A STUDY TO ASSESS THE IMPACT OF E-LEARNING ON ACADEMIC PERFORMANCE AMONG NURSING STUDENTS

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ABSTRACT

INTRODUCTION: Web based learning is used nowadays as another option to face to face education. as a matter of fact its use increase in a direct proportion with the increase of the number of students. This has made educators exert a lot of effort to help the learners to get interactive content that is full of multimedia as it has been proven that it has a significant effect on the process of learning.

OBJECTIVE: The present study aimed to assess the impact of E-learning on academic performance among nursing students.

METHOD: A descriptive study was conducted. A self-administered structured questionnaire was used including structure questionnaire on demographic characteristics. Rating scale for impact of e- learning & Dichotomous scale for level of academic performance was used to select 120 nursing students.

RESULT: The result of the study about scores of impact of e- learning out of 120 nursing students out 120 subjects 22.5% has poor, 62.5% has fair and 15 % has good impact 0f e-learning on academic performance and about the scores of academic performance. Out 120 subjects 22.5% has poor, 69.2% has fair and 8.3 % has good academic performance. The coefficient correlation was also calculated to establish the relationship exist between e-learning and academic performance. The findings establish that there was significant relationship between e- learning and academic performance.

KEY WORDS: Academic Performance, E-learning, Nursing Student

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INTRODUCTION

BACKGROUND OF THE STUDY

Technology has taken over our entire life and education is no exception to it, technological advancement have great effect on how learning is imparted and also consumed. E-learning can be termed as a network enabled transfer of skills and knowledge. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning. The E-learning market in India was worth 247 million US dollars, covering around 1.6 million users in year 2016. It is expected witness an 8X growth to reach USD1.96 billion and the current user base will grow at 44 percent CAGR to 9.6 million users by 2021.Unlike chalk and board method e-learning makes study easier, fun and very effective. The eLearning platformsi.e., Apps or the websites evaluate the learning pace of the students, which enable them to have self-paced, personalized content which they can access in their own comfort, as and when they require. Tuition culture is prevalent in India with estimates of over 71 million students taking tuition to support their school education. Online study is emerging as a great supplement for tuitions. India

in recent time have perceived incidences where incompetent teachers were teaching wrong spellings and pronunciation to primary students. To bout situations like these eLearning has evolved as a benediction for II and III tier cities. E-Learning platforms provide same quality of education to every student, which equip students from every corner of country to stand on the same footing.[1]

Communications and information technology has changed our life in one way or another. With the development of information and communications technology, the term E-learning, which is the acquisition, use, distribution, and facilitation of knowledge in the first place by electronic means, has emerged. This type of learning depends on the Internet and computers. (Tossy, 2017)[2]

E-learning has six types: Physical presence of the students and the teachers away of the electronic communication (face to face contact), e-learning without attendance or electronic communication (self-learning), e-learning without the presence and with electronic communication (asynchronous), e-learning through the virtual presence and electronic communication (synchronous), e-learning with occasional presence and electronic communication(blended/hybrid-asynchronous), and learning by the presence and electronic communication (blended/hybrid-synchronous). (Zare, et al, 2016).[3]

NEED OF THE STUDY

E-learning is also a cost-effective method as the students do not need to travel and move every day, at the same time, the higher education institutions are less required to offer huge buildings and a large number of faculty members to keep on the progress of the educational process. (Arkorful and Abaidoo, 2014).[4]

On the other hand, E-learning may cause a decrease in the institutions and teachers' roles; also, it may affect the values, the educational process and the social life of students negatively. In addition, unacceptable disciplinary actions of the students such as cheating could be hardly controlled, and the educational system is also likely to be not protected and may be a victim to piracy or plagiarism. Moreover, by using E-learning methods, it is not possible to study some scientific fields which requires physical presence, for instance conducting experiments in laboratories or doing close training. (Arkorful and Abaidoo, 2014).[4]

As COVID- 19 pandemic has spread in some parts of India, the authorities imposed a state of emergency restricting the movement and gatherings of citizens. The procedures included closing all the Indian Higher Education Institutions. Therefore, to keep the educational process going on, All University Administration has implemented a full Elearning system during the second semester 2019 – 2020, i.e. the third and fourth types mentioned above. As possible closure for other semesters emerged, significant studies on the effect of applying the e-learning strategy has increased to maintain progress of the educational process especially the students' academic achievement.

As E-learning has already been seen as a substitute learning model, and due to the shortage of the local studies on such model, It is necessary then to conduct a study to measure the effect of applying the E-learning strategy on the students' Academic Achievement in India to help the decision makers take appropriate actions to help make the students' Academic Achievement better.

PROBLEM STATEMENT

A study to assess the impact of e-learning on academic performance among nursing students.

