Attitude of College & University Students towards E-Learning in Kolkata and North 24 Parganas Districts

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Abstract

The objective of present cross-sectional survey-based study was to find out attitude of college and university students towards e-learning in Kolkata and North 24 parganas districts. A total 157 responses were collected by self-made questionnaire. It was found that the maximum number of students have positive attitude towards e-learning. When look at gender variable, male students (97.2%) have more positive attitude than the female students (95.3%), and inferential statistically the difference was found to be not significant (p > 0.05). When look at stream variable, science students (100%) have more positive attitude than the arts students (94.9%), and inferential statistically the difference was found to be not significant (p > 0.05). Another variable habitat, rural areas students (98.6%) have more positive than the urban areas students (94.3%), and inferential statistically the difference was found to be not significant (p > 0.05).

Keywords: *E-learning, Education, Attitude, Undergraduate and post graduate students.*

1. Introduction:

E-Learning is a new education concept by using the internet & technology. It helps teacher & students in teaching learning process-learning is the vast term use to refer to instructional material by electronic tools and technology. Actually, ICT plays an important role not only in classroom but also in only in another field. The main object of E-learning as a learning approach in higher education aim increases accessibility education and help the students' academic achievement and reduce the cost, time of education. Newton (20003) define-learning system has three main areas -1) Improving access to education training. 2) Improve the quality of teaching and learning. 3) Need for high education institution to maintain competitive institution to maintain competitive advantage in a changing marketplace for student. The trend of using E-learning as a learning/teaching tool is now rapidly expanding into education-learning is new style of learning strategy. Meanly, E-learning is learning utilizing electronic technologies to access education curriculum and achieving objectives of education. In most cases, it refers to a course, program or degree delivered completely online for learning & acquiring knowledge (Shu-Sheng Liaw,2007). Today, it helps student for higher education, and it focused on ways in which the teacher organized new technology into their teaching.

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2. Review of Related Literature:

Dr. Ishmirkha Handique Komwar (2017)[1] conducted a research entitled as *"A study on attitude of college student towards E-learning with special reference to north Lakhimpur of Lakhimpur District, Assam"*. A total of 200 students were included in this study and data was collected by Attitude towards e-learning scale developed by Dimpal Rani. In this study the result show that the college student has positive attitude towards e-learning and also gender and habitat were existing no significant difference.

Dr. Santosh Kumar Behera, Susmita Sao, Shili Mahamad (2016)[2] conducted a research entitled as *"Attitude of B.Ed. student-teachers towards E-learning"*, A total of 230 students were included in this study and data was collected by Likert type. In this study the result indicated that the B.Ed. college students showed highly favourable attitude towards E-learning and also gender, habitat were existing no significant difference.

Norziani Dahalam Omar, Hasmawati Hassan & Hanafi Atan (2012)[3] "*Student engagement in online Learning: Learners attitude towards E-learning"*. A totally of 205 students were included in this study and data was collected by A factor analysis and multiple regression. In this study the find out there is a positive and significant correlation among learner attitude and e-mentoring also attitude pertaining to learning autonomy environment is contributing to learners and attitude pertaining to ascertain success of e-mentoring program and learns attitude are critical factors to ensure students would stay involve with their mentor.

Jebreen A. Hussain, khalid Al-Qudah & Reem Al Matari (2013)[4] *"Students attitude in college education at Jordanian Universities towards Mobile phone uses on university education"* total of 363 sample were collected in this study and data was collected by Likert scale. In this study the result show that no significant difference in the attitude towards e-learning based on variables and significant different in ICT familiarity and also showed were significant difference in the attitude of students of the colleges of education in Jordanian University towards mobile phone use attributed to the variable of the university and in favour of the Hashemite university.

Krishnakumar R & Rajesh Kumar M (2011)[5] *"Attitude of Teachers' of Higher education towards e-learning",* A total of 255 students were included in this study and data was collected by E-learning tools. In this study the result show that no significant difference in the attitude towards e-learning based on variables and significant different in ICT familiarity

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[1] Konwar, I. H. (2017). A study on attitude college students towards e-learning with special reference to north lakhimpur of lakhimpur district, Assam. International Journal of Information Science and Education, *Research India Publication*, 4 (1), 1-9

[2] Behera, S. K., Sao, S., & Shili, M. (2016) Attitude of B.Ed. student-teachers towards E-learning, *International Journal of Computer Science Engineering (IJCSE)*, 5 (6), 305-311.

