Attitudes towards E-learning of UG Students in relation to their Gender, Locality and Social Category

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ABSTRACT

The present study has been carried out to study the factors and level of UG Students' Attitudes towards E-learning. In order to obtain the necessary data, 142 U.G. students (n=142) was selected by the purposive sampling method. In the present study, survey method has been employed and a self-made attitude scale consists of 40 items as a tool to measure the Attitude of UG Students has been used. For analysis of the data, both descriptive and inferential statistics has been applied. The study revealed that gender and social category of UG students were not the factors in Attitudes towards E-learning of UG Students; locality was the factor in Attitudes towards E-learning of UG Students.

Keywords: Gender, Locality, Social Category, Attitudes towards E-leaning.

1.0: INTRODUCTION

Technology has become a major part of our social, political, business, marketing, banking, health, administrative, educational as well as professional life and online learning is the newest and most popular form of distance education which is the result of such technology. E-learning is the delivery of instruction, teaching and learning with the help of a combination of electronic media. It is often referred to as "e-learning" among other terms and just one type of "distance learning" - the umbrella term for any learning that takes place across distance based on electronic resources, where teaching is not limited within the four walls of the classroom or institution. The purpose of e-Learning is to empower a student to obtain a degree, certificate without physically attending the School or University. Considering the importance of e-resources, the Government of India has introduced different radio and television channels for providing education. The success of the digital and e-learning depends on learners' attitudes. Again many factors are responsible in attitudes towards e-learning. Several studies have been carried out with the purposes to investigate the effect of learners' gender, localities, demographic background and educational level on Attitudes towards online education. Some studies found a link between individuals' Attitudes towards online education and with their gender. The gender has been found as a factor in realizing the variation in attitudes towards e-learning (Liaw & Huang, 2011; Dhiman et al. 2014; Ong and Lai, 2006; Richardson and Swan, 2003). Some other studies showed Attitudes towards online education as independent concerning Gender (Cuadrado-García et al., 2010; Hung et al., 2010; Suri and Sharma, 2013; Gupta and Sharma, 2018, Thakkar Samir & Joshi Hiren, 2017, Simpson, J.M., 2012; Neither Hong, 2002; Lim, 2001). Attitudes towards online education found as independent concerning Academic Stream (Neelam Dhamija, 2016; Kar D. Saha B. & Mondal B., 2014). Few studies reported significant difference among students with respect to rural and urban residence; and Attitudes towards online education found as dependent concerning Locality (Neelam Dhamija, 2016; Kar D. Saha B. & Mondal B., 2014). Attitudes towards online education found as independent concerning Locality (Thakkar Samir & Joshi Hiren, 2017). Online learning has been considered a "Useful tool for learning, cost-effectiveness, flexibility, and the possibility of providing world-class education" (Jeffcoat Bartley and Golek, 2004; Gratton-Lavoie and Stanley, 2009; De La Varre et al., 2010). The observation of B. J. Young, (2000) is that the "Digital Gender Gap" begins in early childhood, as parents and teachers act

in accordance with the perception that computers are a male domain. Blakemore and Centers, (2005) reported from earliest infancy, boys' activities and toys tend to relate to technology and action, whereas girls' activities and toys relate to nurturance and beauty. According to the study report of Colley and Comber, (2003) and Mucherah (2003), during the period of adolescence males show higher frequency of computer use and greater self-confidence in dealing with computers. Kayany and Yelsma, (2000) and Li and Kirkup, (2007) found the greater digital skills of male students. Mumtaz (2001); Volman and van Eck, (2001); and Colley and Comber, (2003) reported that male students are more attracted to computers than girls. After studying the related literatures and keeping in view the mode of instructional process during pandemic situation, researcher had selected the present problem to investigate students' attitudes towards online education. Hence the present study might be stated as "*Attitudes towards E-learning of UG Students in relation to their Gender, Locality and Social Category*".

1.1: OBJECTIVES OF THE STUDY:

a) To study the Attitudes towards E-learning of UG Students
b) To study the Gender as a factor in Attitudes towards E-learning of UG Students
c) To study Locality as a factor in Attitudes towards E-learning of UG Students
d) To study Social Category as a factor in Attitudes towards E-learning of UG Students
e) To adopt the Scale of Attitudes towards E-learning
f) To recommend the further studies

1.2: SIGNIFICANCE OF THE STUDY

The present study would be highly significant for suggesting the measures to enhance the online education as well as online teaching learning process of College going students. The another significance of the study was to identify students' behavior and their attitudes in the new context of E-learning. The teachers, parents, policy makers, curriculum framers and other academic functionaries will be benefited from this study in imparting education through online mode.