OBJECTIVES

- To assess the level of academic performances among nursing students
- To assess the impact of e-learning on academic performances among nursing students,
- To find out the association between impact of e-learning and level of academic performance

ASSUMPTIONS

- The instrument to be used will elicit the reliable responses.
- The students will fully understand the questions they will be asked.
- The students will provide honest expressions of their knowledge.

HYPOTHESIS

- There will be a significant association between impacts of e-learning and academic performance.

DELIMITATION

The study is limited to the student:

- Study in a selected nursing colleges/schools of Moradabad.
- Who are willing to participate in the study.

OPERATIONAL DEFINITIONS

- **E- LEARNING**- In this study E-learning can also be termed as a transfer of skills and knowledge, and the delivery of education is made to a large number of population at the same by used of network and not accepted wholeheartedly as it assumed that this system lacked the human element required in learning.

- **ACADEMIC PERFORMANCE**- In this study academic performance involves factors such as the intellectual level, personality, motivation, skills, interests, study habits, self-esteem or the teacher-student relationship.

REVIEW OF LITERATURE

The review literature for the present study has been organized under the following heading:

- Impact of e-learning on academic performance.

REVIEW OF LITERATURE RELATED TO IMPACTS OF E-LEARNING ON ACADEMIC PERFORMANCE.

A study was conducted (Ram Gopal, Varsha Singh &Arun Aggarwal) on Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19,aims was to identify the factors affecting students' satisfaction and performance regarding online classes during the pandemic period of COVID–19 and to establish the relationship between these variables. The study was quantitative in nature, and the data were collected from 544 respondents through online survey who were studying the business management (B.B.A or M.B.A) or hotel management courses in Indian universities. The tool structural equation modeling was used to analyze the proposed hypotheses. The study revealed show that four independent factors used in the study viz. quality of instructor, course design, prompt feedback, and expectation of students positively impact students' satisfaction and further student's satisfaction positively impact students' performance.[6]

A study was conducted (Mohamed A. A. Mahdy)the impact of COVID-19 lockdown on the academic performance of veterinary medical students and researchers. The tools was used as structured questionnaire The data was collected by invited students to answer an online google form questionnaire. A total of 1,392 participants were from 92 different countries answered the questionnaire with response rate of 94.1%. The data showed that COVID-19 pandemic lockdown affected the academic performance of most participants (96.7%) with varying degrees. The mean evaluation score for the online education in general was 5.1 ± 2.4 while that for the practical parts was 3.6 ± 2.6. The study revealed that Online education could be improved by making it more interactive, showing medical procedures in real situations, giving concise information.[7]

In a study (Elfaki, et.al., 2019) at Najran University in Saudi Arabia, the researchers wanted to reveal the impact of e-learning on the students' academic performance. The study was designed in a quasi-experimental manner, whereby 80 students from the Faculty of Nursing were targeted, 40 of them as an experimental group and the other 40 as a control group. This methodology is similar to the method used in the study (Tegegne, 2014) at the University of Gemma in Ethiopia, which targeted 144 students of basic algebra, and the results were varying between the two studies. The results of the study

(Elfaki, et al, 2019) showed that the average score of students for the experimental group is higher and statistically significant than the average score of students for the control group, whereas, according to a study (Tegegne, 2014), there were no statistically significant differences between the students' marks using traditional learning and the students' scores using ICT-supported learning. The reason for the different results may be due to the nature of some subjects that are better taught traditionally rather than relying on information and communications technology.[8, 9]

In a study by (Abooki and Kitawi, 2014) at Strathmore University in Kenya to compare the average student results for the first semester of 2008 in subjects using information and communications technology and those that do not use information and communication technology, the study concluded that the e-learning strategy had a positive impact on the academic performance of the students.[10]

(Basri, et. Al., 2018) examined the impact of the adoption of communications and information technology on the students' performance according to gender, educational program, and level of academic achievement at four Saudi universities. The study found that female performance was better than male performance, and the students with the higher educational achievement were better than the students with the low achievement, in addition to that, the students other than those enrolled in computer programming had better performance when applying a learning strategy based on information and communication technology. These results are close to the results of a study by (Kumar and Bajpai, 2015) at Sikkim University in India, but the academic achievement of males was higher than that of females, and the reason for the difference between the results of the two studies may be due to the social conditions surrounding males and females in each country.[11,12]

Investigating the impact of the learning strategy on motivation among the students, a study by (Salamat, et. Al., 2018) at the University of Lahore using questionnaire research tool collected data for 205 students randomly. 21 questions were asked, each question has a scale of three degrees (Agree, Neutral, Disagree). The study found out that e-learning encourages self-learning, and gives a feeling of comfort in use and interaction promoting greater flexibility in learning time, in addition to motivating the students and enhancing their academic performance.[13]

(Pham and Huynh, 2018) at King Khalid University conducted a study to reveal the factors affecting the educational attainment through the e-learning system making a model after collecting data from 263 respondents. The model contained five independent variables, namely: the self-efficacy of the computer, the ability to self-study, ease and benefit, interaction via e-mail, and social presence. The results of the multiple regression analysis showed that all independent variables have a positive effect on learning and knowledge transfer through the e-learning system. Using a different methodology from the above, (Mothibi, 2015) study used the Meta-Analysis methodology where a sample of 15 research studies was used between 2010 -2013. It was concluded that the information and communications technology had a positive and statistically significant effect on the students' academic achievement, who mainly use e-learning model.[14.15]

METHODOLOGY

RESEARCH APPROACH

The purpose of using quantitative approach in the present study was to explain the possible relationship between the selected variables according to the objectives of the study.

