarters (71.4%) of third academic year of nursing students had moderate engagement level regarding blended learning in nursing administration course.

Figure (2) Shows that less than half (46.7%) had a moderate engagement level of students' total engagement. while two -fifths of studied sample (42.6%) had high engagement level of students' total engagement.

Table (7): Demonstrates that there was a highly statistically significant positive correlation between total nursing students' perception of blended learning of nursing administration course and their total engagement.

Table 1: Demographic characteristics of undergraduate nursing students enrolled in nursing administration courses (n=204)

Demographic characteristics	Undergraduate nursing students' sample (n=204)	
	N	**%**
Age (year)		
<20	25	12.25
20-22	170	83.33
>22	9	4.14
Range **Mean±SD**	**21-23** **21.60±0.56**	
Nationality		
Egyptian	204	100
Other	0	0
Marital status		
Single	156	76.47
Married	48	23.53
Academic year		
3rd year	119	58.33
4th year	85	41.67
Have any hobbies that you practice		
Yes	60	39.41
No	144	70.59
Electronic accounts		
Yes	204	100
No	0	0
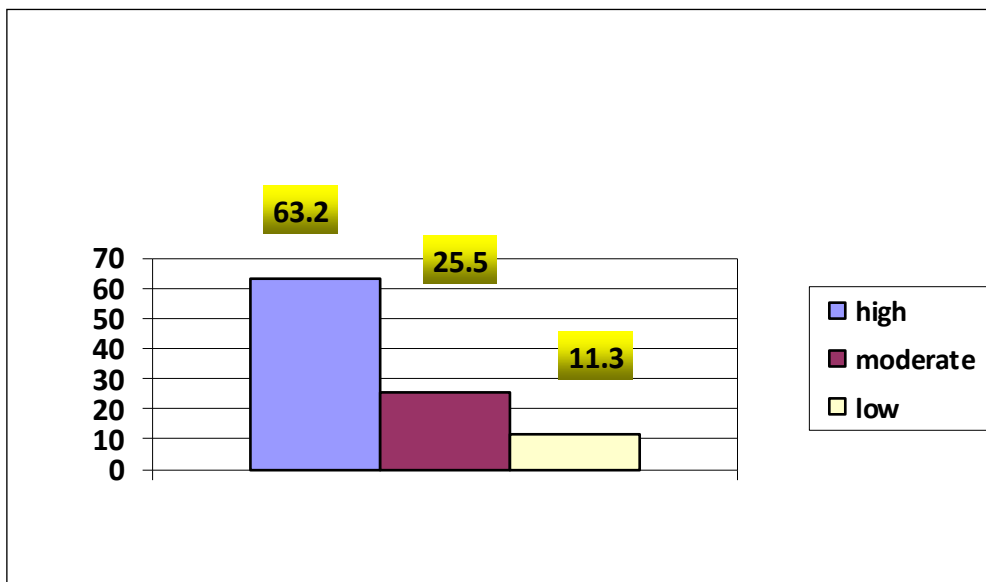
Figure 1: Distribution of total blended learning perception levels among nursing students (n=204)

Table2: Undergraduate students' total perception level regarding blended learning in nursing administration course (n = 204)

Total Perception level	3rd-year students (n= 119)		4th-year students (n = 85)		X²	P Value
	No	%	No	%		
High	56	47.1	73	85.9	39.52	**0.0001
Moderate	42	35.3	9	10.6		
Low	21	17.6	3	3.5		

Table 3: comparison between 4th & 3rd Undergraduate students' perception regarding blended learning in nursing administration course (n=204)

Students' Views on Blended Learning Scale and its implementation process	3rd-year students (n =119)						4th-year students (n=85)						X2	P Value
1. Learners' perception of blended learning's implementation in nursing administration course items	High		Moderate		Low		High		Moderate		Low			
	N	%	N	%	N	%	n	%	n	%	N	%		
a. Learning management system	74	62.2	35	29.4	10	8.4	64	75.3	20	23.5	1	1.2	30.12	**0.0001
b. Face-to-face lectures	62	52.1	46	38.7	11	9.2	59	69.4	24	28.2	2	2.3	31.25	**0.0001
2. Learners' perception of blended learning in general in nursing administration course	3rd-year students (n =119)						4th-year students (n=85)						X2	P Value
	High		Moderate		Low		High		Moderate		Low			
	N	%	N	%	N	%	n	%	n	%	N	%		
	55	46.2	45	37.8	19	15.9	75	88.2	9	10.6	1	1.2	29.19	**0.0001