2.0: HYPOTHESIS:

$H_0 1$: There exists no significant difference between Male and Female UG Students in Attitudes towards E-learning

$H_0 2$: There exists no significant difference between Rural and Urban UG Students in Attitudes towards E-learning

$H_0 3$: There exists no significant difference between General and Socially Backward UG Students in Attitudes towards E-learning

3.0: METHODOLOGY OF THE STUDY:
3.1: Design of The Study

The methodology of the study comprises research method, population, sample, tool, procedure of data collection and statistical analysis which are as follows-

3.2: Method Employed: So far as the research methodology is concerned, the study comes under the scope of "Descriptive Frame Work". This is a status study of descriptive in nature made on the basis of data gathered through field investigation. Hence, the method employed for the study may be rightly said to be "Descriptive Survey" under "Causal Comparative" one.

3.3: Population and Sample of The Study:

i. Population: Students studied at Under Graduate level in various higher educational institutions affiliated to various Universities in West Bengal is considered as the population for the study.

ii. Sample Design followed: Purposive sampling method has been followed to draw the sample from the target population. U.G. students in various academic streams of some selected institutions affiliated to University of Kalyani and West Bengal State University were considered as respondents. The size of the sample for the study was 142.

3.4: Variables studied: Three variables studied in proposed study were:

- **Dependent Variable**: One Dependent variable: Attitudes Towards E-learning.
- **Independent Variable:** Three Independent Variables: Gender (Male and Females), Localities (Rural and Urban) and Social Category (Socially Backward and General)

3.5: Tools Used:

In the present study, the researcher has reviewed a good number of tools both developed in India and Abroad that could be used for measuring Attitudes of UG students towards E-learning. Originally, the researcher developed and standardized the Scale for measuring Attitudes of UG students towards E-learning which is Known as "Attitudes Towards E-learning Scale" (AES) and found it suitable for measuring the Attitudes Towards E-learning of UG Students for the present study.

3.6: Statistical Techniques Used:

After scoring the data, the investigator has used the following statistical techniques for analysis and interpretation of the data:

1. Descriptive Statistics: Mean, Median, Mode, SD, skewness and kurtosis
2. Inferential Statistics: 't' test

4.0: ANALYSIS AND INTERPRETATION OF DATA

4.1: Descriptive Statistics:

Table-1: Showing the descriptive statistics of the scores of Attitudes towards E-learning

Strata→ Statistics ↓	Male	Female	Rural	Urban	Socially backward Category	General Category	All Categories
Mean	40.959	40.224	37.018	43.348	39.883	40.890	40.512
Median	40.00	39.00	37.50	42	40	39	40.00
Mode	40.00	39.00	40.00	40	40	39	40.00
SD	8.972	9.673	8.962	8.780	7.826	10.108	9.374
Count (N)	49	76	56	69	43	82	125
Standard Error	1.28	1.10	1.198	1.057	1.193	1.116	0.838
Sample Variance	80.499	93.563	80.309	77.083	61.248	102.173	87.88
Kurtosis	-.210	-0.777	0.125	-1.085	-0.509	-0.792	-0.608
Skewness	0.315	0.243	0.482	0.219	-0.126	0.289	0.255
Range	38	38	38	32	32	38	38
Minimum	22	22	22	28	22	22	22
Maximum	60	60	60	60	54	60	60
Sum	2007	3057	2073	2991	1715	3353	5064
Normality	0.162	0.038	0.142	0.012	0.234	0.008	0.013
Percentiles P_{25}	32	35	34	36	35	34	34.00
P_{50}	40	39	38	42	40	39	40.00
P_{75}	49	45	45	47	46	45	47.00

4.2: Assuming the Normality of the Distribution for the Scores of Attitudes towards E-learning :