RESEARCH DESIGN

Descriptive correlational design was selected as the research design for the present study.

VARIABLES UNDER STUDY

The variable in the present study were:

- **Independent variable:** E-learning.
- **Dependent variable:** Academic performance.

SETTING OF STUDY

- The final study was conducted in selected college of nursing , Moradabad.

POPULATION

The population identified in the present study was students studying in nursing in selected college of Moradabad.

SAMPLE AND SAMPLING TECHNIQUE

In this study the 120 sample were selected by convenient sampling technique all students studying in nursing in selected college, Moradabad.

CRITERIA FOR SELECTION OF SAMPLE

INCLUSIVE CRITERIA

The study included students who were: -

- students who are studying in nursing profession
- students who are studying in selected school and college of nursing

EXCLUSIVE CRITERIA

The study excluded students who are: -

- Students who are not willing to participate in the study.Students who are not available during data collection.

DATA COLLECTION TOOLS & TECHNIQUES

The instrument facilitates the observation and measurement of the variables under study among nursing students of selected school and college of Moradabad.

- Self-structured questionnaire to assess the level of academic performance
- Self-structured questionnaire to assess the impact of e-learning on academic performance
- Paper pencil instrument technique that a result subject is asked to complete.

ETHICAL CONSIDERATION

- Formal administrative permission was taken to conduct pilot study and final study from selected school of Moradabad.
- Informant consent was obtained from the study subject.
- The anonymity and confidentiality of the participants was maintained by making use of code numbers.

DEVELOPMENT OF TOOLS

The tools were developed by:

- Reviewing of the related research & non-research literature.
- Consultation with the experts in the field & investigator's personal & professional experience.
- Informal discussion with nursing teachers working in clinical area.

DESCRIPTION OF TOOLS

Structured questionnaire to assess the impact of e-learning on academic performance among nursing students in selected school and college of Moradabad.

Part I- Demographic profile

It consists of 6 items related to demographic data of the participants such as age, gender, class, education of parent's, religion, and family income.

Part II- Rating scale for online-e-learning

It consists of 5-point rating scale having 27 items to assess impact of e-learning on academic performance among nursing students. All items are answered using 5-point scale:

Part -III- Dichotomous scale forassess the level of academic performance

It consists of 2-point rating scale having 19 items to level of academic performance among nursing students. All items are answered using 2-point scale:

RELIABILITY OF THE TOOLS

According to **Polit and Beck,** "the reliability of an instrument is the degree of consistency with it measures the attributes it is supposed to be measuring."[16]

The structured questionnaire was used as a tool for the present study: which has three parts i.e. Part 1: Demographic profile, Part 2: Rating scale to assess the impact of elearning, Part 3: Dichotomous scale for academic performance. The reliability of the structured questionnaire to assess the impact of e-learning on academic performance and academic performance was calculated using **Cronbach's Alpha Formula**. The reliability coefficient for part 2: impact of e-learning pm academic performance scale was 0.7, part 3: academic performance scale was 0.8

respectively. Thus, the tool was found to be reliable.

PROCEDURE FOR FINAL DATA COLLECTION

Formal administrative approval was obtained from the selected School of Moradabad. The study was conducted at selected Nursing college of Moradabad. The sample selected using convenient technique. The data were collected from 120 nursing students studying in Nursing.

PLAN FOR DATA ANALYSIS

According to **Parahoo,** "Data analysis is an integrated part of research design, & involves presenting the data in an understandable manner".[20] The data were collected from 120 students and analysed using both descriptive and inferential statistics.

The following plan for data analysis.

- **Section-I:** Demographic Profile of the Study Subjects. Frequency And Percentage Computation Were Done To Describe The Sample Characteristics.
- **Section-II:** Finding Related To Assess The Impact Of E-Learning On Academic Performance Among Nursing Student. The Mean And Standard Deviation Were Computed From The Obtained Impact Of E-Learning Score.
- **Section-III**: Frequency and Percentage Distribution of the Subject According To Criteria Measure Impact of E-Learning Score.
- **Section-IV:** Finding Related To Assess The Level Of Academic Performance Among Nursing Student. The Mean And Standard Deviation Were Computed From The Obtained Academic Performance Score.
- **Section-V:** Frequency and Percentage Distribution of the Subject According To Criteria Measure of Academic Performance Score.
- **Section-VI:** Finding Related To Association between Impacts of E-Learning and Academic Performance

ANALYSIS AND INTERPRETATION

Interpretation involves making sense of study result and examining their implication. It also involves envisioning how the new evidence can best be used in clinical practice and what other practise, and what for the research is needed.