Table 4: Comparison between undergraduate nursing students according to their levels of engagement in online scales of a blended nursing administration course (n=204)

| online scales	Levels of engagement of 3rd-year students(n=119)						Levels of engagement of 4th-year students(n=85)						X^2 P
	High		Moderate		Low		High		Moderate		Low		
	N	%	N	%	n	%	N	%	N	%	n	%	
A. Online Engagement.	74	62.2	35	29.4	10	8.4	53	62	28	33.3	4	4.7	22.32*** 0.000
B. Online Active Learning.	62	52.1	46	38.7	11	9.2	47	55.3	34	40	4	4.7	29.34*** 0.000
C. Online Social Interaction.	56	47.1	48	40.3	15	12.6	45	52.7	35	41.3	5	6	27.77*** 0.000
D. Online Collaboration.	65	54.6	42	35.3	12	10.1	55	64.7	28	33.3	2	2	26.53*** 0.000
E. Online Teaching.	67	56.3	39	32.8	13	10.9	66	77.7	15	17.6	4	4.7	23.41*** 0.000
F. Online Academic Relevance.	74	62.2	35	29.4	10	8.4	53	62	28	33.3	4	4.7	31.34** 0.003
G. Online Contact with Teaching Staff.	62	52.1	46	38.7	11	9.2	66	77.7	15	17.6	4	4.7	45.06*** 0.000
Total	66	55.46	41	34.5	12	10.1	55	64.7	26	30.6	4	4.7	29.16** 0.000

Table 5: Comparison between undergraduate nursing students according to their levels of engagement in general scales of a blended nursing administration course (n=204)

general scales items	Levels of engagement of 4th-year students(n=85)						Levels of engagement of 3rd year students(n=119)						X^2	P value
	High		Moderate		Low		High		Moderate		Low			
	N	%	N	%	N	%	n	%	N	%	N	%		
a. Constructive teaching	67	78.82	4	4.71	14	16.47	18	15.12	96	80.76	5	4.12	60.17	**0.0001
b. collaborative work	69	81.17	11	12.94	5	5.88	24	20.16	80	67.22	15	12.60	59.80	**0.0001
c. teaching staff approachability	67	78.82	4	4.71	14	16.47	22	18.48	95	79.83	2	1.69	45.80	**0.0001
d. supportive learning environment	63	74.12	18	21.17	4	4.71	32	26.89	85	71.42	2	1.69	45.03	**0.0001
e. student and staff interaction	62	72.95	6	7.05	17	20	24	20.16	80	67.22	15	12.60	56.12	**0.0001
f. active learning	63	74.12	9	10.58	13	15.29	12	10.08	97	81.51	10	8.40	42.77	**0.0001
G. academic challenge	67	78.82	4	4.71	14	16.48	27	22.68	80	67.22	12	10.08	35.54	**0.0001
h. complementary activities	63	74.12	18	21.17	4	4.71	15	12.60	99	83.19	5	4.21	32.73	**0.0001
I. beyond class collaboration	69	81.17	14	16.48	2	2.35	24	20.16	80	67.22	15	12.60	50.15	**0.0001
Total	65	76.48	10	11.76	10	11.76	22	18.48	85	71.42	12	10.28	43.46	**0.0001

Table 6: undergraduate students' total level of engagement in blended learning in nursing administration course (n = 204)

Engagement level	3rd-year students (n= 119)		4th-year students (n = 85)		Total		X^2	P Value
	No	%	No	%	No	%		
High	22	18.4	65	76.6	87	42.6	30.94	**0.0001
Moderate	85	71.4	10	11.7	95	46.7		
Low	12	10.2	10	11.7	22	10.7		

Figure 2: Distribution of students' total engagement level in blended learning in nursing administration course (n=204)
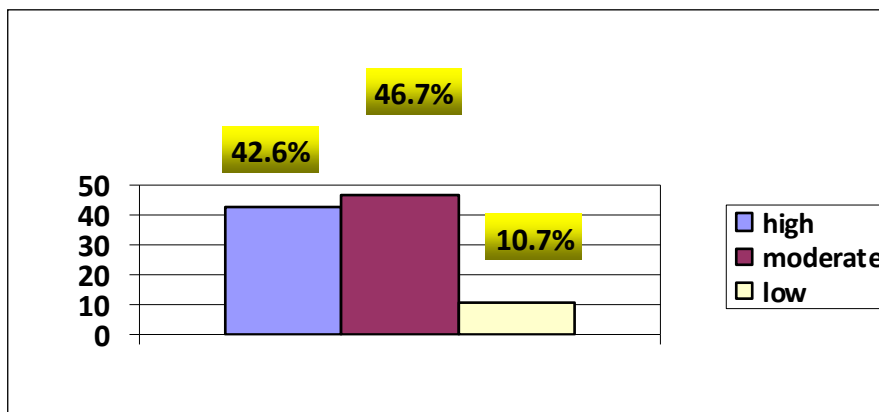
Table 7: Correlation between total nursing students' perception in blended learning of nursing administration course and their total engagement

