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The Impact of E- learning on Students**Dr. H.S. Grewal* & Dr. Ishvinder Singh** & Prof. Sachin Kumar*****

*Professor & Director Doon Business School, Dehradun

**Assistant Professor , Doon Business School, Dehradun

***Assistant Professor , Doon Business School, Dehradun

Abstract

This study is focused on the impact of e- learning on academic learning. The study includes the age & gender of the students of undergraduate and graduate module delivered using traditional lectures and e- learning based methods. e- learning has been revealed in this study not to have a positive impact on academic achievement contrary to the expectations of this study.

The methodology that was employed in this study was through quota sampling by identification of students under the- learning study mode.

It is concluded that in order to improve teaching effectiveness and academic achievement, higher education should consider aiming to develop e- learning teaching strategies that encourage greater engagement and also take into consideration the different learning styles found within the student body.

Key Words: academic performance, e- learning, methodology, factor analysis

JEL Classification M31, C12, C38

Introduction

E- learning has become an increasingly popular approach in higher education institutions due to the rapid growth of Internet technology. As we can see, most higher education institutions using e- learning to improve the education of students and enhance their technology skills. E- learning can give us a lot of positive effects, especially when the contents are able to fulfill the needs. E learning refers to the use of advanced technology of information communication, especially the development

of network technology includes great conveniences to education . So far, if e- learning is considered as the main way of learning, it can also give the negative and positive influences. Learning and teaching methods driven by Information Communication Technology (ICT) are fast becoming common in higher education worldwide. The study is motivated by the recent institutional instances on the use of the Modular Object-Oriented Dynamic Learning Environment (Moodle) platform as a teaching

and learning tool across all education institution .,

History of e- learning

A revolution in the information technology and the emergence of web has made the human society to take a huge leap. The focus of society is shifted from industry to information. The appearance of information technology has been the most important event at the start of this century. Information technology suddenly became an important element of every aspect of our society. Education is no exception. The use of multimedia and networking is welcomed by the field of education. In 1960, the University of Illinois developed a classroom linked with computer terminals where the students could listen to recorded lectures of a particular course. This was the first time that some form of e-learning was followed. In the beginning of 1960s, some professors of Stanford University used computers to teach mathematics and reading in elementary schools. Computer based learning gave birth to many e- learning courses. With the growth of internet in 1990s, correspondence schools like University of Phoenix started showing interest in virtual education. By 1994, the first online high school CAL Campus came into existence. The combination of online education and face-to-face teaching methods has gained more success than using the two methods individually.

Some experts refer to the education in 21st century as a multimedia network education. Educational information is being accepted and promoted by all the nations around the world. A fact stated by the National Centre for Education Statistics that in 2008, there were 18 million students, who were enrolled in some online program worldwide, which was a 1.6% increase from 2002. In India, even though the statistics are not so high, still there is a large scope of online education .Under this situation, the education system and the teaching methods and many other things related to the education field are changing. And this transformation has given birth to e-learning. SWAYAM platform is indigenously developed by Ministry of Human Resource Development (MHRD) and All India Council for Technical Education (AICTE) with the help of Microsoft and would be ultimately capable of hosting 2000 courses and 80000 hours of learning: covering school, undergraduate, post-graduate, and other professional courses.

Literature Review

E- learning has become a pillar of success in higher education as it enhances the quality of teaching and learning (Bhuasiri et al., 2012). A positive relationship exists between the use of learning technology and student engagement and desired learning outcomes (P.-S. D. Chen, Lambert, & Guidry, 2010). Studies have been conducted on student preference for online learning versus face-to-