SECTION-I: DEMOGRAPHIC PROFILE OF THE STUDY SUBJECT

The section describes the characteristics of the study subjects. Frequency and percentage computation sere done to describe the sample characteristics. A summary of the sample characteristics is presented in table -01

TABLE-01

Frequency, Percentage distribution of students by their demographic characteristics (Age, Gender, Class, Marital status, Religion Education of parent's, Family income)

n= 120

Demographic Performa		Percentage (%)	Frequency(f)
Age	17-18 years	9.17%	11
	18-19 years	19.17%	23
	19-20 years	20%	24
	20-21 years	35.83%	43
	Above 21 years	15.83%	19
Class	ANM	10%	12

	GNM	69.17%	83
	B.Sc.	20.83%	25
Gender	Male	28.3%	34
	Female	71.7%	86
	Other	0%	0
Marital Status	Married	10.8%	13
	Unmarried	89.2%	107
Religion	Hindu	78.3%	94
	Muslim	14.2%	17
	Sikh	0.8%	01
	Christian	6.7%	08
	Other	0%	0
Education of Parents	Illiterate	0.8%	01
	5th-8th class	16.7%	20
	10th-12th class	45.8%	55
	Graduation and above	36.7%	44
Family Income	5000-15,000	78.3%	94
	16,000-25,000	14.2%	17
	26,000-35,000	0.8%	01
	35,000 and above	6.7%	08

The above study shows that in 120 nursing students, 9.17% were 17-18 yrs., 19.17% were 18-19yrs, 20% were 19-20 yrs., 35.83% were 20-21yrs and 15.83% were above 21 yrs. age group. Out of 120 nursing students 10% were studying in ANM, 69.17% were studying in GNM, and 20.83% were studying in B.Sc. Out of 120 nursing students 28.3% were male, 17.7% were female and 10.8% were married and 89.2% were unmarried students. Out of 120 nursing students 78.3% were Hindu, 14.2% were Muslim, 0.8 % were Sikh, and 6.7% were follow Christian religion group. The data shows that 0.8% parents were illiterate, 16.7% parents were educated till 5^{th}-8^{th} class, 45.8% parents were educated between10^{th} -12^{th} class, and 36.7% parents were graduate and above. By the collected data we came to know that out of 120 nursing students 78.3% belongs to 5000 to 15000 family monthly income, 14.2% belongs to 16000 to 25000 family monthly income, 0.8% belongs to 26,000-35,000 family

monthly income and 6.7% belongs to 35,000 and above family income.