Items	Total engagement
Total students' perception in blended learning of nursing administration course	r=0.311**

Discussion

Higher educational institutions are under increasing pressure to deploy pioneering technology-mediated educational approaches to accommodate diverse student academic needs. One such initiative is Blended Learning (BL), which is a combination of face-to-face teaching with online teaching. BL employs more than one teaching mode to enhance learning outcomes and teaching delivery. BL improves students' learning engagement and experience as it produces a positive impact on learners' perceptions of the learning environment. **(Anthony Jnr, 2022).**

Concerning total blended learning perception levels among nursing students, the present study findings presented that less than two-thirds of studied nursing students had high level regarding total blended learning perception levels. From the researcher point of view, the wide spread of technology among the new generations became blended learning easily perception, and students are more engaged when using learning management system.

This study finding was consistent with a study conducted in south-eastern Turkey by **Çırak Kurt & Yıldırım, (2018)** who study The students' perceptions on blended learning: A Q method analysis and mentioned that the students had high perception regarding blended course. Also, this finding was consistent with a study conducted in Malaysia by**Bidder et al., (2016)** who study Students' perceptions of blended learning and achievement, and revealed that students had positive perceptions of convenience afforded by blended learning.

Concerning undergraduate students' total perception level regarding blended

learning in nursing administration course between the third and fourth academic year, the present study showed that the majority of fourth-year nursing students had high perception level. while slightly less than half of the third-year nursing students had high perception level.

From the researcher point of view, the fourth academic year nursing students had previous experience of blended learning in nursing administration course in the third-academic year, so their perception is higher than students in the third-academic year. Another assumption in the fourth- academic year, the nursing administration course contains a practical part, so they were exposed to simulation situations to reality so had more communication with academic staff and used more learning management system.

This finding was in the same line with two studies, first study was conducted in Arab Open University-Bahrain Branch by **shehab ,(2007)** who study Undergraduate Learners' Perceptions of Blended Learning and its Relationship with Some Demographic and Experiential Variables at the Arab Open University- Bahrain Branch revealed that the experience with the internet has a significant effect on learners' perception of undergraduate learners. Learners who had more experience expressed significantly higher positive perception of the blended learning program. The second study was conducted in Australia by **Bouilheres et al., (2020)** who study Defining Student learning Experience through Blended learning and revealed that there was a significant between experience in blended learning and perception.

In the light of comparing fourth year and third-year undergraduate students' perception regarding blended learning in nursing administration course, the present study findings presented that more than three-quarters of fourth-academic year nursing students had high perception level regarding learning management system. While slightly less than two-thirds of the third-academic year nursing students had high perception level regarding learning management system. From the

researcher point of view, that learning management system was easily accessible, with a recurrent explanation website for students by academic staff, consistent guidance, and enjoyable online activities. LMS offers various kinds of tools like communications tools, academic calendars, subject content, assignment submission, clinical document submission, online tests, surveys, course syllabi, and timetables.

This finding was consistent with a study conducted in India by **Saravanakumar et al., (2022)** who study Perception of Learning Management System Among Distance Learners in India and revealed that the majority of the studied sample have high perception and satisfaction regarding learning management system. In the same line study conducted in Saudi Arabia by **Alshehri ,Rutter&Smith, (2019)** who study An implementation of the UTAUT model for understanding students' perceptions of Learning Management Systems: A Study within Tertiary Institutions in Saudi Arabia showed that there was a high acceptance and perception of LMS depended on performance expectancy, social influence and technical support were direct contributors towards an individual's behavioral intention to use LMS.

However, in disagreement study conducted in Turkey by **Balcı,(2017)** who study Perceptions on blended learning: a study on student and instructor experiences in an English preparatory program revealed that majority of the students found face-to-face instruction more effective than online studies through LMS.

As regarding comparing undergraduate nursing students according to their levels of engagement in online scales, the present study results revealed that slightly less than two-thirds of studied nursing students in the fourth academic year had high engagement level regarding online scales. While slightly more than half of the third academic year had high engagement level regarding online scales. From the researcher point of view, older students were exposed to an online nursing administration course from the previous year, so

they were more engaged than in the third-academic year.

