



Perception of University Students Towards E-Learning Technologies with regard to Gender, Discipline of Study and Level of Study

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ABSTRACT

The study was conducted on perception of university students towards e-learning technologies with regards to gender, discipline of study and level of study. . The selected sample of the study consisted of 197 university students including 82 female and 105 male, students of University. The level of study of these students was bachelor and master and the disciplines of study of the selected sample were humanities, natural sciences and sciences. Convenient sampling technique was used to collect the data. For the purpose of drawing the result the investigator used statistical technique like percentage and frequency. The finding reveals that there was a not significant difference in perception of university students towards E-learning technologies regarding gender, level of study and discipline of study. For the future researcher the investigator to suggest to study perception of e-learning technologies with other variables like e-learning and internet anxiety, awareness regarding misuses of internet etc.

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INTRODUCTION

Electronic learning or in short term (e-learning)is a modern educational method that is used to provide all the resources and educational services at any time and in any place using technology and



communications (such as electronic tools) for easy and inexpensive access. However, e-learning uses Wide-Area Technology (WAN) technology, but it is not limited in any way. In the field of e-learning, in addition to Web-based education, non-formal education, distance education, self-learning, and computer-based education can also be addressed. E-learning is education and learning by electronic means typically, the content of the curriculum is presented using audio, picture and text transmissions, which can be achieved through the use of mutual communication between learners and professors. Using more advanced equipment and facilities can provide information and knowledge of better quality and higher.

Wikipedia defines e-learning as: The term is usually used for web-based distance learning without face-to-face interaction, but it's not a straightforward definition. (Wikipedia site) In other words, e-learning is intended as any type of preparing encouraged through the Internet and its advances and incorporates utilization of the (www) or World Wide Web to help guidance and course content transmission.(Massrom,2007).With the spread of information technology and the dispersion of communication tools into the human community, educational tools and techniques have also improved. The development of these tools and approaches is in a way that each person can learn at any time and place with his facilities and within the time he specifies. As to the scope of e-learning and the environments in which this method of education is presented, as well as the tools and methods for presenting it, it should be said that e-learning has a wide range and depending on the type. (Clark & Mayer, 2003)

REVIEW OF THE LITERATURE

Raymond Selurm Mamatah (2016) in a study which was conducted on "Students' Perceptions of E-Learning", Purposed to find students' perceptions of e-learning, as an option in contrast to traditional or the common type of education. This study was done on 80 students of Ghana Polytechnic University. The study results show that a large proportion of students think that e-learning should be maintained because it is a creative thought and, also, it was found that they prefer the hybrid approach, a mixture of online and classroom learning and, it is a desirable way of education for the respondents.

Tagoe (2012) examined the effect of (TAM) on students' perceptions of e-learning in Ghana University. The consequences of the study indicated that students who entered school with great PC abilities had the option to take an interest in e-learning without trouble. The outcomes likewise demonstrated that the male pupils were extra interested to use the Internet than females. Eventually, it



was found that students are interested in participating in advanced web-based e-learning, and thus, it is assumed that in the future, the combined course modes are more attractive than online web-based courses.

Naydo (2006) explored e-learning features, trends, scope, and opportunities and capabilities of e-learning. And it was clear as a result of the exploration that the role of e-learning in education was very important with the development of electronic support methods. The study also found that while there is a strong interest in e-learning, some limitations are also there. One of the obstacles is the deficiency of contact with technology structure because, without it, e-learning can't be established. As a result, this study proposes an on-going study to systematize and understand e-learning.

Number of researches has been carried out on related topic in different parts of the world. On review of the literature it was found out that different researchers have been conducted on the similar topic on e-learning perception by Elochukwu,2010; Nursi Haida, Zezlina, Nozlina and Mahd Nourafzal 2012; Hegeran et al,201; Docebo,2014; Clement & Doustal,2014;Tars et al,2015; PoojaTamta and M. A. Ansari 2016; Al Ghamdi and Samerji 2016.

METHODOLOGY

In order to test the hypothesis and theoretical model of the research, researcher used descriptive. In the present study, samples of 187 university students including 82 female and 105 male were taken in a random sampling technique. The major variable of the study was on perception of university students towards e-learning technologies. The perception of the E-learning scale was used in the study to measure the perceptions of university graduate and postgraduate students toward E-learning technologies

Raymond Selorm Mamattah (2016) constructed the improvised multidimensional scale with four important and related dimensions: perceived usefulness (PU), perceived ease of use (PEU), intention to use (IU) and attitude towards (AT) e-learning in the future. these four dimensions interact with each other and their function depends upon each other in conceiving perceptions towards e-learning technologies.

OBJECTIVE

To study the perception of university students towards e-learning technologies with regard to gender, level of study and discipline of study.

**Hypotheses of the study**

H₀. There is no statistically significant difference among the levels of perception of the student toward e-learning technologies concerning gender, level of study and discipline of study.