[3] Omar, N. D., Hassan, H., & Atan. (2011). Student engagement in online Learning: Learners attitude towards E-learning, *Procedia Social and Behavioural Sciences*, Elsevier, 67, 464-475.

[4] Hussain, J. A., Al-Qudah, K., & Matari, R. A. (2013). Students attitude in college education at Jordanian Universities towards Mobile phone uses on university education*, International Journal of Innovation Management*, Imperial College Press, 7 (2), 19-28.

[5] Krishna *K*umar, R., & Rajesh, K. M. (2011). Attitude of Teachers' of Higher education towards e-learning, Journal of Education and Practice, *The International Institute for Science, Technology and Education (IISTE*), 2 (4), 48-53.

Manmohan Gupta & Mala Sharma (2018)[6] *"A study on attitude of senior secondary school students towards E-learning in relation to their Gender, Residential, backward and nature of School"*. A total 160 students included in this study and data were collected by self-made questionnaire. In this study the result indicated that no significant difference between the attitude of senior secondary school towards e-learning of gender, residential backward, stream.

Amal Rhema & Jwona Miliszewska (2014)[7] *"Analysis of student attitudes towards e-learning: the case of Engineering student in Libya"*. A total of 348 students were included, in this study the result shows that the experience and perception of technology-supported learning gather student technology for learning, skill, satisfaction and interested to academics, administration.

Samir Takkar & Hiren Joshi (2017)[8] conducted a research entitled "*International journal of advance Engineering and research development*". A total of 56 students were included in this study and the result show that there is a highly positive attitude of diploma Engineering students towards E-learning. It's not affected in gender, locality or social category of students.

Gazmend Xhaferi, Rovena Bahiti & Arta Farizi (2018)[9] "*Investigation of lecturer' attitude towards E-learning According to Demographic Variables*". A Total 49 students were included in this study and the result indicated that did not significantly their personal variables like gender, faculty and age but were showed significant between teaching factor and e-learning experience.

3. The Statement of the Problem:

There is little research conducted in this area. Therefore, a wide knowledge here notices in this area and an intensive research was conducted in this field. So, the problem of the present study was specified and stated *as "Attitude of College & University Students towards E-learning in Kolkata and North 24 Parganas Districts".*

4. Objectives of the Study:

The study was conducted with the following objectives:

I. To find out the present status of attitude towards E-Learning among the under-graduate and post graduate students in Kolkata and North 24 Parganas district.
II. To find out the study difference in attitude towards E-Learning among the under-graduate and post graduate students with regard to their gender, habitat and stream of education.

5. Hypothesis of the Study:

In view of the objective of the study, the following Null- hypotheses were formulated.

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[6] Gupta, M., & Sharma, M (2018). A study on attitude of senior secondary school students towards e-learning in relation to their gender, residential backward and nature, *International Journal of Engineering, Science and Mathematics*, 7 (1), 418-432.

[7] Rhema, A., & Miliszewska, J. (2014). Analysis of student attitudes towards e-learning: the case of Engineering student in Libya, *Issues in Informing Science and Information Technology,* 11, 169-190.

[8] Thakkar, S., & Joshi, H (2017). Students attitude towards e-learning, *International Journal of Advance Engineering and Research Development*, 4 (11), 209-213.

[9] Xhaferi. (2018) et. al. Investigation of Lecturer' Attitudes towards E-Learning According to Demographic Variables, *European Journal of Formal Sciences and Engineering*, 1(1), 11-16.

H_{01}: There is no significant difference in attitude towards E-Learning between male & female under-graduate and post graduate students.
H_{02}: There is no significant difference in attitude towards E-Learning of undergraduate and post graduate students with regards to their stream of education.
H_{03}: There is no significant difference in attitude towards E-Learning between rural areas & urban areas under-graduate and post graduate students.

