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The usage of internet and e- learning practice among the college students with special reference to Hindusthan College of Arts and Science, Coimbatore

K. JAYARAJ* AND V. NIRMAL
PG & Research Department of Visual Communication
Hindusthan College of Arts and Science, Coimbatore (T.N.) India

ABSTRACT

India has always accorded high importance to education. The education system which was evolved first in ancient India is known as Vedic system or otherwise it is called as knowledge as preparation for life in this world. The concern for the improvement of education had been at the top of India's development agenda since independent several commissions were appointed by the Government of India from time to time to formulate policies and programs require to enhance access to and participation in education and improve quality of education. In this connection the predominant requirement of new educational policy would give more importance to uplift the e- learning systems in higher education. Hence we have chosen this research.

Key Words : Higher education, E-learning system , Online learning

INTRODUCTION

The term "e-learning" has only been in existence since 1999, when the word was first utilized at Computer Based Technology systems in seminar. Other words also began to spring up in search of an accurate description such as "online learning" and "virtual learning". However, the principles behind e-learning have been well documented throughout history, and there is even evidence which suggests that early forms of e-learning existed as far back as the 19th century. The term "e-learning" has been thrown around quite a lot in recent years; many are still unaware of what it actually means and how it can help them achieve success in both their professional and personal lives. When it comes to education, the model has been pretty straight forward - up until the early education was in a classroom of students with a teacher who led the process. Physical presence was a no-brainer, and any other type of learning was questionable at best. Then the computer evolution happened and it radically changed the learning landscape. In essence, e-learning is a computer based educational tool or system that enables you to learn anywhere and at any time. Today e-learning is mostly delivered though the internet. Technology has advanced so much that the geographical gap is bridged with the use of tools that make you feel as if you are inside the classroom. E-learning offers the ability to share material in all kinds of formats such as videos,

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slideshows, word documents and PDFs. Conducting webinars (live online classes) and communicating with professors via chat and message forums is also an option available to users.

E-learning provides the learners with the ability to fit learning around their lifestyles, effectively allowing even the busiest person to further a career and gain new qualifications. Some of the most important developments in education have happened since the launch of the internet. These days learners are well versed in the use of smart phones, text messaging and using the internet so participating in and running an online course has become a simple affair. Message boards, social media and various other means of online communication allow learners to keep in touch and discuss course related matters, whilst providing for a sense of community. In the fast-paced world of e-learning the available technologies to make a course exciting are always changing, and course content can and should be updated quickly to give students the very latest information. This is especially important if the e-learning training is being given to employees in a sector where keeping up-to-date on industry developments is of the utmost importance. This is one of the reasons why many businesses are now offering training via e-learning - other reasons includes low costs and the ability for employees to study in their own time and place.

Overall, traditional learning is expensive, takes a long time and the results can vary. E-learning offers an alternative that is faster, cheaper and potentially better. The use of information communication technology (ICT) has revolutionized the process of learning where electronic devices are used for the process of effective learning. As education becomes a ubiquitous service delivered anywhere and anytime over the global network, the higher education institutions are using modern ICTs and computers to support learning, in order to provide better and more cost effective ways of delivering instruction and training.

The term e- learning covers new approaches in teaching and learning and a broad gamut of pedagogical tools to assist students in learning. E-learning is usually defined as a type of learning facilitated ICT for improving the quality of teaching and learning. A number of other terms such as, online learning, network and web-based learning, virtual learning, distributed learning are also used. E-learning is nonlinear i.e. learners determine how, what, and when they access information. It is a dynamic process- personalized, transformed and customized on demand in response to learner and environmental variables. The leaner controls their own interaction with the content and presentation. It is a highly efficient and cost-effective way of learning.

The previous researchers have analysed the effect of demographic variables such as gender and age on e-learning attitude of students. It also suggests the dependence of the demographic variable department/ background of student on internet usage and activities on computer. But not much research has been done to analyse the effect of department or discipline of student as a factor affecting attitude towards computer and e-learning. This research builds an approach to examine individuals' attitude toward the computer technology and e-learning based on the discipline/ department in which they are studying thus adding a new dimension to the literature.