FIGURE-01

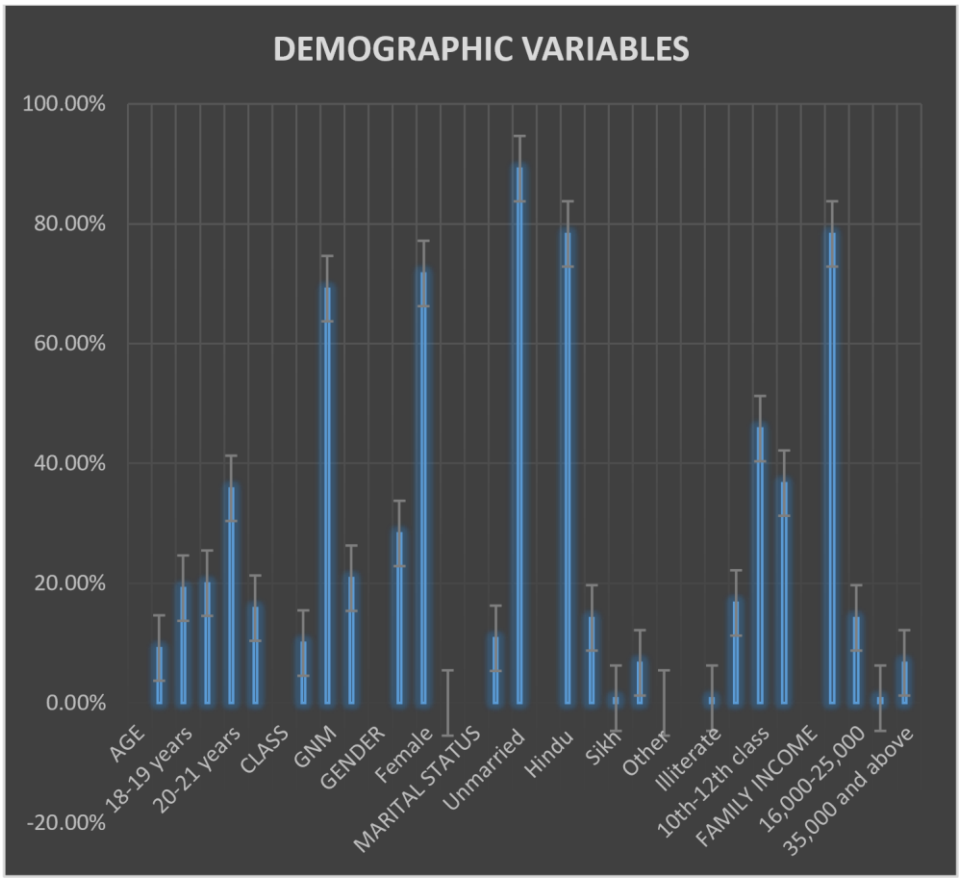

FIGURE 01: BAR DIAGRAM DEPICTING FREQUENCY DISTRIBUTION OF DEMOGRAPHIC VARIABLES

SECTION-II: FINDING RELATED TO ASSESS THE IMPACT OF E-LEARNING ON ACADEMIC PERFORMANCE AMONG NURSING STUDENT.

THE MEAN AND STANDARD DEVIATION WERE COMPUTED FROM THE OBTAINED IMPACT OF E-LEARNING SCORE

The section looks at the analysis, description and interpretation of the data collected to assess the impact of E- learning on academic performance. From the obtained level of impact of E-learning scores mean and standard deviation.

TABLE -02

Descriptive Statistics	Mean	Mode	Median	SD	Variance	Max	Min	Range	Margin Error

Impact of E-learning Score	52.95	52	53	7.79	60.79	76	33	43	0.71178

Maximum= 108 Minimum= 0

The table 2 shows that the range of obtained scores for the subjects was from. The computed mean 52.95 and standard deviation 7.79.

FIGURE-02

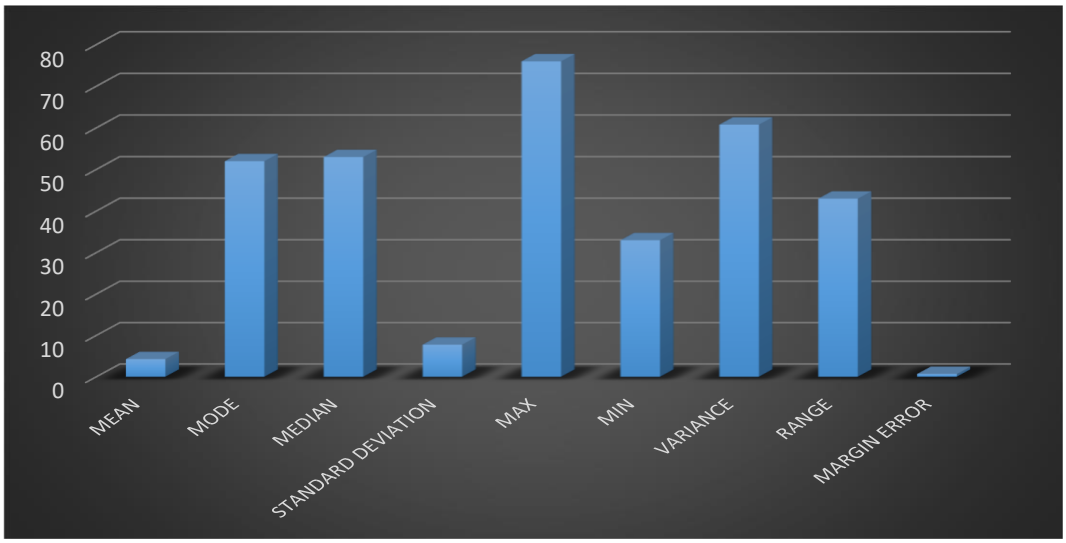

FIGURE 02: BAR DIAGRAM DEPICTING THE DESCRIPTIVE STATISTIC MEAN AND STANDARD DEVIATION VALUE OF IMPACT OF E-LEARNING SCORE.

SECTION-III: FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE SUBJECT ACCORDING TO CRITERIA MEASURE OF IMPACT OF E- LEARNING SCORE

The section describe the impact of E-learning among nursing students. Frequency and percentage computation were done to describe the level of impact of E-learning among nursing students

TABLE -03

n=120

CRITERIA MEASURE OF IMPACT OF E-LEARNING SCORE		
Category Score	**Percentage**	**Frequency**
POOR(>Mean+SD)	22.5%	27
FAIR (Mean-SD to Mean +SD)	62.5%	75

GOOD(<Mean-SD)	15%	18

The data in table 03 indicate that out 120 subjects 22.5% has poor, 62.5% has fair and 15 % has good impact 0f E-learning on academic performance.