The present study finding was supported by a study conducted at Northeastern Illinois University by **Thill,Rosenzweig&Wallis, (2016)** who study The Relationship Between Student Demographics and Student Engagement with Online Library Instruction Modules revealed that older students were more willing to spend time interacting with the online instructional module. However, in disagreement with these findings, the study conducted in the United States by **Hampton & Pearce, (2016)** who study Student Engagement in Online Nursing Courses revealed there was a significant correlation between engagement and age, an older student was less engaged than young in online courses.

As regarding comparing undergraduate nursing students according to their levels of engagement in general scales of a blended nursing administration course, the present study showed that the majority of the fourth-academic year of nursing students had high engagement level in general scales. While less than three-quarters of third-year nursing students had moderate level regarding total level of engagement in general scales.

From the researcher point of view, the students had more excitement for involvement in classroom engagement activities and more communicated contact with peers and teaching staff. This present study finding was supported by the study conducted in Australia by **Coates, (2007)** revealed that high level regarding general scales.

Concerning undergraduate students' total level of engagement between the fourth and third academic years in blended learning in nursing administration course, the present study showed that more than three-quarters of the fourth academic year had high engagement level. While slightly less than three-quarters of the third academic year had moderate engagement level. From researcher point of view, the students older were more motivated in learning activities and engaged more than the

third year of nursing students. In the same line with a study conducted in Australia by**Timms et al., (2018)** who study Psychological engagement of university students, and revealed that older students are more engaged in learning activities than young.

However, inconsistent with a study conducted in Malaysia by **Amir et al., (2014)** revealed that younger students recorded higher engagement level as compared to elder ones. Female students reported having a higher level of engagement when compared to males.

Regarding students' total engagement levels in blended learning in nursing administration course, the present results revealed that slightly less than half of the studied sample had moderate engagement level. While two-fifths of the studied sample had a high engagement level. From the researcher point of view, this result of these findings might be due to nursing students continuously receiving feedback, support, and academic guidance from faculty staff, and working with other students on assignments or projects and so on; all these issues lead to enhancement and maintenance of student's engagement with their college.

The present study finding was in agreement with the result of a study conducted in Egypt by **Abou Elyazied ,Mahmoud&Mohamed, (2022)** who study influence of psychological capital on nursing students' engagement and revealed that more than half of nursing students had high level of engagement. Also, more than two-fifths of the studied sample had moderate engagement level. Also, along the same line was the study conducted in Egypt by **Abbas, (2017)** who study Human factors affecting university hospitality and tourism students' intention to use e-learning: A comparative study between Egypt and the UK showed that there was a high student engagement with the e-learning platform.

Regarding the correlation between total nursing students' perception of blended learning of nursing administration course and their total engagement, the present study results

revealed a highly statistically significant positive correlation between total nursing students' perception of blended learning of nursing administration course and their total engagement. From the researcher point of view, BL played a vital role in teaching and learning as it focuses on meaningful, self-directed, life-long, student-centered learning. Also, it helped students construct their knowledge through problem-based, active, and collaborative learning. So, the implementation of BL models led to high student engagement.

In the same line findings, the study conducted at a University Hospital Center by **Vavasseur et al., (2020)** who study Blended learning of radiology improves medical students' performance, satisfaction, and engagement revealed that There was a high relationship between blended learning and engagement. In the same line of findings, the study conducted in Australia by **Fisher, Perényi & Birdthistle, (2021)** who study The positive relationship between flipped and blended learning and student engagement, performance, and satisfaction revealed that a positive relationship between blended learning and student engagement.

Conclusion

Based on the study findings, it can be concluded that less than two-thirds of studied nursing students had high-level perception regarding total blended learning perception level. While slightly more than one-quarter of studied nursing students had moderate perception level regarding total blended learning perception level. In addition, less than half of the studied nursing students had moderate engagement level regarding students' total engagement level. While two-fifths of the studied sample had high engagement level regarding students' total engagement level. There was a highly statistically significant positive correlation between total nursing students' perception in blended learning of nursing administration course and their total engagement. These present findings answer the research question which stated that Is there a relationship between undergraduate students'

perception regarding blended learning and their engagement in nursing administration courses?

Recommendations

In the light of the findings of the current study the following recommendations are suggested:

1- Enhance student engagement through conducting periodical online counseling sessions to help students verbalize their feelings about their college experience and respect students' opinions, concerns, and suggestions.

2- Periodically conducting a survey of nursing students' opinions and suggestions concerning blended learning applications.

3- Offering more specialized training programs for faculty staff and nursing students in blended learning application models.

4- Use critical thinking assignments in an online learning environment to motivate and engage students on a platform.

5- Further research is proposed to assess challenges facing blended learning implementation among faculty staff.

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