The assumption of independent observation, scale of measurement and homogeneity of variance were established. For the assumptions of Normal Probability, the Descriptive Statistics were calculated. The results have been shown in Table-5. In the distribution the Mean, Median and Mode were coincided (Mean =Median=Mode). From the above results, it might be concluded that sampling distribution for the Scores of Attitudes towards E-learning of secondary students followed a tendency of Normal Probability. After fulfilling the criteria laid down for parametric statistics, the researcher has used "t" test design for testing the hypotheses.
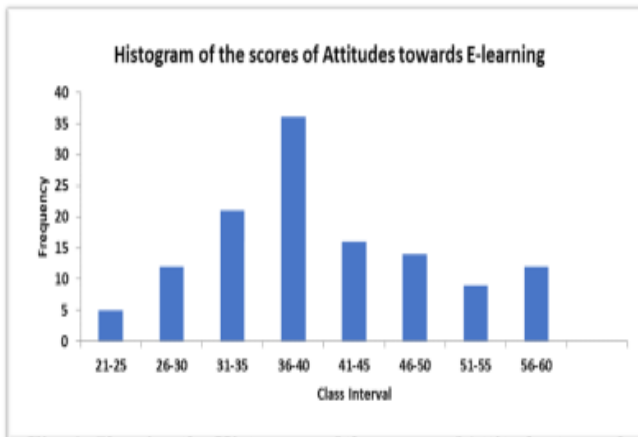
4.3: GRAPHICAL PRESENTATION OF DATA:

Fig.-1: Showing the Histogram of the scores of Attitudes towards E-learning of UG Students (n=142)
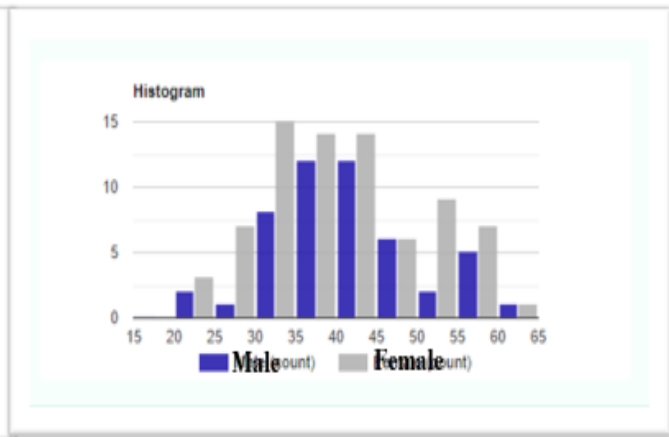

Fig.-2: Showing the Histogram of the scores of Attitudes towards E-learning of UG Male and Female Students.
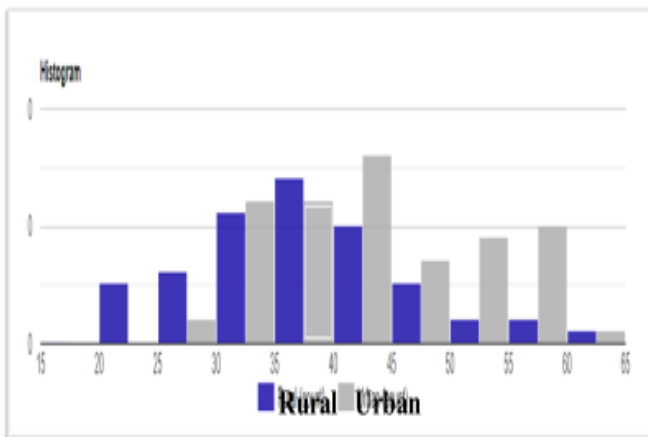

Fig.-3: Showing the Histogram of the scores of Attitudes towards E-learning of UG Rural and Urban Students
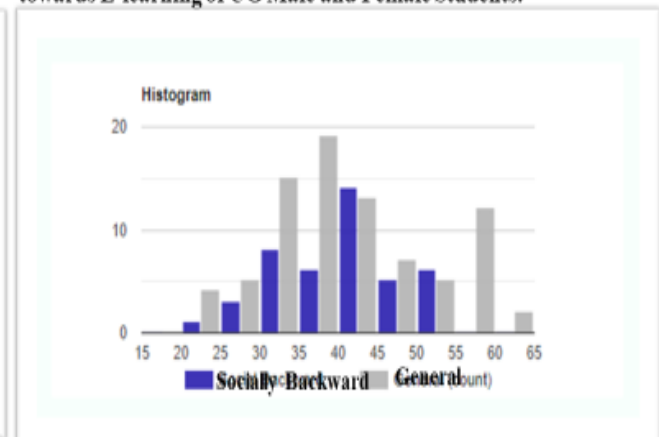

Fig.-4: Showing the Histogram of the scores of Attitudes towards E-learning of UG Socially Backward and General Students

4.4: Inferential Statistics:

Table- 2: ANOVA Summary (One Way ANOVA test, using F distribution df-5,369; right tailed)

Source of Variation	Sum of Squares (SS)	Mean Square (MS)	df	F	P
Between Groups	1283.3909	256.6753	5		
Within Groups	31389.0843	85.0628	369	3.0174	0.0110
Total	32672.4753	87.3571	374		

After the observation of the ANOVA Summary table, it has been revealed that since p-value<α, H_0 is rejected. Some of the groups' Means consider to be not equal. In other words, the difference between the Means of some groups is big enough to be statistically significant. p-value equals 0.0110, [p(x ≤ F) = 0.989]. It means that the chance of type1 error (rejecting a correct H_0) is small: 0.0110 (1.1%). The smaller the p-

value the stronger it supports H_1. The test statistic F equals 3.0174, which is not in the 95% region of acceptance: $[-\infty:2.2384]$. The observed effect size f is medium (0.2). That indicates that the magnitude of the difference between the averages is medium. The η^2 equals 0.039. It means that the group explains 3.9% of the variance from the average (similar to R^2 in the linear regression). The means of the pairs are significantly different.

To find out the actual difference between groups, the researcher has followed up the techniques of Tukey HSD Post-hoc Test and 't' -test.

4.5: Tukey HSD Post-hoc Test:

1. Male vs Female: Diff=-0.7350, 95% CI =-5.5744 to 4.1044, p=0.9980
2. Male vs Rural: Diff=-3.9410, 95% CI=-9.1081 to 1.2261, p=0.2475
3. Male vs Urban: Diff=2.3890, 95% CI=-2.5457 to 7.3237, p=0.7352
4. Male vs Backward: Diff=-1.0760, 95% CI=-6.5956 to 4.4436, p=0.9935
5. Male vs General : Diff=-0.0690, 95% CI=-4.8385 to 4.7005, p=1.0000
6. Female vs Rural: Diff=-3.2060, 95% CI=-7.8579 to 1.4459, p=0.3594
7. Female vs Urban: Diff=3.1240, 95% CI=-1.2683 to 7.5163, p=0.3234
8. Female vs Backward: Diff=-0.3410, 95% CI=-5.3815 to 4.6995, p=0.9999
9. Female vs General : Diff=0.6660, 95% CI=-3.5399 to 4.8719, p=0.9976
10. Rural vs Urban: Diff=6.3300, 95% CI=1.5790 to 11.0810, p=0.0022
11. Rural vs Backward: Diff=2.8650, 95% CI=-2.4909 to 8.2209, p=0.6438
12. Rural vs General : Diff=3.8720, 95% CI=-0.7071 to 8.4511, p=0.1514
13. Urban vs Backward: Diff=-3.4650, 95% CI=-8.5971 to 1.6671, p=0.3833
14. Urban vs General : Diff=-2.4580, 95% CI=-6.7732 to 1.8572, p=0.5783
15. Backward vs General : Diff=1.0070, 95% CI=-3.9665 to 5.9805,p=0.9923

After fulfilling the criteria laid down for parametric statistics, the researcher has used "t" test design for testing the null-hypotheses.

4.6:Analysis of significance of Differences in Mean Scores (UG Male and Female Students) for the Scores of Attitudes towards E-learning pertaining to Null-Hypothesis No-1 (Ho₁)

For the purpose of testing the hypotheses formulated for the present study, the researcher had adopted 't'-test to determine whether there was any significant difference between UG Male and Female Students in of Attitudes towards E-learning scores.

Table- 3: Showing 't'-value of the Scores of Attitudes towards E-learning of UG Male and Female Students.

Variable	Strata	Count (N)	Mean	SD	SE$_M$	SE$_D$	t- value	df
Attitudes towards E-learning	Males	49	40.959	8.972	1.282	1.723	0.427**	123
	Females	76	40.224	9.673	1.109			

**Insignificant at 0.05 level.

From the table-, it was evident that the difference between the means of UG Male and Female Students was not statistically significant in Attitudes towards E-learning. The obtained "t" value was found to be insignificant at 0.05 level for Attitudes towards E-learning. Hence the Null Hypothesis (i.e.Ho₁) was accepted and it has been established that, "no significant difference existed between UG Male and Female Students in their Attitudes towards E-learning"

Table-4: Showing the 't' value of Attitudes towards E-learning of UG Rural and Urban Students

Variable	Strata	Count (N)	Mean	SD	SE_M	SE_D	t- value	df
Attitudes towards E-learning	Rural	56	37.018	8.962	1.1976	1.594	3.971*	123
	Urban	69	43.348	8.780	1.05699			

*significant at 0.05 level

The Table- revealed that, the UG Rural and Urban students were significantly different in Attitudes towards E-learning at 0.05 level. Hence, the Null Hypothesis i.e. Ho_2 was not retained and it could also be stated that, "there was a significant difference between the UG Rural and Urban students with respect to their Attitudes towards E-learning."

Table-5: Showing the 't' value of Attitudes towards E-learning of UG General and Socially Backward Students

Variable	Strata	Count (N)	Mean	SD	SE_M	SE_D	t- value	df
Attitudes towards E-learning	**General**	82	40.890	10.108	1.1162	1.768	0.569**	123
	Socially Backward	43	39.883	7.826	1.19345			

**Insignificant at 0.05 level.

From the table-, it was evident that the difference between the means of UG General and Socially Backward Students was not statistically significant in Attitudes towards E-learning. The obtained "t" value was found to be insignificant at 0.05 level for Attitudes towards E-learning. Hence the Null Hypothesis (i.e. Ho_1) was accepted and it has been established that, "no significant difference existed between UG General and Socially Backward Students in their Attitudes towards E-learning"

5.0: FINDINGS OF THE STUDY : The of above analysis of data revealed the following major findings. were found as followings:

1. **Gender is not a factor in Attitudes towards Online Education:** There exists no significant difference between male and female UG students in their Attitudes towards online education. Gender is not a factor in Attitudes towards online education of UG students. However, the male UG students hold more positive attitudes towards online education than their female counterparts.

2. **Localities is a factor in Attitudes towards Online Education:** Localities i.e. Location or Place of residence is the factor in Attitudes towards online education of UG students. Urban UG students showed more positive attitudes towards online education than their rural counterparts.

3. **Social Category is not a factor in Attitudes towards Online Education:** Social Category is found not a factor in Attitudes towards E-learning of UG Students. But as per the study of means of two groups, it has been observed that, the General UG students had slightly better scores in Attitudes towards E-learning than Social Backward Students.

6.0: RECOMMENDATIONS FOR FURTHER RESEARCH: In the light of present study the following suggestions were recommended for further research: -

1. The study needs to be made on larger cross sections of populations like various degree levels and diploma students to have a broad generalization.

2. Institutional resources and facilities, Internet knowledge and Computer Literacy, Parental Involvement, Locus of Control, Motivation and there are other variables which would be studied as factors in Students' Attitudes towards online education.

3. The investigation of the same type may be conducted at different regions of the country to make a comparative study.

4. The study needs to be made on a larger sample of educational organization for various strata such us:- Primary, Middle schools, Colleges and other educational institutions, so as to get a more reliable and comparable results.

7.0: IMPLICATIONS AND COCLUSION OF THE STUDY:

The findings and discussions of present study proved that, both the localities and Academic Streams are contributing factors in Attitudes towards online education of UG students. The students belonging to urban area showed very high having more informed on environment and on the contrary, the group of individuals belonging to rural region was it. So the present study was of vital concern for teachers in particular and curriculum framers along with educational policy makers in planning curriculum, text books, instructional strategies as well as materials for online delivery. The worth of any research work could be determined by its usefulness. Hence, the researcher pointed out the various aspects of implications of the present study. The findings of the present study on would be utilized in various ways:-

a) This study would be helpful for the students to meet the growing demand of online education in the field of Indian Higher education.

b) Internet-based online courses are growing day-by-day. This study might be a reformation to change the traditional and habitual mode of education to a new technological mode of education.

c) This study might be a pathway to develop practical skills in the field of new online virtual educational environment.

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