FIGURE-03

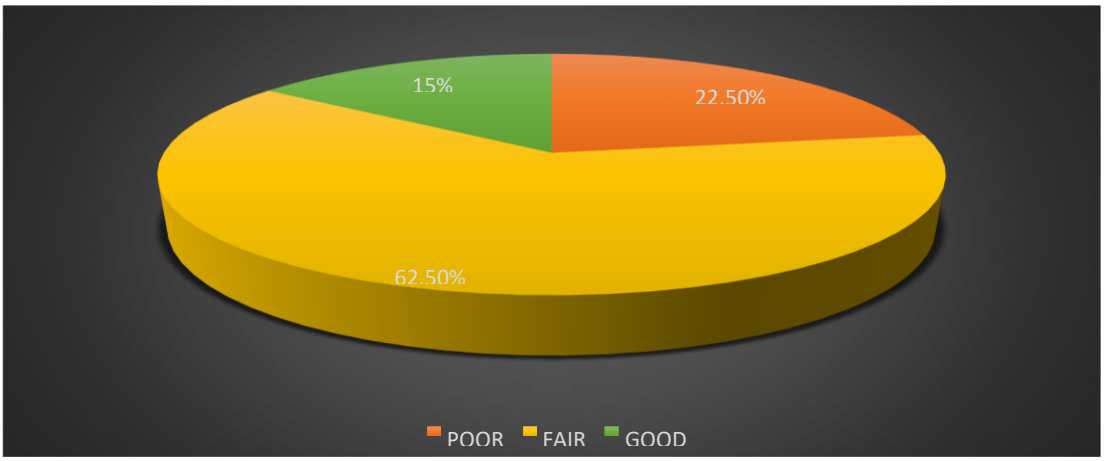

FIGURE 03: PIE DIAGRAM SHOWING IMPACT SCORES OF E-LEARNING ON ACADEMIC PERFORMANCE AMONG NURSING STUDENTS.

SECTION-IV: FINDING RELATED TO ASSESS THE LEVEL OF ACADEMIC PERFORMANCE AMONG NURSING STUDENT. THE MEAN AND STANDARD DEVIATION WERE COMPUTED FROM THE OBTAINED ACADEMIC PERFORMANCE SCORE

The section looks at the analysis, description and interpretation of the data collected to assess the academic performance. From the obtained scores mean and standard deviation.

TABLE-04

Descriptive Statistics	Mean	Median	Mode	SD	Variance	Max	Min	Range	Margin error
Academic performance Score	12.39	12	12	1.76	3.013	16	6	10	0.1584

Maximum=19, Minimum=0

The table 04 shows that the range of obtained scores for the subjects was from.

The computed mean 12.39 and standard deviation 1.76.

FIGURE-04

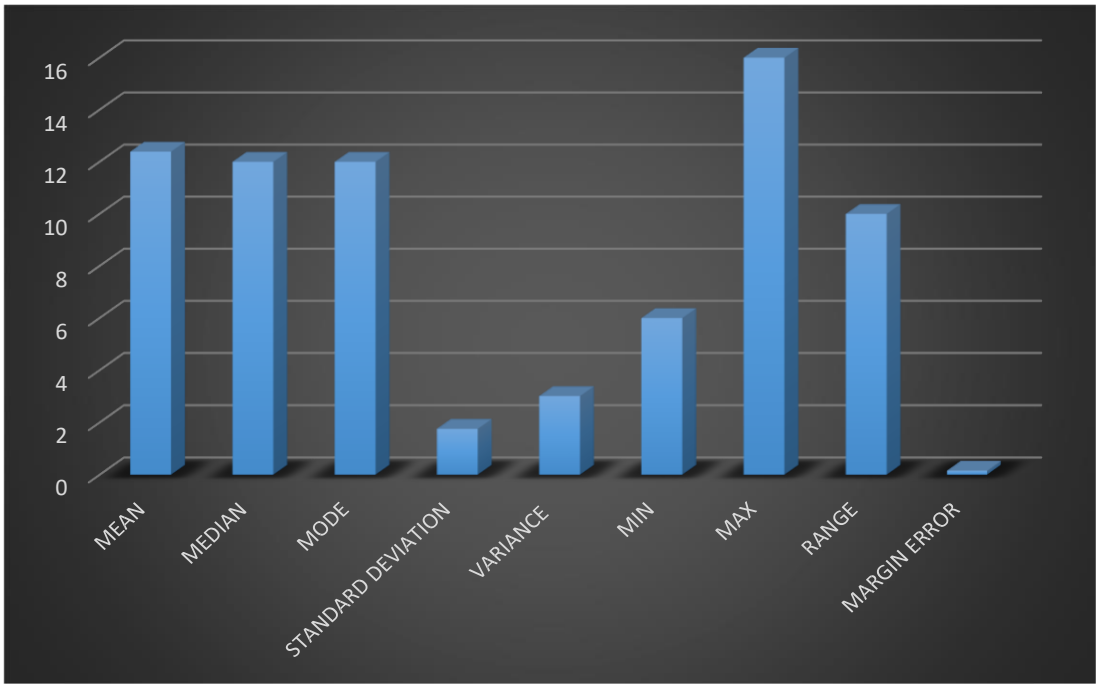

FIGURE 04: BAR DIAGRAM DEPICTING THE DESCRIPTIVE STATISTIC MEAN AND STANDARD DEVIATION VALUE OF ACADEMIC PERFORMANCE SCORE.

