

Effectiveness Of An Adoptive E-Learning Resources; Intervention On School Going Students' Learning In Comparison To Traditional Instruction

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Abstract

The study highlights the effect of e-learning on student's academic learning performance at school level. The objective of the study was to find out the effects of e-learning on students interest and learning through e-learning resources. Responses were taken from the 150 high school students aged 12 to 15 years old from Varanasi and Ayodhya City Uttar Pradesh, India. e-learning is the employment of technology to aid and enhance learning. it can be as simple as High school students attaching a video documentary in class or as complex as an entire course provided online. The classes were divided in two subgroups with group one receiving the classes through traditional classroom method and with group two receiving the class using online method and traditional classroom method (Blended method). It is unquestionable that online learning, additionally known as distance learning, is here to stay. This study involves intact high school classes utilizing a Quasi-experimental design. The lesson content was identical except in the method of delivery of lessons. The first group was taught the classes in a traditional lecture-based way. The second group received exactly the same amount and structure of learning using blended method of learning. The sample was comprised of 150 students.

Keywords: Online learning, Distance learning, Blended learning, Internet, Traditional learning, Effectiveness.

Introduction

E-learning began decades ago with the introduction of television and over-head projectors in classrooms and has advanced to include interactive computer programmes, 3D simulations, video and telephone conference and real-time online discussion groups comprised of students from all over the world. with technological advances, e-learning has limitless possibilities. Electronic learning is gaining popularity the world over. The world wide web has left no stone unturned in making e-learning reach out to the masses. lot enabled learning is paving ways to extend traditional

earning methods reach out to students and make learning affordable and boundary less.

Online learning classes consist of classes that are delivered fully via the internet, or a amalgamation of internet delivered classes and periodic meetings in a traditional classroom as blended learning. Students are spending plenty of time using several gadgets surfing various web pages, websites, learning apps, Whats app, Facebook, Google search engine which help students to learn beyond the traditional classroom. An in progress and necessary discussion within the education community queries whether or not online learning is as effective as traditional classroom learning.

With the amount of time, various resources, use of internet and technology usage dedicated to online learning. The extent of learning students reach is an important factor in determine online learning effectiveness. Recent technological developments have produced distance learning easier (McBrien et al. 2009). Most of the terms used like (online learning, open learning, web-based learning, computer-mediated learning, blended learning, and m-learning).

The synchronous learning platform is structured because students attend live lectures, live streaming on various platforms and real-time communication among teachers and students by the use of different e-learning resources. The benefits of e-learning is that it has possibility of instant feedback, whereas asynchronous learning platforms are not properly structured. Learning content is not presented in live classes; it is presented at different learning systems and mediums. Immediate feedback and instant response are not possible under such a platform (Littlefield 2018). Synchronous learning offers many opportunities for social communication (McBrien et al. 2009).

The physical “brick and mortar” classroom is beginning to lose its monopoly as the place of learning. The Internet and different e-resources has made online learning possible and convenient to the students to learn not only in the traditional classroom setup, and plenty of researchers and educators are interested in online learning now a days to enhance and improve student learning outcomes while combating the reduction in resources, particularly in higher education. It is imperative that researchers and educators consider the effectiveness of online learning compared to traditional face-to-face format layout and the elements that impact the effectiveness of on-line courses. Transitioning classes into electronic gadgets, The thought behind using of digital technologies to teach students from homes was introduced to continue with education and overcome mental stress and anxiety. Use of information and communication technology (ICT) for learning

process is called E-learning. E-learning is a term which is used to describe the online education and web based training etc. (Oye, Salleh, and lahad, 2010).

E-learning is a process of using information and communication technology (ICT) to enhance and facilitate teaching and learning. Actual use of e-learning has significant effect in student’s academic performance. E-learning use is associated with increased student’s academic performance. In these days technology is a tool used to remove geographical barriers and facilitates everybody to learn anytime and anywhere in the world without the presence of the lecturer (Saleem & Rasheed 2014).