An e-learning timeline :

Long before the internet was launched, distance courses were being offered to provide students with education on particular subjects or skills. In the 1840's Isaac Pitman taught his pupils shorthand via correspondence. This form of symbolic writing was designed to improve writing speed and was popular amongst secretaries, journalists, and other individuals who did a great deal of note taking or writing. Pitman, who was a qualified teacher, was sent completed assignments by mail and he would then send his students more work to be finished using the same system.

In 1924, the first testing machine was invented. This device allowed students to tests themselves. Then, in 1954, BF Skinner, a Harvard Professor, invented the "teaching machine", which enabled schools to administer programmed instruction to their students. It wasn't until 1960 however that the first computer based training program was introduced to the world. This computer based training program (or CBT program) was known as PLATO-Programmed Logic for Automated Teaching Operations. It was originally designed for students attending the University of Illinois, but ended up being used in schools throughout the area. The first e-learning systems were really only set up to deliver information to students but as we entered the 70s e-learning started to become more interactive. In Britain the Open University was keen to take advantage of e-learning. Their system of education has always been primarily focused on learning at a distance. In the past, course materials were delivered by post and correspondence with tutors was via mail. With the internet the Open University began to offer a wider range of interactive educational experiences as well as faster correspondence with students via email etc.

Online learning today :

With the introduction of the computer and internet in the late 20th century, e-learning tools and delivery methods expanded. The first MAC in the 1980's enabled individuals to have computers in their homes, making it easier for them to learn about particular subjects and develop certain skill sets. Then, in the following decade, virtual learning environments began to truly thrive, with people gaining access to a wealth of online information and e-learning opportunities.

By the early 90s several schools had been set up that delivered courses online only, making the most of the internet and bringing education to people who wouldn't previously have been able to attend a college due to geographical or time constraints. Technological advancements also helped educational establishments reduce the costs of distance learning, a saving that would also be passed on to the students - helping bring education to a wider audience.

In the 2000's, businesses began using e-learning to train their employees. New and experienced workers alike now had the opportunity to improve upon their industry knowledge base and expand their skill sets. At home individuals were granted access to programs that offered them the ability to earn online degrees and enrich their lives through expanded knowledge.

ICT adoption evolution in HEIs :

The use of ICT in HEIs has encountered three phases (Martin, 2002), which reflects those of the development of information technologies. From the 1960s until the end of 1980s, this phase was called the mastery phase with emphasis on gaining knowledge and skill of a computer. Many assumptions were made to indicate how a computer could be used in education, such as, to usurp the traditional functions of libraries. However, the lack of financial support, educational software, and staff experience in the use of computers were major obstacles to prevent ICT becoming integrated in teaching and learning. Therefore, the use of ICT in HEIs was very limited at this stage.

From the 1980s till the end of 1990s is called the application phase with emphasis on using intuitive graphical user interface-based applications such as word processing, spreadsheets and databases. In HEIs, computers and generic applications as well as self-study leaflets were provided for students to gain knowledge and be literate in ICT. Many HEIs were required to integrate ICT skills development into their subject courses. However, there was little incentive to engage academics in IT-based teaching. At present MHRD, Govt. of India and IIT's are offering ICT based orientations

for teachers working in the higher education to promote the ICT based teaching among the higher education.