6. Methodology:

The present study is a cross sectional survey among the college and universities students using attitude scale towards E-Learning in Higher education. The survey was conducted in Kolkata and North 24 Parganas district.

6.1 Population:

All the students at under-graduate and post graduate level of the Kolkata and North 24 Parganas district were considered as population of the study.

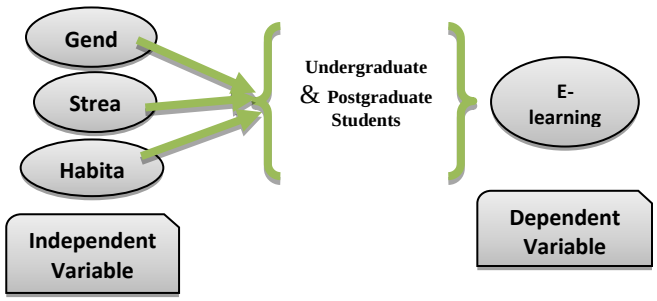
6.2 Sample:

Since a good number of sample representatives a population is required to collect information from the target group students were chosen randomly from RBC college for Women, Rastrauru Surendranath college and Jadavpur universities UG and PG students. The study was conducted on a total participant 157 students at undergraduate and post graduate level. The summary of the sample distribution is shown in Table- 1.

Table - 1 : Distribution of sample according to different variables in percentage.

Variable		Total Number	Percentage
Gender	Male	71	45.2%
	Female	86	54.8%
Stream	Arts	118	75.2%
	Science	39	24.8%
Habitat	Urban	87	55.4%
	Rural	70	44.6%

Figure 1. Schematic diagram of the influencing variable under the study



6.3 Tools:

The self-made questionnaire was developed by Trisha Nayak and modified by Dr. Muktipada Sinha to measure the student attitude toward E-Learning in Higher education. It consists of 25 items having 20 positives and 5 negative items along with the five-point Likert scale of strongly agree, agree, don't know, disagree, strongly disagree carry a weight age of 5, 4, 3, 2, 1 for positive item and just the revise in case of negative item. The questionnaire also includes questions covering demographic characteristics of students such as gender, locality and stream of the study. In this study, face validity and content validity of the scale was ensured through consultation with faculty member from Burdwan University.

7. Analysis & Result:

7.1 Descriptive Statistics:

Assessment of the overall attitude of undergraduate & post graduate students towards E-Learning. Out of the total 157 students at the UG & PG level, 151 students i.e., 96.2 % showed positive attitude score and 6 students i.e. 3.8 % showed negative attitude score of Attitude Scale on E-Learning at Higher Education level. This indicates that maximum undergraduate & post Graduate students were strongly positive attitude towards-learning.

Table 2 : Overall attitude of undergraduate & post graduate students towards E-Learning

Overall Attitude			Total
Attitude Towards E-Learning	Positive Attitude*	Total Number	151
		% of Total	96.2%
	Negative Attitude**	Total Number	6
		% of Total	3.8%
Total		Total Number	157
		% of Total	100%

**Score 76 to 125; **Score 25 to 75*

Figure 2 : Overall attitude towards e-learning

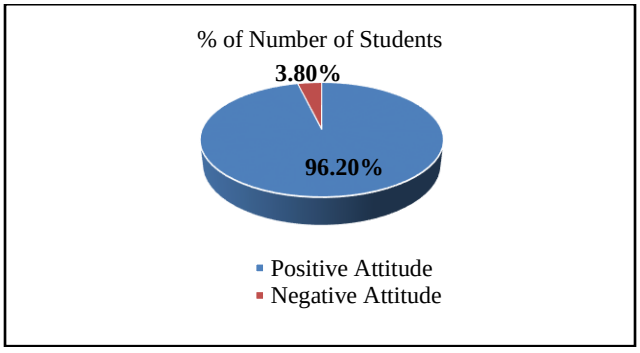


Table- 3 : Gender variable wise comparison of attitude undergraduate & post graduate students towards e-learning

OVERALL ATTITUDE			GENDER		TOTAL
			Male	Female	
Attitude Towards E-Learning	Negative Attitude	Total Number	2	4	6
		% Within Gender	2.8%	4.7%	3.8%
	Positive Attitude	Total Number	69	82	151
		% Within Gender	97.2%	95.3%	96.2%
TOTAL		Total Number	71	86	157
		% Within Gender	100.0%	100.0%	100.0%
		% of Total	45.2%	54.8%	100.0%

From the above table it was found that male students, 2.8% were showed negative attitude towards e-learning, whereas 97.2% male students were showed positive attitude. Another side when look at the female students, 4.7% were showed negative attitude towards e-learning and 95.3% female students were showed positive attitude.

