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Learner's attitude towards e-learning and its relationship with academic achievement

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Abstract

E-Learning is one of the thrust area identified by Ministry of Electronics and Information Technology for imparting education using educational tools and communication media. Nowadays e-learning is the only way to communicate, to educate oneself, to gather information in India as well as in the whole world due to COVID-19 Pandemic. So, the demand of e-learning generally increases. Keep this in mind in the present study researchers wants to see that how students reacts to this e-learning system i.e. the attitude of the learners towards this e-learning system and is there any relationship between learners attitude towards e-learning and their academic achievement.

Keywords: Attitude, e-learning, COVID-19, academic achievement

Introduction

In today's world learning is not just limited to classroom. It has exceeded the boundaries of classroom and can take place inside waiting rooms, at bus stops, railway stations, during educational field trips, museums visits, excursions, and market places. In short learning can occur 'anytime' and 'anywhere'. This 'anytime' and 'anywhere' learning paradigm has been made possible by sophisticated technologies which include different type of technology enabled learning devices. Now a day, due to growth of internet technology and due to COVID-19 pandemic e-learning plays a significant role as a learning approach of higher educational institutions as well as all the levels of education. The term "e-learning" was coined by Elliot Masie at his Tech Learn Conference in 1999. "e-learning"- means learning through electrical gadgets. E-Learning is a relatively new phenomenon that is growing in a significant number of universities around the world, enhancing the teaching and learning processes. E-Learning is one of the thrust area identified by Ministry of Electronics and Information Technology for imparting education using educational tools and communication media. It is the learning facilitated and supported by Information Communication technologies (ICT). The broad objective is to develop tools and technologies to promote e-learning. Nowadays e-learning is the only way to communicate, to educate oneself, to gather information in India as well as in the whole world due to COVID-19 Pandemic. So, the demand of e-learning generally increases.

Review of related literature

- Chandrika, (2020), worked on "A study on Students Perception towards Online Teaching during COVID-19 Lockdown with Special Reference to Tumkur University". The researcher intends to know the student's perception towards online teaching during Lockdown COVID-19 AND to know the awareness of students on using online resources. The researcher found that out of 224 students 54.01% students are more aware about using online resources, 35.26% students were experienced network related problem, 37.05% students experienced problem in understanding practical subjects, 47.75% students were dissatisfaction with online teaching and 34.37% students believe that online teaching is less effective.
- Mahajan & Kalpana, (2018), worked on "A study of students' perception about e-learning". They worked to find the learners perception and usefulness of e-learning. They found that e-learning has its benefits from a student's perspective and it will

- have a positive influence in their performance with better understanding of their course.
 - Konwar (2017), Investigated “A Study on Attitude of College Students towards E-learning with Special Reference to North Lakhimpur of Lakhimpur District, Assam.” The researcher intends to study the attitude of college students towards e-learning, to study the difference in attitude of college students towards e-learning with regard to gender and to study the difference in attitude of college students towards e-learning with regard to locality. The study revealed that the college students have positive attitudes towards e-learning and there is urban college students.
 - Thakkar & Joshi (2017) Studied on “Students’ Attitude e-learning”. The main aim of the study was to gauge students’ attitude towards the use of E-learning systems. They analyzed their attitude with respect to gender, locality and social category. Results show that there is a highly positive incline of diploma engineering students towards the usage of E-learning. Also, this attitude is not affected by differences in gender, locality or social category of students.
 - Bhagat, & Chang, (2018), studied on “A Cross-cultural Comparison on Students’ Perceptions towards Online Learning”. The aim of the study was to explore cross-country (Taiwan versus India) differences in students’ perceptions of online learning by gender. However, there was no significant interaction effect of country by gender. Findings indicated that culture and language did influence students’ perceptions towards online learning. There is a need to raise awareness about factors that may affect online learning experience and to provide guidance and for practice and future work. The statistical results of the study showed significant differences between Indian samples and Taiwanese samples and Taiwanese samples has positive attitude towards online learning comparatively Indians samples.
 - Zabadi & Al-Alawi (2016), Studied on “University Students’ Attitudes towards E-Learning: University of Business & Technology (UBT)-Saudi Arabia-Jeddah: A Case Study”. The study was conducted to examine attitudes of UBT students’ in Dahban and Sari campuses towards e-learning by taking (371) students from four colleges and English language center. In sampling techniques, they used the stratified random sampling in choosing the study sample. To gather the primary data from respondents, a well-structured questionnaire, developed by the researchers. The findings indicated that UBT participants’ owns a high standard on attitude towards e-learning and their attitude results are significantly vary with their gender, technology usage and skills.
 - Odeshi (2014), Studied on “Attitude of Students Towards E-learning in South-West Nigerian Universities: An Application of Technology Acceptance Model”. The study examined the attitude of students towards e-learning in selected south-west Nigerian universities. Specifically, the study looked at the relationship between attitude and e-learning with the application of Technology Acceptance Model (TAM). Questionnaire was used to collect data from a sample of 387 postgraduate and undergraduate students. Statistical techniques used for the analyses of data were frequency distribution, simple linear regression, One-Way ANOVA and paired T-test was used to test the hypotheses. Findings showed that students have a positive attitude towards e-learning because they find the system easy to use and useful for their course work. Also, attitude influences the intention to use an e-learning system.
 - Smart, K.L. & Cappel J.J. (20013), worked on “Students’ Perception of Online Learning: A Comparative Study”. The study examines students’ perceptions of integrating online components in two undergraduate courses. The results indicate that participants in elective courses rated the online learning significantly than those in a required course. Overall participants rated the online modules marginally positive while those in the required course rated them marginally negative. Three outcomes suggest that instructors should be selective in the way they integrate online units into traditional, classroom-delivered course.
 - Liaw (2013) conducted a study on the topic “Investigating students’ perceived satisfaction, behavioral intention, and effectiveness of e-learning: A case study of the Blackboard system”. He concluded that students only have a middle level positive attitudes toward e-learning usage, from perceived usefulness (M = 4.30) to interactive learning activities (M = 3.93). It seems that although learners believe that e-learning is a useful assisted learning tool, they are concern with system quality, especially interactivity. While using the Blackboard e-learning system, learners indicated that they needed more interactive and communicative functions and activities.
 - Aixia and Wang (2012) in their study entitled “Factors Influencing Learner Attitudes Toward E-learning and Development of E-learning Environment Based on the Integrated E-learning Platform” found that the perception of e-learning is positively influenced by its flexibility in knowledge management, time management and widening access to information. Moreover, an integrated E-learning platform, providing many web-based, multi-platform tools, is introduced based on knowledge management.
- Objectives of the study**
- To measure the attitude of learners towards e-learning.
 - To study the difference in attitude of learners towards e-learning with regard to their gender.
 - To study the difference in attitude of learners towards e-learning with regard to their locality.
 - To study the difference in attitude of learners towards e-learning with regard to their stream of study.
 - To find out the relationship between academic achievement and Attitude towards e-learning learners.
- Hypotheses and Research Question of the study**
- Both research questions and hypotheses are considered simultaneously. The hypotheses have taken to analysis the extent and nature of attitude towards e-learning and to explore the view of students towards the effectiveness of e-learning researcher considered the research question.
- Hypotheses**
- H01** – There is no significant difference between male and female learner’s attitude towards e-learning.

- H02** – There is no significant difference between urban and rural learners’ attitude towards e-learning.
- H03** – There is no significant difference between urban male and urban female learners’ attitude towards e-learning.
- H04** – There is no significant difference between urban male and rural male learners’ attitude towards e-learning.
- H05** – There is no significant difference between rural male and rural female learners’ attitude towards e-learning.
- H06** – There is no significant difference between urban female and rural female learners’ attitude towards e-learning.
- H07** - There is no significant difference between science and arts stream learners’ attitude towards e-learning.

Research Question

- What was the view of learners about effectiveness of e-learning in education?

Delimitation of the study

In this study there have some delimitations. The present study is delimited in the following aspect.

Population & Sample: All the undergraduate students of west Bengal are population in this study but researchers selected only Nadia district for their study. Researchers selected only 300 college students from science and arts stream as sample for the study. To select the sample researcher used the purposive sampling technique for their study.

Method: To carry out this study researcher used the descriptive survey method.

Tools used: Only one standardized questionnaire was used in this study.

Variables: For this Study, researcher has considered the following variables: Gender, Locality, Educational Stream (Science and Arts) and Academic Achievement. And only dependent variable is attitude towards e-learning.

Analysis and interpretation

Variable wise Analysis: For the present study researcher has used the following variable: Gender (Male, Female), Locality (Rural, Urban), Educational Stream (Science, Arts). Now variable wise analysis and interpretation are as

follows:

Table 1: Variable wise Mean and SD

Variable		N	Mean	SD
Gender	Male	150	130.33	14.63
	Female	150	122.75	13.11
Locality	Urban	150	129.24	14.82
	Rural	150	125.52	26.65
Educational Stream	Science	150	145.86	16.49
	Arts	150	125.13	13.01

The above table shows that there are variables like gender, locality and educational stream wise mean value is different in different level of variable.

Hypotheses wise Analysis

In the present study researcher formulated seven number of hypotheses to find out the attitude of college going learners towards e-learning and its relationship with academic achievement. These hypotheses were being verified by the t-test.

H01–There is no significant difference between male and female learners’ attitude towards e-learning.

Table 2: Attitude towards e-learning between male & female learners.

Student	N	Mean	Std. Deviation		
Male	150	130.3333	14.62628		
Female	150	122.7467	13.10982		
t-test					
Student	t	Df	Sig.(2-tailed)	Mean Difference	Std. Error Difference
Male-Female	3.501	298	.001	7.58667	2.16708

Significant at 0.05 levels

Interpretation

Here corresponding null hypotheses is rejected because here ‘t’ value is significant. It was observed that significant difference exists between male and female learners regarding attitude towards e-learning. From this, it is cleared that the attitude of male learners is better than the female learner’s attitude towards e-learning. This is presenting in the following charts.

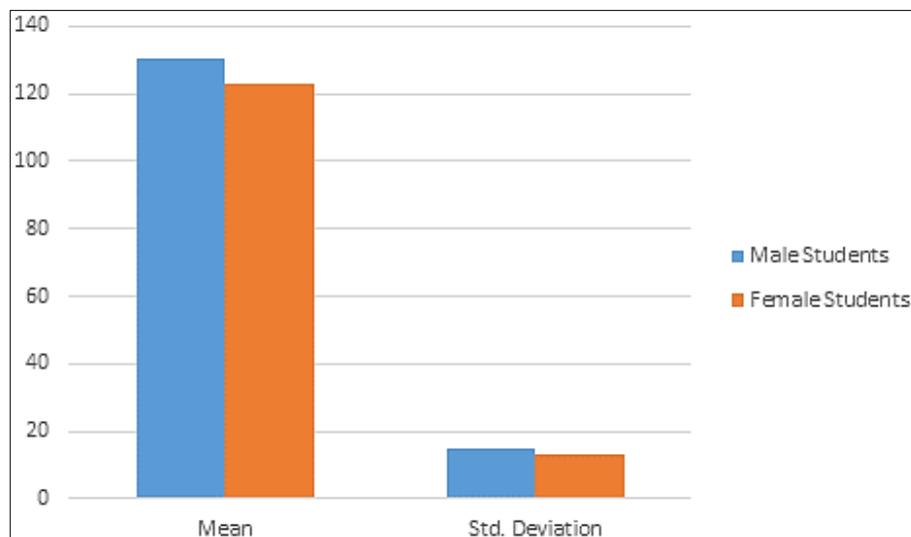


Fig 1: Gender wise learners’ attitude towards E-learning.

H₀₂ – There is no significant difference between urban and rural learners’ attitude towards e-learning.

Table 3: Attitude towards e-learning between urban and rural learners.

Locality Wise Student		N	Mean	Std. Deviation	
	Urban Student	150	129.2476	14.82642	
	Rural Student	150	125.5238	26.65668	
t-test					
Student	t	Df	Sig.(2-tailed)	Mean Difference	Std. Error Difference
Urban - Rural	1.170	298	.245	3.72381	2.60412

(Significant at 0.05 levels)

Interpretation

Here ‘t’ value is not significant, so corresponding null hypotheses is accepted. This indicate that both urban and rural students possess high attitude towards e-learning

although urban students have slightly higher attitude towards e-learning than rural students. Presented in the following figure.

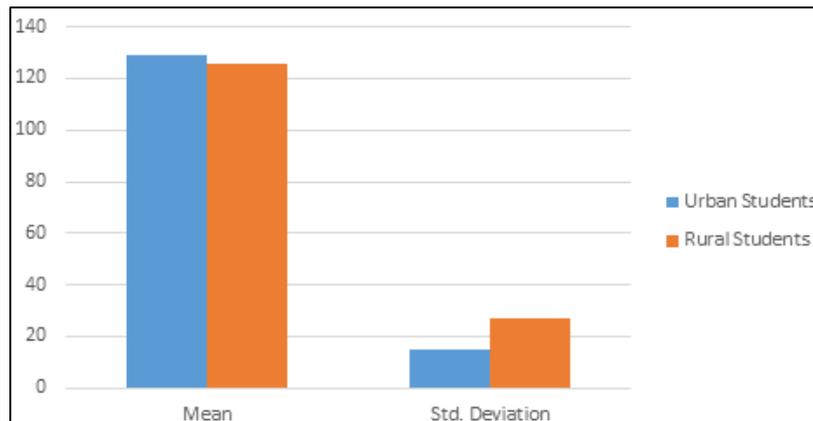


Fig 2: Locality wise students’ attitude towards E –learning.

H₀₃ – There is no significant difference between urban male and urban female students’ attitude towards e-learning.

Table. 4: Attitude towards e-learning between urban male & urban female learners.

Student		N	Mean	Std. Deviation	
Student	Urban Male	75	136.99	15.49	
	Urban Female	75	132.55	14.59	
t-test					
Urban Male -Urban Female	t	Df	Sig.(2-tailed)	Mean Difference	Std. Error Difference
	1.71	148	.001	6.58	2.61708

(Significant at 0.05 levels)

Interpretation

Here ‘t’ value is not significant, so corresponding null hypotheses is accepted. This indicate that both urban male and urban female students possess high attitude towards e-

learning although urban male students have slightly higher attitude towards e-learning than urban female students. Presented in the following figure.

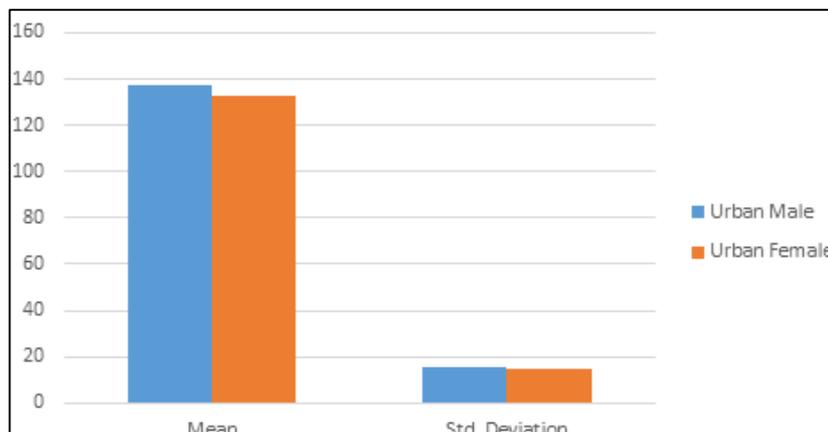


Fig 3: Gender & Locality wise students’ attitude towards E-learning.

H₀₄ – There is no significant difference between urban male and rural male students’ attitude towards e-learning.

Table. 5: Attitude towards e-learning between urban male & rural male students.

Student		N	Mean	Std. Deviation	
Student	Urban Male	75	136.99	15.49	
	Rural Male	75	129.32	13.11	
t-test					
Urban Male	t	Df	Sig.(2-tailed)	Mean Difference	Std. Error Difference
-Rural Male	2.02	148	.001	5.76	2.71058

Significant at 0.05 levels

Interpretation

Here corresponding null hypotheses is rejected because here ‘t’ value is significant. It was observed that significant difference exists between urban male and rural male

students regarding attitude towards e learning. From this, it is cleared that the attitude of urban male students is better than rural male student’s attitude towards e learning. This is presenting in the following charts.

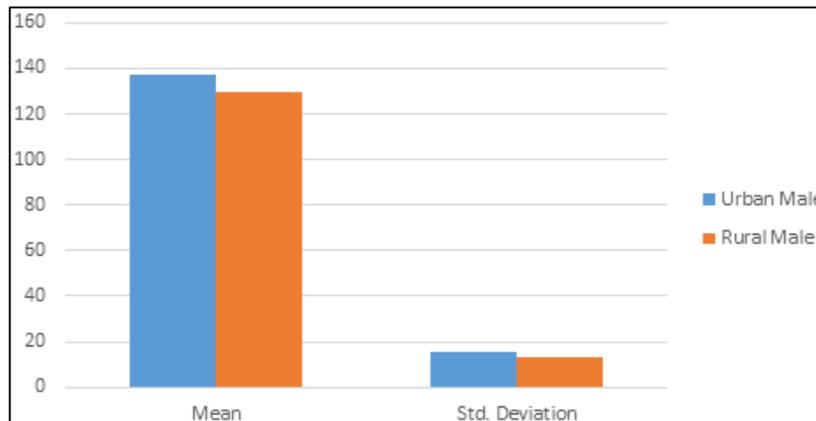


Fig. 4: Gender & Locality wise students’ attitude towards E -learning.

H₀₅-There is no significant difference between rural male and rural female students’ attitude towards e-learning.

Table. 6: Attitude towards e-learning between rural male & rural female students.

Student		N	Mean	Std. Deviation	
	Rural Male	75	129.32	13.11	
	Rural Female	75	128.34	12.95	
t-test					
Student	t	Df	Sig.(2-tailed)	Mean Difference	Std. Error Difference
Rural Male -Rural Female	1.62	148	.001	5.76	2.71058

(Significant at 0.05 levels)

Interpretation

Here ‘t’ value is not significant, so corresponding null hypotheses is accepted. This indicate that both rural male and rural female students possess high attitude towards e-

learning although rural male students have slightly higher attitude towards e-learning than rural female students. Presented in the following figure.

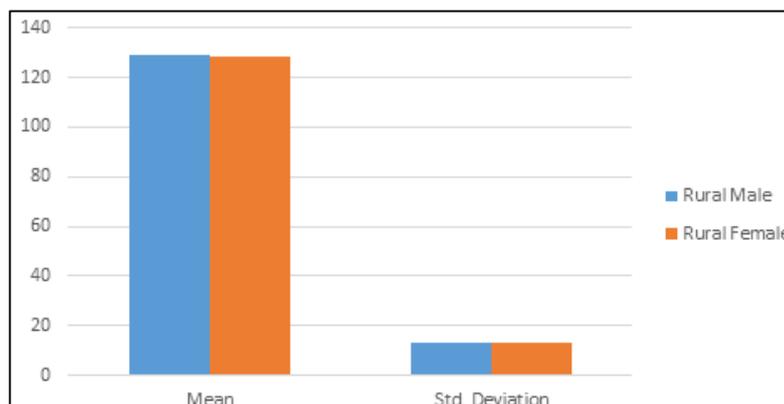


Fig. 5: Gender & Locality wise students’ attitude towards E-learning.

H06 – There is no significant difference between urban female and rural female students’ attitude towards e-learning.

Table. 7: attitude towards E-learning between urban female & rural female students.

Student	N	Mean	Std. Deviation		
Urban Female	75	133.37	13.78		
Rural Female	75	128.34	12.95		
t-test					
Student	t	Df	Sig.(2-tailed)	Mean Difference	Std. Error Difference
Urban Female -Rural Female	3.59	148	.001	5.76	2.71058

(Significant at 0.05 levels)

Interpretation

Here corresponding null hypotheses is rejected because here ‘t’ value is significant. It was observed that significant difference exists between urban female and rural female

students regarding attitude towards e learning. From this, it is cleared that the attitude of urban female students is better than rural female students’ attitude towards e learning. This is presenting in the following charts.

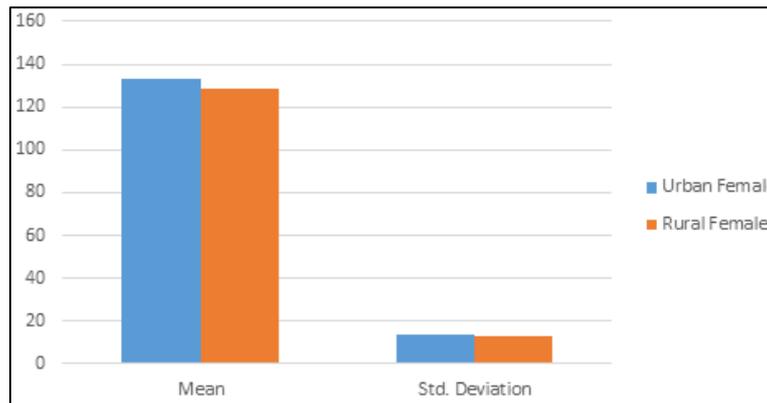


Fig 6: Gender & Locality wise students’ attitude towards E-learning.

H07: There is no significant difference between Science and Arts streamed students’ attitude towards e-learning.

Table. 8: Attitude towards e-learning between Science and Arts streamed Students

Educational Stream	N	Mean	Std. Deviation		
Science	150	145.86	16.49		
Arts	150	125.13	13.01		
t-test					
Educational Stream	t	Df	Sig.(2-tailed)	Mean Difference	Std. Error Difference
Sc-Arts.	3.501	298	.001	7.58667	2.16708

(Significant at 0.05 levels)

Interpretation

Here ‘t’ value is significant, so corresponding null hypotheses is rejected. This indicate that significant difference was existed between science and Arts Students

regarding attitude towards e-learning. It could be concluded that the science students’ attitude are higher than arts students regarding Attitude towards e-learning. It is also presented in the following figure.

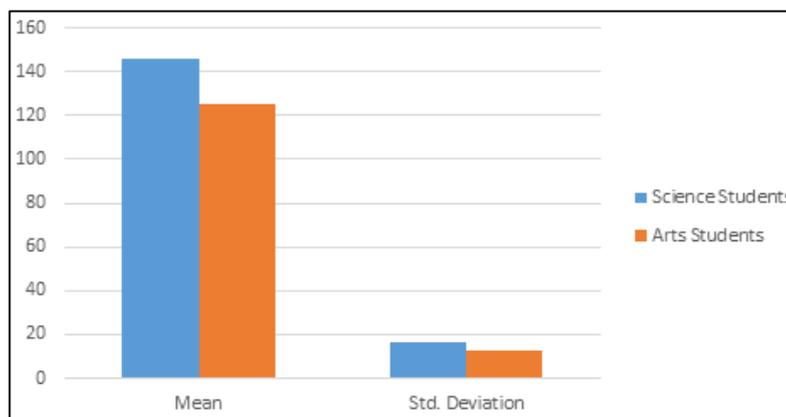


Fig 7: Educational Stream wise students’ attitude towards E-learning.

Qualitative Analysis

Qualitative analysis allows for a detailed of the thought, feeling, opinions and experience of the individuals, group of communities (Cohen, 2006). The researcher has formulated one research question which is presented in qualitative form collected by the questionnaire.

R.Q-1: What was the view of student about effectiveness of e-learning in education?

Open questionnaire was applied on 300 Students and it was seen that they expressed their own view differently.

Researcher analyses these opinions and divided the opinion into different category. Category wise opinions are presented below:

Table. 9: Presenting the percentage view of student about effectiveness of e-learning in Education

Gathering Information	Costly	Time Saving	Technologically Sophisticated	Others
35	20	20	15	10

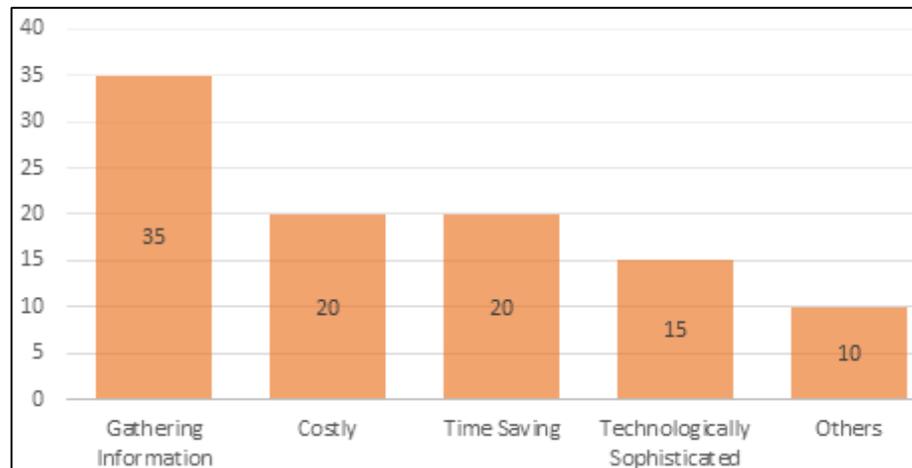


Fig 8: View of students about effectiveness of e-learning in education

Interpretation

It is clear from above mentioned Table and figure were that 35% of the total sample have opined that e-learning helps students in gathering information. About 20% of the sample said that e-learning is costly for use. 20% respondent opine that e-learning helps save the time of learning. 15% students of the total sample expressed that they are unable to use e-learning due to advance technology. And the rest 10% respondents has given different views about the aforesaid matter.

Finding of the study

All the findings obtain from the above statistical analysis and the interpretation are given below:

- Significant difference exists between male and female students regarding attitude towards e-learning.
- There is no significant difference exist between urban and rural student attitude towards e-learning.
- Both Urban male and urban female students possess high attitude towards e-learning.
- Significant difference existed between urban male and rural male students regarding attitude towards e-learning.
- Both rural male and rural female students possess high attitude towards e-learning although rural male students have slightly higher attitude towards e-learning than rural female students.
- Significant difference exists between urban female and rural female students regarding attitude towards e-learning.
- Significant difference was existed between science and Arts Students regarding attitude towards e-learning
- Exist significant relationship between students' academic achievement and attitude towards E-learning.

Conclusion

On the basis of above findings, following conclusions are drawn in the present study: In respect of gender of the students there are significant difference in attitude towards e-learning. The attitude of male students towards e-learning is more positive than the female students. In respect of locality of the students both rural and urban students possess positive attitude towards e-learning. Although urban students have slightly higher attitude towards e-learning. One of the major objectives of this research was to the Identify the difference of attitudes towards e-learning of the students belonging to the different educational stream i.e. science and arts. There are significant difference of attitude towards e-learning among the students of science and arts. Science students' attitude towards e-learning is more positive than the students of arts. One of the major objective of the research was to find out the relationship between the student's attitude towards e-learning and their academic achievement. In this regard it is found that academic achievement is better of those students whose attitude towards e-learning is more positive. In the opposite side, academic achievement is comparatively low of those students whose attitude towards e-learning is negative. Therefore, it can be concluded that there is significant correlation between the attitude of students towards e-learning and their academic achievement.

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