From the end of 1990s to date is called the reflective phase. Because of the evolutional change of teacher-centred teaching and learning models to learner-centred models, it was perceived that "for Higher Education to move forward, a whole perspective on the nature of the learning environment must be maintained, with more student-focused learning approaches matched by a suffusion of ICT across curriculum and pedagogy" (Collis and Van der Wende, 2002). At this stage, emphasis has been placed on how ICT can be used in education by offering a variety of teaching methodologies including distance and resource-based modes. This implies that because the new ICT technology is changing the way information is stored and transmitted, HEIs need to look for ways in which it is delivered. Examples of ICT developments assisting teaching and learning include 'hybrid library' to access to ICT-based resources as well as traditional paper-based stock, virtual learning environments (VLMs) for students accessing a range of online resources with built-in tools and interactive facilities to enhance the students' experience. These three phases demonstrates the increasing use of ICT in HEIs. As in many areas, ICT has been perceived to have positive effects to enhance teaching and learning.

ICT initiatives and implementation issues in HEIs :

Studies (Stensaker, 2007; Fallshaw, 2000) have suggested some strategies or check-lists for the adaptation of ICT in HEIs including a well-defined institutional ICT strategy in line with the corporate strategy, the commitment and involvement of the institutional top-management, the need to link ICT to organizational development initiatives, and the availability of technical support and skills, etc. However, the factors revealed in literature have hardly stressed the pedagogical aspect as to how ICT could be used to improve teaching and learning. It has been mostly incorporated for administrative reasons such as student registration or offering practical information on websites. The integration of ICT in teaching and learning strategy is still largely limited. This suggests that the adaptation of ICT in HEIs is largely driven by the extensive external pressure rather than the actual needs of using ICT. Therefore, when initiating an ICT strategy most of HEIs only emphasized on adoption strategies, infrastructures and new institutional visions rather than how to integrate ICT in the teaching and learning process (Bates, 2000).

One of the barriers for successful implementation of ICT initiatives is that staff should be given support such as time and training for development and updating of ICT-based materials (Lewis and Goodison, 2004). As discussed by Löfström and Nevgi (2007), one of the issues in relation to the support that staff get, is how far staff should be supported in order to generalize the use of ICT. Another issue is to integrate into staff timetables to replace face-to-face relationship to online tutoring. The implementation of ICT into learning and teaching in HEIs also raises the question of the incentive for staff to engage in such developments. The involvement of academic staff is still very limited, and a lot of staff have not even been involved at all (Becta, 2008). Therefore, the successful implementation of ICT initiatives should provide staff with adequate ICT training and raise their ICT level of skills as a whole. The implementation of ICT largely depends on a strong central strategy in an organization pushing forward an agenda for change. Ellis and Moore (2006) also revealed that the integration of ICT in teaching and learning should follow a team-based approach requiring expertise and involvement from more than one person so that the existence of a supportive and responsive team is able to respond to the needs of individual staff members.

Current e-learning application in HEIs :

E-Learning refers to the way people communicate and learn electronically which has only recently emerged as a key source of competitive advantage in the information society (Roffe, 2002). With the quick development of ICT, E-learning is becoming a new, effective learning method alongside class-room learning. Although still an emerging field, it offers many benefits that are radically different from a conventional classroom-based learning environment and can still generate results for students, *i.e.* just-in time; accessible from any site with the right equipment; cost-effectiveness; personalization; learner centered learning; contemporary; scalable structure; interactivity; uniformity of content; content updated rapidly; blindness of the learning engagement; and measurement of program performance, etc. EL also provides possibilities for educationalists as enhanced access; more flexible learning; extending the range of influence; and deepening the penetration for learning. Therefore, EL could be providing learning programs for internal students, external students, distant students, and training (ibid). Thus, the argument, on which researchers focus, is not about whether to adopt or not to adopt EL for higher education, but how to implement it to offer a high quality learning experience.

Benefits and drawbacks of e- learning :

Whether you're a high-school teacher looking to engage your students in a more interactive way, or a corporate trainer hired by a large company to design training curricula, e-learning packs a punch when it comes to benefits that make the creation and delivery processes easier and hassle-free. Important benefits are outlined below:

– **No boundaries, No restrictions:** Along with location restrictions, time is one of the issues that learners and teachers both have to face in learning. In the case of face-to-face learning, the location limits attendance to a group of learners who have the ability to participate in the area, and in the case of time, it limits the crowd to those who can attend at a specific time. E-learning, on the other hand, facilitates learning without having to organize when and where everyone who is interested in a course can be present.