ANALYSIS**1- Study the Perception of university towards e-learning technologies concerning gender**

Gender wise data for the sample has been presented in the following table, to find the significant difference between them t-test has been applied and the result has been tableted in the following table:

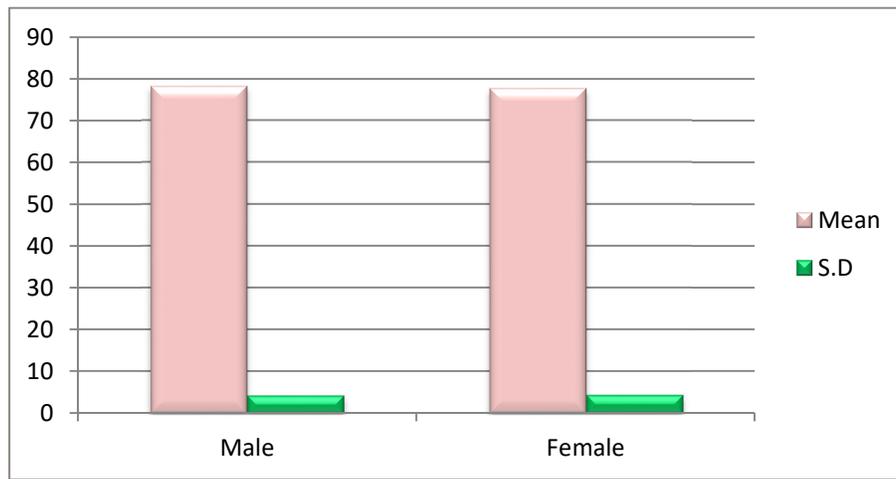
Table 1: t-ratios for difference in perceptions of university students toward e-learning technologies scores between male and female

Levene's Test for Equality of variances	t-test for equality of means									
	F	Sig	N	Group	Mean	S.D	Std. error mean	Std. error difference	df	t
1.098	0.702	10	Male	78.22	4.279	0.418	0.605	185	0.886	In significant
		5	Female	77.68	3.784	0.428	0.598			

The above table 3.2 describes that the Leven's test for equality of variance comes out significant with F value 1.09, furthermore, mean scores of male and female students in perceptions on e-learning technologies were 78.22 and 77.68.it is clear that mean score of both male and female don't have much difference. A part from this, t value come out 0.88 which was less than table value at 0.01(2.58) and 0.05(1.96) level of confidence. So calculated "t value" was statistically insignificant. Hence the

hypotheses “There exists no significant difference between levels of perceptions of university students toward e-learning technologies in relation to gender” was accepted. This indicates that male and female university students don’t differ concerning perceptions of e-learning; both have the same perceptions toward e-learning technologies.

Fig1: Mean and S.D of perceptions toward E-learning technologies among respondent based on gender



2- Study the Perception of university towards e-learning technologies concerning level of study

To find the significant difference in perception of masters and bachelors towards e-learning technologies, t-test has been applied and the result has been tableted in the following table 2:

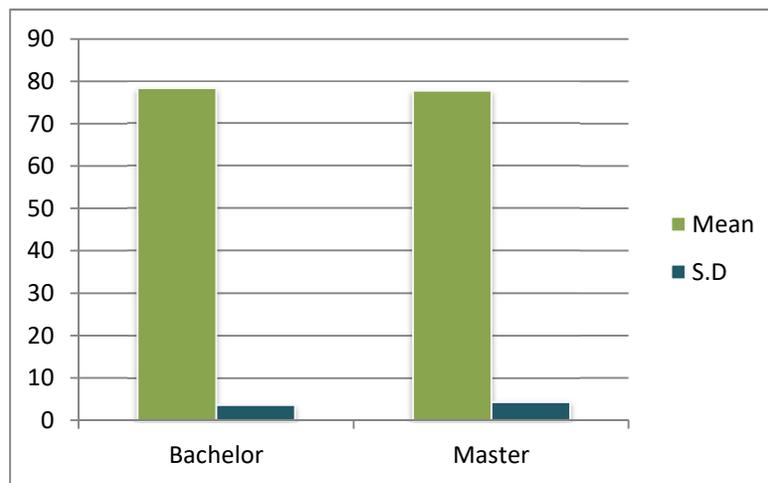
Table 2: t-ratio for difference in perceptions of e-learning scores between bachelors and masters

Levene's Test for Equality of variances	t-test for equality of means									Remark	
	F	Sig	N	Group	Mean	S.D	Std. error mean	Std. error differen	df		t

							ce			
6.024	0.015	100	Bachelor	78.25	3.751	0.418	0.375	185	0.950	Insignificant
		87	Master	77.68	4.479	0.428	0.480			

As it has been shown in table 3.3 the Leven's test for equality of variance comes significant with F value 6.024 furthermore, the mean scores of bachelor and master students in perceptions on e-learning technologies were 78.25 and 77.68. Mean score of both male and female don't have much difference. Apart from this t value come out 0.95 which was less than table value at 0.01(2.58) and 0.05(1.96) level of confidence.so calculated t value was statistically insignificant .hence the hypotheses" There exists no significant difference between levels of perceptions of university students toward e-learning technologies in relation to their level of study” was accepted. This indicates that bachelor and master university students don't differ concerning perceptions of e-learning, both have the same perceptions toward e-learning technologies. The dispersion of mean and standard deviation among bachelor and Master Students in show graphically as following in fig 2:

Fig 2: Mean and S.D of perceptions toward E-learning technologies among respondent based on Level of Study



3- Discipline of study

to find the significant difference in perception of students of different discipline of study including humanities, social science and sciences, one way ANOVA has been applied and the result has been tableted in the following table; 3:

Table 3, Summary of ANOVA on the scores of the discipline of study concerning perceptions on e-learning technologies

Variable	SOV	Sum of square	df	Mean square	F	P-Value
Discipline of study	Between-group	13.372	2	6.686	0.394	0.675
	Within-group	3119.579	184	16.954		
	Total	3132.952	186			

A clear glance on the table 3 remarks that F ratios for students belonging to different discipline of study i.e. humanities, social science and science concerning e-learning technologies come out 0.394 with p-value 0.675 which is insignificant than the table value at 0.05 ($P < 0.05$) hence, which shows students with different discipline of studies don't differ significantly with respect to their perceptions of e-learning technologies. And the null hypothesis stated "There exists no significant difference between levels of perceptions of university students toward e-learning technologies in relation to the discipline of study" is accepted.

DISCUSSION

As far as the results of this research are concerned, the main finding of this research is that e-learning technologies are perceived by students to be useful. And the lack of differences in the perception of university students towards e-learning technologies with regard to gender, level of study and discipline of study can be resulted due to two reasons:



1. The rates of using the internet and its related technologies and services which are economical and easily accessible in India in comparison to other countries in which the reviewed researches were conducted, which enables students to enter the university with better ability to use the internet and its related technologies and having a Previous perception toward e-learning.
2. The facilities provided by the respective university for all students enable them to use the free and a high-quality internet for their daily activities, doing their assignment, using LMS and enhance their knowledge and capacities. It makes all students, despite their differences in gender, level of study and discipline of study, to have mostly the same perception toward e-learning technologies.

SUGGESTIONS

The present study offered some suggestions which could be undertaken by future researchers:

1. The present study could be extended to all disciplines of University to generalize the findings.
2. It is required to study perception of e-learning technologies with other variables like e-learning and internet anxiety, awareness regarding misuses of internet etc.
3. It is also required to explore, Will employers give equal preference to e-learning graduates and classroom learning graduates when making an employment decision, and it is required to study the factors affect that.

Conclusion

The study was conducted on perception of university students towards e-learning technologies with regards to gender, level of study and discipline of study in University. The test was administered to 187 university students including 82 female and 105 male of two level of studies (master and bachelors) from three discipline of study including humanities, social science and sciences, who were taken through a convenient sampling technique. The findings of the current study revealed that there is not a significant difference in level perceptions of e-learning technologies of university students. This further implies that there is no effect of gender, level of study and discipline of study on the perception of E-learning between students. It means that male and female, masters and bachelors and also students of different discipline of studies of University possess an equal level of perceptions toward e-learning technologies.

**REFERENCES**

- Buzzetto-More N. A., (2008). Student perceptions of various e-learning components. *Interdisciplinary Journal of E-Learning and Learning Objects*, Vol. 4. Retrieved November 9, 2015 from www.ijello.org/Volume4/IJELLOv4p113-135Buzzetto413.pdf
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Liaw, S. S. (2008). Investigating students' perceived satisfaction, behavioral intention, and effectiveness of e-learning: A case study of the Blackboard system. *Computers and Education*, 51(2), 864–873.
- Liaw, S. S., Huang, H. M., & Chen, G. D. (2007). Surveying instructor and learner attitudes toward e-learning. *Computers and Education*, 49(4), 1066–1080.
- Lin, C. S., Wu, S., & Tsai, R. J. (2005). Integrating perceived playfulness into expectation-confirmation model for web portal context. *Information and Management*, 42(5), 683–693.
- Liu, S.-H., Liao, H.-L., & Pratt, J. A. (2009). Impact of media richness and flow on e-learning technology acceptance. *Computers and Education*, 52(3), 599–607.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478.
- Volery, T., & Lord, D. (2000). Critical success factors in online education. *The International Journal of Educational Management*, 14(5), 216–223.
- Webster, J., & Hackley, P. (1997). Teaching effectiveness in technology-mediated distance learning. *Academy of Management Journal*, 40(6), 1282–1309.
- Webster, J., & Martocchio, J. J. (1992). Microcomputer playfulness: Development of a measure with workplace implications. *MIS Quarterly*, 16(2), 201–226.
- Yuen, A., & Ma, W. (2008). Exploring teacher acceptance of e-learning technology. *Asia-Pacific Journal of Teacher Education*, 36(3), 229–243.
- Zhang, D., Zhao, J. L., Zhou, L., & Nunamaker, J. F. Jr., (2004). Can e-learning replace classroom learning? *Communications of the ACM*, 47(5), 75–79.