With the passage of time the use of internet is increasing rapidly that’s why the training and learning institutions have devoted great efforts and large sum of money to develop e-learning progress for use because it saves our time and increase our skills. (Chiu, Sun, et al., 2007).

Methodology

This study involved 10th grade school students from urban and semi-urban schools to examine the Student Awareness and Engagement Towards E-Learning Using E-Learning Resources and Its Impact On the Academic Performance. A set of questionnaire was prepared to gather some demographic information. Questions were divided into sections which consists demographic profile, technology usages, availability of resources, awareness among students, engagement of the student and role of e-learning resources in the e-learning studies. The design of the program account unit covering all 12 weeks of the 2017-2018 academic sessions. The t-test, one way ANNOVA, correlation coefficient was used to determine the result. Data was logged into the computer and analysed using the statistical package for social sciences (SPSS) version 20.

Result and Discussion

Table 1: Study hours its impact on academic performance

Table 1.a: Coefficient of Correlation

	Academic Performance	Hours spent online	Gender	Location setting	Subject

Academic Performance	Pearson Correlation	1				
	Sig. (2-tailed)					
Hours spent online	Pearson Correlation	0.589	1			
	Sig. (2-tailed)	0.3079				
Gender	Pearson Correlation	0.562	.310	1		
	Sig. (2-tailed)	0.1855	0.0183			
Location setting	Pearson Correlation	0.582	0.1836	0.1208	1	
	Sig. (2-tailed)	0.0023	0.1859	0.4200		
Subject	Pearson Correlation	0.568	0.0072	0.2345	0.1038	1
	Sig. (2-tailed)	0.0432	0.9491	0.0936	0.4682	

To compute the correlation between the study variables and their findings in the study the Karl Pearson's coefficient of correlation (r) as used. The findings as shown in Table 8 revealed that there was a positive correlation between academic performance and hours spent online as shown by a correlation figure of 0.589, even though the correlation is positive, the connection between academic performance and hours spent online isn't significant. It was also clear that there was a positive correlation between academic performance and gender with a correlation figure of 0.562, even though the correlation is positive, the relationship between academic performance and gender is not significant. It was also revealed that there was a positive correlation between academic performance and location of setting with a correlation figure of 0.582, likewise even

though the correlation is positive, the connection between academic performance and site setting isn't significant. Finally, a positive correlation between academic performance and subject with a correlation value of 0.568 was realized. Even though the correlation is positive, the connection between academic performance and subject isn't significant. This clearly depicts that there was a moderate correlation between academic performance and hours spent online, gender, location setting and subject. The lack of significance in the individual relationships could be due to interactive effects with the other variables. Rodgers and Ghosh (2001) identified that 'effort' (or engagement) levels were highly significant in determining student examination performance. (Muhammad, A., Saleem & Iqra, R)

Table:2.1 intergroup comparison of impact of e-learning (blended learning) on the academic performance of the student

TEST ONE

T-test

Table:2.1. (a) Description of first test results in relation to mean and Standard Deviation

	Group	N	Mean	Std. Deviation	Std. Error Mean
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Marks for first test in urban School	Experimental Group	56	15.2679	1.77345	0.23699
	Control Group	94	14.1259	1.78028	0.15260
Marks for first test in Semi-urban School	Experimental Group	55	15.1567	1.66334	0.23589
	Control Group	95	14.1368	1.78029	0.15261

Table: 2.1(b) Independent Sample Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Marks for first test in urban School	Equal variance assumed	0.006	0.940	3.869	148	0.000	1.14193	0.29519
	Equal variance not assumed			3.972	109.115	0.000	1.14193	0.28746
Marks for first test in semi-Urban School	Equal variance assumed	0.006	0.941	3.879	148	0.000	1.14184	0.29519
	Equal variance not assumed			3.983	108.124	0.000	1.14186	0.28856

The result shows that on the average, the reported variability of the, marks in the first test was significantly higher for the experimental Group from urban (M=15.2679, SD= 1.77345) and experimental Group from semi-urban (M=15.1567, SD= 1.66334) Control Group form urban (M=14.1259, SD=1.78028) and Control Group form semi-urban (M=14.1368, SD=1.78029), $t(150) = 3.869$,

$p < 0.001$, $r = 0.27$ in urban Schools and from semi-urban Schools $t(150) = 3.879$, $p < 0.001$, $r = 0.26$. the estimated size of the effect indicates that the difference in performance in the test created by group was small and thus representing a substantial effect.

TEST TWO

t-test

Table: 2.2(a) Description of Second test results in relation to mean and standard deviation

	Group	N	Mean	Std. Deviation	Std. Error Mean
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Marks for second test in urban School	Experimental Group	56	16.0536	1.34055	0.17914
	Control Group	94	14.2519	1.35337	0.11648
Marks for second test in Semi-urban School	Experimental Group	55	16.0525	1.34043	0.17902
	Control Group	95	14.2508	1.35325	0.11636

Table: 2.2(b) Independent sample test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Marks for second test in urban School	Equal variance assumed	0.368	0.0545	8.399	148	0.000	1.80172	0.21453
	Equal variance not assumed			8.432	102.728	0.000	1.80172	0.21368
Marks for second test in semi-urban School	Equal variance assumed	0.355	0.533	8.289	148	0.000	1.80172	0.21453
	Equal variance not assumed			8.332	103.728	0.000	1.81162	0.22456

The results show that on the average, the reported variability of the marks in the second test was significantly higher for the Experimental Group from urban (M=16.0536, SD=1.34055) and experimental Group from semi-urban (M=16.0525, SD=1.34043) than for the Control Group from urban (M=14.2519, SD=1.35337) and Control Group from semi-urban (M=14.2508, SD=1.35325), From urban

student $t(150) = 8.399$, $p < 0.001$, $r = 0.5214$ and from semi-urban Schools $t(150) = 8.289$, $p < 0.001$, $r = 0.5213$. the estimated size of the effect indicates that the difference on the performance in the second test created by group was significant and thus represents a substantial effect.

4.6.3 Test one and test two T-TEST

Table: 2.3(a) Description of mean marks in relation to Group for test One and Two

	Group	N	Mean	Std. Deviation	Std. Error Mean
Mean Marks for the two tests in urban	Experimental Group	56	15.6607	1.20268	0.16071
	Control Group	94	14.1889	1.50480	0.12951

School					
Mean Marks for the two tests in Semi-urban School	Experimental Group	55	15.5406	1.20156	0.16051
	Control Group	95	14.1788	1.50350	0.12840

Table: 2.3(b) Independent sample test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Mean Marks for the two tests in urban School	Equal variance assumed	3.412	0.066	6.505	148	0.000	1.47183	0.22626
	Equal variance not assumed			7.131	122.551	0.000	1.47183	0.20640
Mean Marks for the two tests in semi-urban School	Equal variance assumed	3.211	0.064	6.303	148	0.000	1.44053	0.22423
	Equal variance not assumed			7.101	122.561	0.000	1.47162	0.20530

The result shows that on the average, the reported variability of the Mean between the first test and the second test was significantly higher for the Experimental Group from urban ($M=15.6607$, $SD=1.20268$) and experimental Group from semi-urban ($M=15.5406$, $SD=1.20156$) than for the Central Group from urban ($M=14.1889$, $SD=1.50480$) and Control Group from semi-urban ($M=14.1788$, $SD=1.50350$). From urban student $t(150)=6.505$, $p<0.001$, $r=0.4280$ and from semi-urban Schools $t(150)=6.303$, $p<0.001$, $r=0.4270$. the estimated size of the effect indicates that the difference in performance between the two groups was significant, and

therefore represents a substantial effect. The magnitude of the effect showed that the difference in performance between the two groups of students was significant. This finding offers evidence that e-learning has a significant influence on the performance of student.

Result of the similar study conducted by **Lumadi, M., (20130)** highlighted that students from experimental group were showing significant improvements in the test results as compare to the control group. E-learning (Blended learning) has a significant influence on the academic performance of the student.

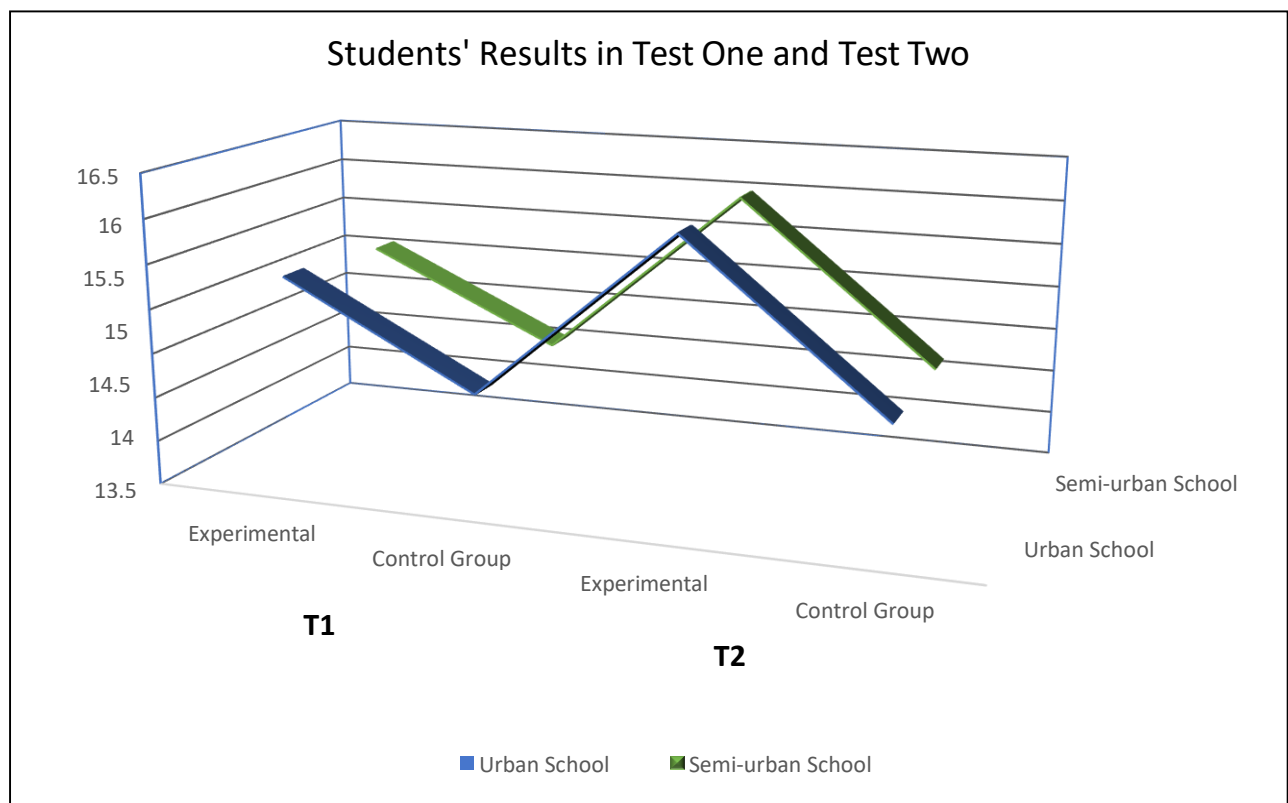


Fig. 2.3 Students' Results in Test One and Test Two

Conclusion

E-learning is the need of the hour, helps effective time management and motivates students to do their work independently. E-learning provides access to unlimited resources anytime anywhere while making it of fordable too.

E-learning is utilizing electronic technologies to get access educational curriculum. Presently, e-learning is inspiring the world societies at large. In this perturbed era, it is hard to get education in formal mode due to social economic or interconnected problems because there is no limitation of time and space. So, e-learning makes learning easier to learn. The evolution of technology is drastically changing the social norms. Educated and uneducated masses use technology frequently for enjoyment and benefits. It is observed that different social media like Facebook, what's app and Twitter plays an important role in education. These applications introduce them a variety of new terms of education, one of them

is e-learning. E-learning resources helps students to improve academic performance as well as increase their knowledge beyond the set classroom tradition curriculum.

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