– **More fun :** Designing a course in a way that makes it interactive and fun through the use of multimedia or the more recently developed methods of *gamification* (further discussed in later chapters) enhances not only your engagement factor, but also the relative lifetime of the course material in question.

– **Cost effective :** This is directed to both learners and teachers, but there is a good chance that whatever your role you had to pay exorbitant amounts of money at some point to acquire updated versions of textbooks for school or college. While textbooks often become obsolete after a certain period of time, the need to constantly acquire new editions is not present in e-learning.

– **IIt Just Fits! :** As companies and organizations adopt technologies to improve the efficiency of day-to-day operations, the use of the internet becomes a necessity. As multinational corporations expand across the globe, the chances of working with people from other countries increases, and training all those parties together is an issue that e-learning successfully addresses.

– **Application in a real-life scenario:** In an effort to enhance the credibility of course material, oftentimes a professor will summon a field specialist to give a lecture relevant to the topic at hand.

– **Concerns that arise with e-learning:** Even given all the benefits of e-learning, one cannot deny there are some drawbacks. Practical skills are somewhat harder to pick up from online resources.

– **Isolation:** Though e-learning offers ease, flexibility and the ability to remotely access a classroom in the student's own time, learners may feel a sense of isolation. This is because learning online is a solo act for the most part, which may give the learner the feeling that they are acting completely alone. As technology progresses and e-learning benefits from the advancements being made, learners can now engage more actively with professors or other students using tools such as video conferencing, social media, and discussion forums amongst others.

– **Health related concerns:** E-learning requires the use of a computer and other such devices; this means that eyestrain, bad posture and other physical problems may affect the learner. When running an online course it's a good practice to send out guidelines about correct sitting posture, desk height, and recommendations for regular breaks.

Types of e- learning trends:

Blended learning:

Blended learning is a combination of offline (face-to-face, traditional learning) and online learning in a way that the one compliments the other. It provides individuals with the opportunity to enjoy the best of both worlds. For example, a student might attend classes in a real-world classroom setting, and then supplement the lesson plan by completing online multimedia coursework. As such, the student would only have to physically attend class once a week and would be free to go at their own pace (and without worrying about scheduling issues).

Blended learning is often also referred to as "hybrid" learning, and can take on a variety of forms in online education environments. While some organizations may only use blended learning techniques on rare occasions, others might utilize it as a primary teaching method within their curriculum. There are two key principles commonly associated with blended learning (which are the "secrets" to its success): students who can share information and work with other students directly in a collaborative setting have a more enriched learning experience, and collaboration between students can be improved upon if group activities rely on information gathered from online resources or lessons. It's also been suggested that students who complete online coursework followed by interactive, face-to-face class activities have richer educational experiences. Tools and platforms that complement blended learning include learning management software's and mobile devices such as tablets and smart phones.

Social and collaborative learning:

Collaborative learning is an e-learning approach where students are able to socially interact with other students, as well as instructors. In essence, learners work together in order to expand their knowledge of a particular subject or skill. In e-learning environments, this is typically done through live chats, message boards, or instant messaging. Collaborative learning is based upon the principle that students can enrich their learning experiences by interacting with others and benefiting from one another's strengths. In collaborative learning situations, students are responsible for one another's actions and tasks which encourages teamwork as well.

Micro-learning:

A term that is being mentioned quite often as of late, especially in corporate e-learning environments, is "micro-learning". This teaching approach can provide a wide range of benefits to learners as well as trainers. This is primarily due to the fact that it can provide educational benefits without overwhelming the learner. It is quickly becoming one of the most popular emerging e-

learning trends.

Rapid e-learning:

While rapid e-learning can pertain to a number of things, it is generally used to describe the pace at which an e-learning course is developed. