

Use of E-learning and its Effect on students

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Abstract

- **Purpose:** The purpose of the study is to measure the factors affecting the use of e-learning and its effect on students on the base of three variables time, technology and workload.
- **Design/methodology/approach:** Being descriptive study, survey method was adopted for data collection to find out the factors. A sample of 100 students of Islamia University of the Bahawalpur was selected for the survey. Data was analyzed by using Cronbach's Alpha, correlation and regression in SPSS software.
- **Findings:** From our study it is found that the independent variables, time, technology and workload have great influence on dependent variable e-learning.
- **Keyword:** e-learning, time, technology and workload.
- **Paper type:** Research paper.

1. INTRODUCTION:

In these days internet and computer has become a major part of our daily life. Sharing our views ideas and our lives by using internet with other people, has change a lot in the way we work, study and spend our free time. The decision to write this research paper relating to observe and find effect of e-learning means computer and internet on students, (koistinen. n.d). According to Ahmad Fawaz Alzaghoul, "Delivery of education including the activities of instruction, teaching, learning and assessment through various electronic media is called E-learning. E-learning helps the learner to get knowledge at a distance through internet. E-learning enables people to learn at any time and at any place, for this we need a computer and an internet connection". According to Chorng-Chyang Ong *et-al* (2003) "Delivered or enabled experience by electronic technologies including the internet. Internet and extranet breaks the limitations of time and space and also creates many benefits, including reduced cost, regulatory compliance, meeting business needs, retraining of employees, low recurring cost and customer support. In health department e-learning also play his role, according to Yu and Yang, (2006) due to rapid changes in health care environments nurses constantly need to update their professional knowledge and skills to ensure the quality of health care provision.

According to Anderson, So many international studies declare that mere use of technologies in the classroom does not guarantee learning will improve. According to Bressler L.A. (University of Houston-Downtown) *et.al*, Since the establishment of the Internet, and educators to take advantage of new technologies not only for research purposes or for marketing of their institution, but as a means of offering courses and even all online degree programs and to overcome the barriers of time and distance that can be otherwise prevent students from attending graduation or continue. Despite the additional advances in technology, Internet technology alters the traditional relationship between student and teacher personal care for "a number". The efficiency of Internet technology is likely to be less effective than a traditional classroom.

According to Anderson (2008), Reporting on a number of international studies that the mere use of technology in the classroom does not guarantee learning improvement. Use of information and communication technology 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 has become rapidly popular learning approach in higher educational institutions due to rapid growth of internet technology. 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. The main of e-learning is to increase accessibility of education and reducing the costs and time as well as improving student's academic performance. This approach of learning facilitates different students at different continents to attend the same classes almost at the same time. In these days technology is become a medium of teaching and learning without being at university campuses.(oye, N.D., A.Iahad, N., *at-al*, April 2012).

2. Literature Review:

E-learning has become an increasingly popular learning approach in higher educational institutions due to the rapid growth of internet technologies. Use of information and communication technology to enhance and facilitate teaching and learning is called E-learning. (oye, N.D., A.Iahad, N., *at-al*, April 2012). According to Rogers (2008),In this modern age E-learning has a competitive advantage and many universities have implemented it and this has impacts on student's performance or GPA. However, still there are other universities

and academic institutions that use very low interactive E-learning which is not enough to contribute to the performance of the students. In contrary to that, other higher institutions use highly interactive E-learning which directly impact and improve the student's performance. According to Fisser and Felliccione (2001) developments in information and communication technologies (ICTs) have impacted all sectors of society, including the education sector. In higher education, application of ICTs in form of e-learning is already changing teaching and learning processes. There are many pedagogical and socio-economic factors that have driven higher learning institutions to adopt e-learning. These include greater information access; greater communication via electronic facilities; synchronous learning; increased cooperation and collaboration, cost-effectiveness (e.g. by reaching different students and in greater numbers) and pedagogical improvement through simulations, Virtual experiences, and graphic representations. Both trainers and learners can choose more appropriate applications which are flexible in time, in place, personalized, reusable, adapted to specific domains and more cost-efficient.

3. Variable:

3.1. Dependent variable:

3.1.1. E-learning:

Use of electronic media, information and communication technology in education is called E-learning.