face learning, albeit without cross-cutting conclusions. Students prefer face-to-face learning to acquire conceptual knowledge in the subject matter, while online learning is preferred in acquiring self-regulated learning skills (Paechter & Maier, 2010). According to (Paechter and Maier, 2010), online learning does not only provide students with time and place flexibility, but also with the ability to apply one's knowledge and "meta-cognitive self-regulation strategies such as monitoring one's learning progress" (P.-S. D. Chen et al., 2010). (Chen, 2010) and associates find that students using online learning platforms are "more likely to make use of deep approaches of learning like higher order thinking, reflective learning, and integrative learning in their study and they reported higher gains in general education, practical competence, and personal and social development" Furthermore, according to (Chen et al, 2010), students who engage in online learning tend to score higher marks than those who do not. ICT-based learning platforms further adversely affect lecture attendance as students can easily access learning resources such as PowerPoint slides online (Traphagan, Kucsera, & Kishi, 2010). (Timothy Rodgers, 2004), Student Engagement in the e-learning Process and the Impact on Their Grades. It is being observed that in order to improve the teaching effectiveness, higher education focus on developing e-learning strategies that encourage greater involvement

of students. In relation to online teaching, some studies indicate that this medium of delivery has a positive impact on performance, for example, (Smith and Hardaker, 2000). Other studies however, find that greater online teaching has a negative impact on performance (Johnson, 2005). (Carini et al, 2006) found that, engagement is positively correlated with students grades but in general the relationship between engagement and performance is complex. This conclusion was further supported for example, (Rodgers and Ghosh, 2001) identified that 'effort' (or engagement) levels were highly significant in determining student examination performance. A study in an e-learning context (Davies and Graff, 2005) found that online engagement had no statistically-significant impact on examination performance. (Arbaugh, 2000) argues that this will depend on the student's attitude to the perceived usefulness, and also the ease of use, of this delivery medium. However, high attrition rates emanating from online learning have been of concern to educators worldwide (K.-C. Chen & Jang, 2010)

Statement of the Problem

E-learning has become a platform for the students to access the study material & to interact with a number of instructors having academic excellence in variety of fields. It has been observed that the study material gained from e-learning is enhancing the

knowledge of the students and as well of the instructors.

Objectives

- To determine the preference of the students towards online learning material
- To determine the effectiveness of communication by the instructor
- To find that the online material is adaptive according to the needs and requirements of the e-learner
- To study the impact of e-learning on students

Research Design : Descriptive Research

The collection of primary data from the students of different colleges & universities pursuing graduation & post graduation programs

SAMPLE TECHNIQUE: Quota Sampling

INSTRUMENT:

- Questionnaire

SAMPLE SIZE: 200 students

The Null hypothesis (H₀) for the statements is that there is no significant correlation at the 0.05 level of significance between gender, education & age .

H₀ Gender is not having impact on all factors of effective modes of e- learning

H₀ Education is having impact on all factors of effective modes of e- learning

H₀ Age is having impact on all factors of effective modes of e- learning

1. Gender is having impact on all factors of effective modes of e- learning except the following variables

(a) The online course makes it easy for me to communicate my needs at .004

(b) I feel confident that the online teaching process will be delivered.001

2. Education is having impact on all factors of effective modes of e- learning except the following variable

(a) Students may have the opportunity to mix what they learn with practical work at .016

3. Age is having impact on all factors of effective modes of e- learning except the following variable

(a) Online learning Offers an interactive mode of education at .012

(b) Students may have the opportunity to mix what they learn with practical work at .035

(c) Learning is reinforced through clear learning objectives for each module at .020

(d) The online course has a good reputation at .036

(e) E- learning helped me to examine issues, to evaluate new ideas, and to apply what I have learned at .025

Findings

Factor I

➤ Online has relevant information for me to master course content .654

➤ The online course makes it easy for me to communicate my needs .588

- Online learning Offers an interactive mode of education .550
- Online learning information in an appropriate format .568

The above findings conclude that the online has “relevant information”

Factor II

- Students may have the opportunity to mix what they learn with practical work .598
- Courses are presented in separate modules.390
- Learning is reinforced through clear learning objectives for each module.341

The above findings conclude that the e - learning course content correlates with “practical work”

Factor III

- Instructor gave fast feedback via a variety of communication .552
- Courses are easy to navigate .313
- The workload was just right .362
- Learning is reinforced through clear learning objectives for each module.256
- The online course has a good reputation.256

The above findings conclude that the e learning provides “effective communication” with the instructor

Factor IV

- The online course creates a sense of personalization .504
- Encourages access to more related electronic course material .482

- Courses are easy to navigate .418

The above findings conclude that the e-learning courses are “easy to navigate”

Factor V

- The online course met my personal and/or professional goals .446
 - The activities were realistic and could be performed with the resources I had available .374
 - Encourages access to more related electronic course material .278
 - Students may have the opportunity to mix what they learn with practical work .191
- The above findings conclude that the online courses are adaptive according to the “needs requirements of the e-learner”

Factor VI

- Students may have the opportunity to mix what they learn with practical work .263
- Courses are presented in separate modules .236
- Encourages access to more related electronic course material .225

The above findings conclude that e- learning encourages to access “new course material”

Factor VII

- The online course has a good reputation .435
- The online course met my personal and/or professional goals .443
- Online learning information in an appropriate format .444

The above findings conclude that online courses has a good “reputation” learner

Conclusion

This study highlights the students preference through e learning. A number of students prefer a flexible and a self spaced method of education .

Information technology has made accessible information to all continents through the satellites, cables, and other such devices that have made man more independent and have increased his mobility by making distances shorter and communication faster.

As the analysis of data gathered has shown that the students are willing to accept the

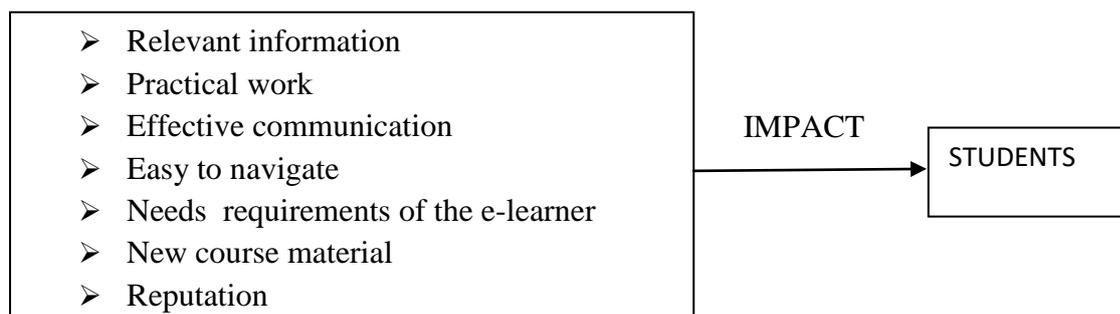
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information provided through e learning websites. Students have also given the feedback that the e- learning courses are easy to navigate and are adaptive according to the needs and requirements of the e-learner. It has also being observed that the e-learning encourages to access new course material learner online courses has a good reputation learner. It can be confidently said that there is still a long way to go before we can make the whole world harvest the benefits from the progress of science and technology.

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Component Matrix^a

	Component						
	1	2	3	4	5	6	7
V1	.568	-.084	-.267	-.235	-.210	-.016	-.015
V2	.296	-.090	.132	.482	.278	.225	-.168
V3	.331	.598	-.211	-.184	.191	.263	-.192
V4	.303	.390	.178	.291	.182	.236	-.221
V5	.466	.341	.256	-.032	-.380	.227	.096
V6	.508	.150	.313	.418	-.227	.209	-.089
V7	.502	.178	-.457	-.109	-.270	-.086	-.333
V8	.142	-.084	.256	.041	-.444	.081	.435
V9	.360	-.323	-.196	.504	.133	-.408	.144
V10	.538	-.149	-.201	.101	-.351	.048	.107
V11	.588	-.405	-.214	.045	.017	.192	-.201
V12	.505	-.454	-.146	.130	.075	.178	.025

V13	.454	-.468	.293	-.360	.178	.051	-.209
V14	.413	-.338	.552	-.290	.117	.017	-.185
V15	.550	.100	.209	-.311	.130	.125	.444
V16	.654	.054	.080	.022	.059	-.191	.193
V17	.420	.203	-.322	.104	.446	.103	.443
V18	.451	.271	.246	-.152	.374	-.355	.036
V19	.395	.286	.362	.171	-.187	-.567	-.194
V20	.552	.092	-.410	-.209	-.034	-.203	-.062

Extraction Method: Principal Component Analysis.