SECTIONV: FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE SUBJECT ACCORDING TO CRITERIA MEASURE OF ACADEMIC PERFORMANCE SCORE.

The section describe the level of academic performance among nursing students. Frequency and percentage computation were done to describe the level of impact of academic performance among nursing students

TABLE -05
n=120

CRITERIA MEASURE LEVEL OF ACADEMIC PERFORMANCE		
Category Score	**Percentage**	**Frequency**
POOR(>Mean+SD)	22.5%	27
FAIR (Mean-SD to Mean +SD)	69.2%	83
GOOD(<Mean-SD)	8.3%	10

The data in table 05 indicate that out 120 subjects 22.5% has poor, 69.2% has fair and 8.3 % has good academic performance.

FIGURE-05

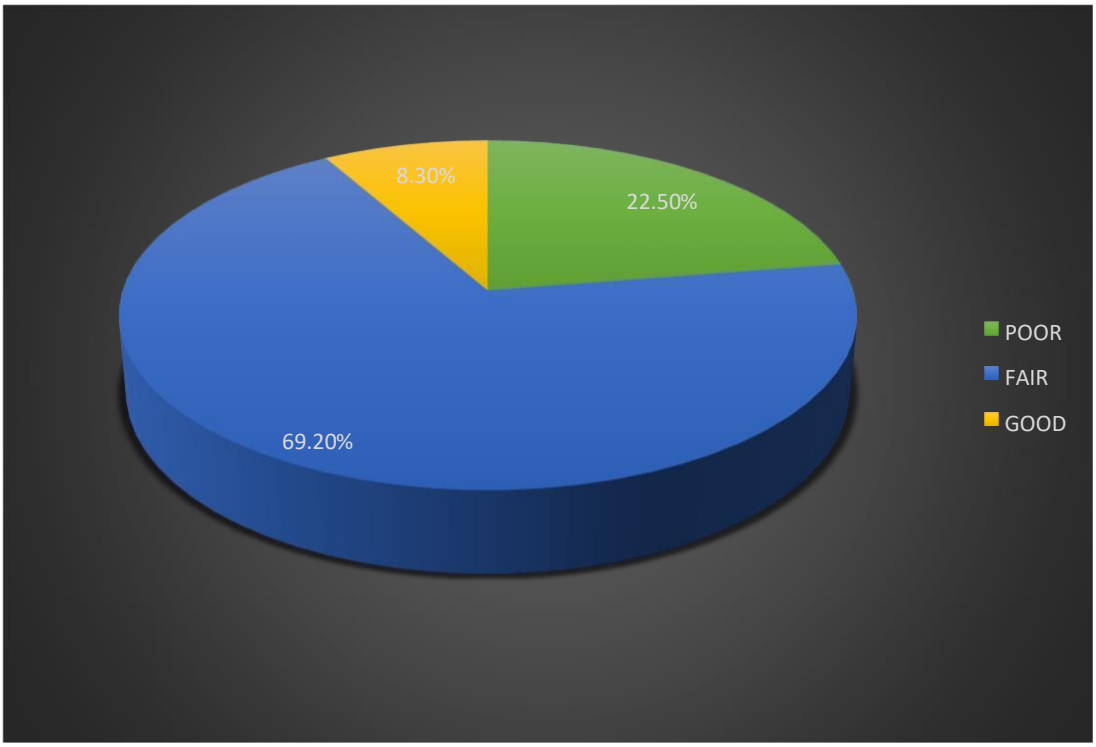

FIGURE 05: PIE DIAGRAM SHOWING IMPACT SCORES OF LEVEL OF ACADEMIC PERFORMANCE AMONG NURSING STUDENTS.

SECTION VI: FINDING RELATED TO CORRELATION BETWEEN THE E- LEARNING SCORE AND ACADEMIC PERFORMANCE.

The section deals with assessment of correlation between e-learning and academic performance. For obtaining the relationship between e- learning impact and academic performance, coefficient of correlation was calculated as shown in table 06.

TABLE -06

Pearson's Correlation	**Pair1**	
	IMPACT OF E-LEARNING SCORE	**LEVEL OF ACADEMIC PERFORMANCE SCORE**
Mean	52.95	12.39
SD	7.79	1.75

n	120
Correlation	0.2272
P Value	0.12577
Result	Significant

The data presented in table 06 shows that the coefficient of correlation between e- learning and academic performance was 0.2272. It shows that there was significant relationship between e- learning and academic performance at level of 0.05.