Figure 3 : Gender wise distribution of attitude towards e-learning

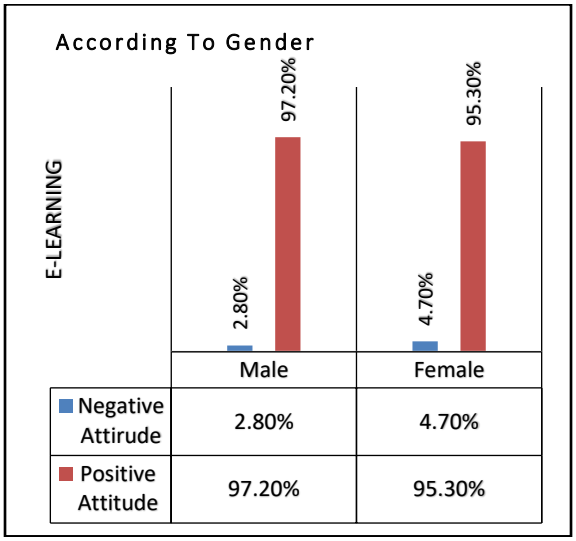


Table 4: Habitat variable wise comparison of attitude undergraduate & post graduate students towards e-learning

OVERALL ATTITUDE		STREAM		TOTAL
		Arts	Science	
Towards E-Attitude	Negative Attitude	Total Number	6	0	6
		% Within Stream	5.1%	0.0%	3.8%
	Positive Attitude	Total Number	112	39	151
		% Within Stream	94.9%	100.0%	96.2%
TOTAL		Total Number	118	39	157
		% Within Gender	100.0%	100.0%	100.0%
		% Of Total	75.2%	24.8%	100.0%

From the above table it was found that arts stream students, 6 students i.e. 5.1% were showed negative attitude towards e-learning, whereas 112 students i.e. 94.9% students were showed positive attitude. Another side science student, no one is science student negative attitude towards e-learning, whereas 39 students i.e. 100% showed positive attitude.

Figure 4 : Stream wise distribution of attitude towards e-learning

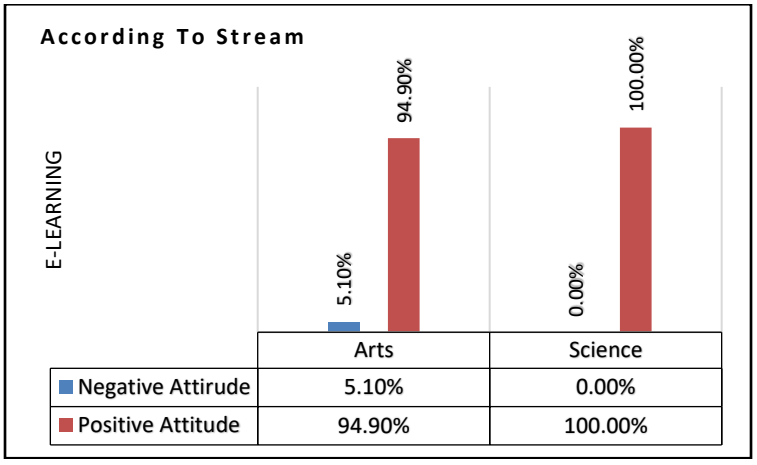


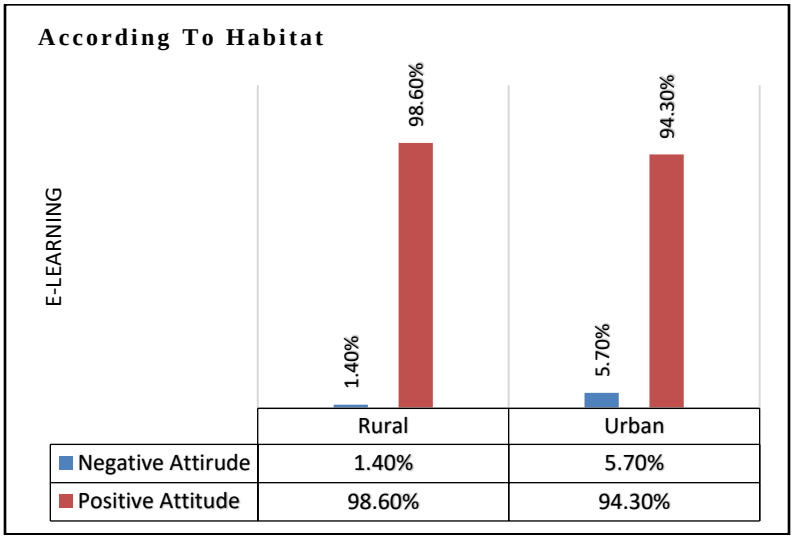
Table 5 : Habitat variable wise comparison of attitude undergraduate & post graduate students towards e-learning

OVERALL ATTITUDE		HABITAT		TOTAL
		Rural	Urban	
Towards E-Attitude	Negative Attitude	Total Number	1	5	6
		% Within Gender	1.4%	5.7%	3.8%
	Positive Attitude	Total Number	69	82	151
		% Within Gender	98.6%	94.3%	96.2%
TOTAL		Total Number	70	87	157
		% Within Gender	100.0%	100.0%	100.0%
		% of total	44.6%	55.4%	100.0%

From the above table it was found that rural areas students, 1 student i.e. 1.4% were showed negative attitude towards e-learning, whereas 69 students i.e. 98.6% students were showed

positive attitude. Another side urban area students, 5 students i.e. 5.7% negative attitude towards e-learning whereas, 82 students i.e. 94.3% showed positive attitude.

Figure 5 : Habitat wise distribution of attitude towards e-learning



8. Analysis using Inferential Statistics:

This part deals with inferential statistics using chi square test of variable. In the current study, the nature of population from which samples have been drown is not known to be normal. The variables are in normal from which is classified in category are represented by frequency counts. So, it is decided to test the collected data by distribution free non-parametric test. As the chi square test is used with discrete data in the form of frequencies, it is decided to used chi square test as a test of independent and to estimate the like hood that some factor than chance accounts for the observed relationship (Koul,2009)[10].

9. Hypothesis Testing:

H_{01}: There is no significant difference in attitude towards E-Learning between male & female under-graduate and post graduate students.

Table 6 : χ^2 test showing the Gender comparison in attitude towards e-learning between male & female under-graduate and post graduate students.

Variable	Category	N	df	χ^2 Value	Level of sig.	Remarks
GENDER	Male	71	1	.356	.551	*NS (p>0.05)
	Female	86				

**NS- Not Significant*

[10] Koul, L. (2009). *Methodology of Educational Research (4th Edition)*, Vikas Publishing House Pvt. Ltd

The result indicates that findings on testing $H_0$1 that is given below-
The analysis in above table revealed that the value of χ^2 = .356 and *p* =.551. The critical values of χ^2 at 0.05 and 0.01 level of significance with 1 *df* = 3.841 and 6.635 respectively. It has been observed that the calculated value of χ^2 is far lower than the critical values of χ^2 at both the levels. So, the null hypothesis can be accepted as $p > 0.05$. Hence, it can be safely concluded that the found difference in attitude towards e-learning between male & female under-graduate & post graduate students is not significant and it can be attributed to any chance factors.

H_{02}: There is no significant difference in attitude towards E-Learning of under graduate and post graduate students with regards to their stream of education.

Table 7 : χ^2 test showing the Stream comparison in attitude towards e-learning between Arts & Science under-graduate and post graduate students.

Variable	Category	N	df	χ^2 Value	Level of sig.	Remarks
STREAM	Arts	118	1	2.062	.151	*NS (p>0.05)
	Science	39				

**NS- Not Significant*

The result indicates that findings on testing $H_0$2 that is given below:
The analysis in above table revealed that the value of χ^2 = 2.062 and *p* =.151. The critical values of χ^2 at 0.05 and 0.01 level of significance with 1 *df* = 3.841 and 6.635 respectively. It has been observed that the calculated value of χ^2 is far lower than the critical values of χ^2 at both the levels. So, the null hypothesis can be accepted as $p > 0.05$. Hence, it can be safely concluded that the found difference in attitude towards e-learning between arts & science under-graduate & post graduate students is not significant and it can be attributed to any chance factors.

$H_0$3: There is no significant difference in attitude towards E-Learning between rural areas & urban areas under-graduate and post graduate students.

Table 8 : χ^2 test showing the Habitat comparison in attitude towards e-learning between Rural & Urban under-graduate and post graduate students.

Variable	Category	N	df	χ^2 Value	Level of sig.	Remarks
HABITAT	Rural	70	1	1.968	.161	*NS (p>0.05)
	Urban	87				

**NS- Not Significant*

The result indicates that findings on testing $H_0$2 that is given below-
The analysis in above table revealed that the value of χ^2 = 1.968 and *p* =.161. The critical values of χ^2 at 0.05 and 0.01 level of significance with 1 *df* = 3.841 and 6.635 respectively. It has been observed that the calculated value of χ^2 is far lower than the critical values of χ^2 at both the levels. So, the null hypothesis can be accepted as $p > 0.05$. Hence, it can be safely concluded that the found difference in attitude towards e-learning between Rural & Urban under-graduate & post graduate students is not significant and it can be attributed to any chance factors.

10. Findings of this Study:

The major findings of this study in respect to analysis in interpretation data are given below-

Overall attitude towards E-Learning: 151 students i.e., 96.20% showed positive attitude score and 6 students i.e. 3.80% were showed negative attitude score of Attitude scale on e-learning at higher education level.

(i) According to Gender Wise E-Learning Attitude:

It has been revealed from the study the negative attitude towards e-learning was more in female students (4.7%) than the male students (2.8%) and the other hand the positive attitude of the students towards e-learning was more in male students (97.2%) than the female students (95.3%), and gender has statistically not significant at both 5% & 1% level of significant.

(ii) According to Stream Wise E-Learning Attitude:

It has been revealed from the study the negative attitude towards e-learning was more in arts stream students (5.1%), no one is negative attitude in science stream students and the other hand the positive attitude of the students towards e-learning was more in science students (100%) than the arts students (94.9%), and stream of education has statistically not significant at the both 5% & 1% level of significant.

(iii) According to Habitat Wise E-Learning Attitude:

It has been revealed from the study the negative attitude towards e-learning was more in urban students (5.7%) than the rural students (1.4%) and the other hand the positive attitude of the students towards e-learning was more in rural students (98.6%) than the urban students (94.3%), and habitat of students has statistically not significant at the both 5% & 1% level of significant.

11. Conclusion & Discussion:

E-learning is simply, and kind of learning or development content deliver a digital way. E-learning help to understand the topic first time around and it's also very useful and flexible option. The emergence of E-learning in education system will help the students in developing their motivation and confidence of the students. But some challenges like lack of awareness and systematic approach towards e-learning and its transforming education system (Nawaz and Qureshi, 2010)[11]. The present study revealed that the attitude towards e-learning have to be very high of college & university students and its expected that the college & university students will be uses e-learning strategy for their education. From this study, we can conclude that the college & university students are ready to take the opportunity of online learning mode.

12. Delimitation's of the Study:

The study was delimited to the following:

i. The data were collected from Kolkata and North 24 parganas district only.
ii. The present study delimited to 157 samples from both rural and urban areas.

[11] Nawaz, A., & Qureshi, AQ. (2010). E-teaching/E-pedagogy: Threats & opportunities for teachers in HEIs, Global Journal of Management & Business Research, 10(9), 23-31.

iii. The study was conducted on under-graduate and post graduate student only.
iv. The variable of the study was delimited like Gender, Habitat and stream of education.

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Behera, S. K., Sao, S., & Shili, M. (2016) Attitude of B.Ed. student-teachers towards E-learning, *International Journal of Computer Science Engineering (IJCSE)*, 5 (6), 305-311.

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