3.2 Independent variables:

3.2.1 Technology:

According to Pei-Chen sun and Hsing Kenny Cheng, The rapid development of computer and internet technologies has made e-learning become an important learning method. There has been a considerable increase in the needs for multimedia instructional material in e-learning recently as such content has been shown to attract a learner attention and interests. The multimedia content alone, however, does not necessarily result in significant positive learning performance and satisfaction. Moreover, it is expensive to design and develop effective multimedia instructional content that leads to desirable learning performance and satisfaction. The objective of our paper is to propose and empirically test a model that examines the impact of the fitness of instructional content and media on learner performance and satisfaction. According to Erik M. Van raaij and Jeroen J.L Schepers,(2008), the individual acceptance and use of new technologies has been studied extensively over the last two decades. Especially the technology acceptance model (TAM) and its successor TMA2 have received a lot of attention. First, the technology studied is an e-learning system, also known as a virtual learning environment (VLE). VLSs are designed for supporting and improving the individual study process. They do so by offering a repository for course documents, discussion forums, chat boxes, mass communication options, etcetera. Within the overwhelming amount of technology acceptance studies the number of those studying the acceptance and use of VLEs is small but growing.

According to Chao_Min Chiu and Eric T.G. Wang (2008) there are many approaches to Web-base learning. On one end of the spectrum, individuals access information resources on the Web to learn and solve daily task by themselves however, in our study, we focused on online classes offered at institutions of higher education. Web based learning is based on material delivered through a web browser over the public internet, private intranet or extranet. Its success depends mainly on learners loyalty i.e. continued use.

3.2.2 Time saving:

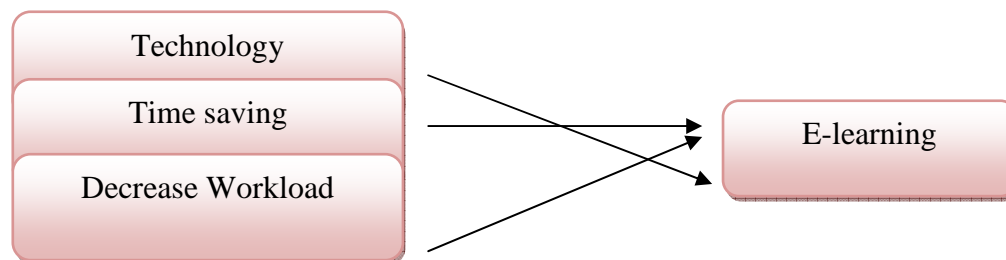
According to Green (1999), In the last few decades with the use of internet, email, multimedia technology and intelligence tutoring system on campus the Computer Assisted Learning (CAL) system become so popular. According to a survey it is recorded that majority of college professors use email to communicate with their students and one-third of college courses utilize CAL technology. Similarly, according to the report of Jones in 2002, that majority of the college and university students own computers and wireless devices and use internet to enhance their learning experience and to save time. 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).

Sound instructional practice includes in distance education courses, but is not limited to supporting and fostering the development of communities of practice, (Salmon, 2005). The students involved in higher education through distance learning need a venue to connect and actively engage with other member of the class, who they often have never met in person, and activities in distance education courses need to allow for students to apply their learning to authentic educational contexts, (Correia & Davis, 2008).

3.2.3 Decrease Workload:

According to Wilson & Cole, (1996), an important goal of instructional Design is to devise materials for, and methods of, instruction that maximize the chance that learning is both straightforward for the learner and effective in its outcome. By "straightforward for the learner", we mean that as far as possible the complexity of what is to be learned is minimized. By "effective in its outcome" we mean that what is learned develops the schemata to structure and encode what is learned so that when faced with future problems they are able to deal with them correctly and with minimal effort.

4. Theoretical framework:-



According to Dr. Jamil A. Itmazi To present knowledge learning process needs techniques and tools, interact with it and share it with others. In this context, e-learning is becoming an important tool to support the learning system to achieve its goals. After the spread of the internet, e-learning is become hot topic in the 1990. Generally internet is new media.

5. Hypothesis:-

H1: there is relationship between technology and E-learning.

H2: there is relationship between time saving and E-learning.

H3: there is relationship between decrease workload and E-learning.

6. Research methodology:-

6.1 Data collection:-

The respondents of the study are the students, who are involved in e-learning (PAKISTAN). Conventionally study was conducted to evaluate the impact of e-learning on students. So, students are selected as respondents due to convenience and get better results.

6.2 Sample size determination:-

Simple random sampling was used to collect the data. Out of which 103 questionnaire, 100 questionnaires were received and are finally used for data analysis.

6.3 Research instrument:-

Data was collected by using questionnaire adopted. The questionnaire consists of 25 questions related to our variables. The respondent of this study were asked to rate on five point Liker scale 1 being agree and 5 being strongly disagree.

6.4 Data analysis:-

Data was entered, edited and analyze by using software SPSS version 16 and Microsoft excel by applying the following techniques; Cronbach's alpha, correlation and Regression.

Cronbach's Alpha

To check the internal reliability of the instrument, Cronbach's alpha was run. The value of Cronbach's Alpha comes to 0.827 which is above the standard value proposed by (Nummally, 1978) of 0.744 this shows that our instrument is reliable and we can confidently apply different statistical tests and interpret the results with confidence.

Correlation analysis

Table 6.1

Correlations

| | | E-LEARNING (DV) | TIME SAVING (IV1) | TECHNOLOGY (IV2) | DECREASE WORKLOAD (IV3) |
|------------------|---------------------|--------------------|-------------------------|---------------------|-------------------------------|
| E-LEARNING DV | Pearson Correlation | 1 | .710** | .558** | .272** |
| | Sig. (2-tailed) | | .000 | .000 | .003 |
| | N | 100 | 100 | 100 | 100 |

Pearson correlation was run to check the relationship of variables with each other and whether any observed variable has perfect covariance with any other variables, which are observed in the study. From the table 6.1 it is observed that all relationships were found significant. The correlation value of time saving is .710 which show that time has large impact on use of e-learning. There is also a strong relationship between technology and e-learning with a correlation of .558 which is above 0.5 it show that technology has a great impact on use of e-learning and its effect on students. With correlation .272 of decrease workload it is determined that there is significant relationship between both.

7. Regression analysis:-

Table 7.1

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .742 ^a | .550 | .536 | .29433 |

a. Predictors: (Constant), DECREASE WORKLOAD, TIME SAVING, TECHNOLOGY

b. dependant variable: E-learning

Table 7.1 shows the model summary in which the value of R is .742 which shows that there is strong correlation between independent and dependent variable. The value of R square is .536 which shows that model is good fit. Therefore our all alternative hypothesis are accepted with the significance value less than 0.05 which shows that all independent variables have great influence on dependent variable e-learning.

Table 7.2

ANOVA^b

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1 | Regression | 10.169 | 3 | 3.390 | 39.128 | .000 ^a |
| | Residual | 8.316 | 96 | .087 | | |
| | Total | 18.485 | 99 | | | |

a. Predictors: (Constant), DECREASE WORKLOAD, TIME SAVING, TECHNOLOGY

b. Dependent Variable: E-LEARNING

The 7.2 table shows that F significance is 0.000 which is less than 0.05 which shows all independent variables do a good job in explaining the dependent variable.

8. Findings

The findings of this study show that there are various different factors that affect the e-learning. From our study we find that e-learning is strongly influence by these factors like decrease workload, time saving and technology. From our study we find that by using e-learning we can save a lot of time and we can do our time in very less time. It is also found that by using e-learning we can divide our workload and can reduce the burden of work. And in last we conclude that by using latest technology we can develop our e-learning process in developed form which is easy to understand by everyone. So from our study it is found that there are various factors that affect the e-learning system.

9. Conclusion:-

This study helps in understanding that how the time saving, decrease workload and technology affect on e-learning. The focus of our study was to examine the effect of e-learning on students on the base of time saving, technology and decrease workload. The data was collected from the students of Islamia University Of Bahawalpur by adopted the questionnaire.

Three tests were applied Cronbach's Alpha, correlation and regression. Cronbach's Alpha shows that questionnaire is reliable. From the regression analysis it indicates that model is a good fit. By applying correlation technique all relationships were found significant. There is string relationship between time saving, decrease workload and technology.

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