FIGURE -06

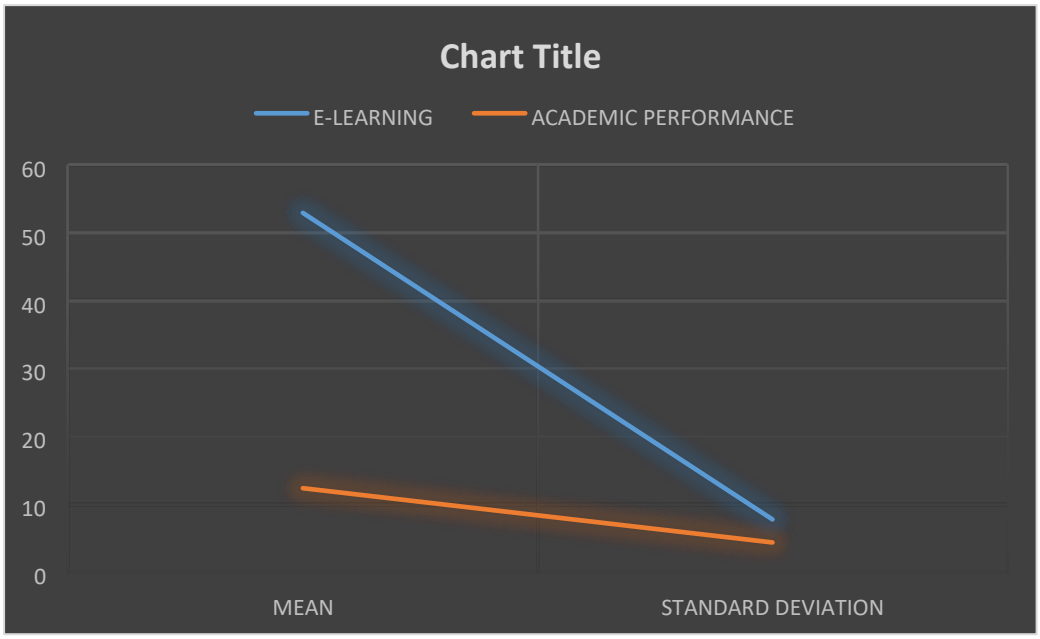

FIGURE 06: LINE DIAGRAM SHOWING COFFIECIENT CORELETION BETWEEN E- LEARNING AND ACADEMIC PERFORMANCE AMONG NURSING STUDENTS

DISCUSSION

MAJOR FINDING OF THE STUDY

Demographic profile of the study subjects. Frequency and percentage computation were done to describe the sample characteristics.

The finding related to the demographic profile of the study subjects.

- The above study shows that in 120 nursing students, 9.17% were 17-18 yrs., 19.17% were 18-19yrs, 20% were 19-20 yrs., 35.83% were 20-21yrs and 15.83% were above 21 yrs. Age group.
- Out of 120 nursing students 10% were studying in ANM, 69.17% were studying in GNM, and 20.83% were studying in B.Sc.
- Out of 120 nursing students 28.3% were male, 17.7% were female and 10.8% were married and 89.2% were unmarried students. Out of 120 nursing students 78.3% were Hindu, 14.2% were Muslim, 0.8 % were Sikh, and 6.7% were follow Christian religion group.
- The data shows that 0.8% parents were illiterate, 16.7% parents were educated till

5^{th}-8^{th} class, 45.8% parents were educated between10^{th} -12^{th} class, and 36.7% parents were graduate and above.

- By the collected data we came to know that out of 120 nursing students 78.3% belongs to 5000 to 15000 family monthly income, 14.2% belongs to 16000 to 25000 family monthly income, 0.8% belongs to 26,000-35,000 family monthly income and 6.7% belongs to 35,000 and above family income.

Finding related to assess the impact of e-learning on academic performance among nursing student. The mean and standard deviation were computed from the obtained impact of e-learning score and percentage distribution.

The computed mean 52.95 and standard deviation 7.79.Out of 120 subjects 22.5% has poor, 62.5% has fair and 15 % has good impact 0f E-learning on academic performance

Finding related to assess the level of academic performance among nursing student. The mean and standard deviation were computed from the obtained academic performance score and percentage distribution.

The computed mean 12.39 and standard deviation 1.76.Out 120 subjects 22.5% has poor, 69.2% has fair and 8.3 % has good academic performance.

Finding related to correlation between the e-learning score and academic performance.

The coefficient of correlation between e- learning and academic performance was 0.2272. It shows that there was significant relationship between e-learning and academic performance at level of 0.05.

LIMITATIONS

- This study was limited only for nursing students.
- The study was conducted on a small sample of students. The finding cannot be generalized for students in other universities degree programs and general population.

RECOMMENDATION

- A comparative study can be done to understand the gender difference between impact of e-learning and level of academic performance.
- A same study can be replicated on a wider sample to help validate and generalized the finding to the population unlike the present study which was conduct on a small sample size thus limiting generalization.
- A study can be done to assess the point of view about e-learning among general population at different level for the improvement in the use the of e-learning pattern in academic schedule.

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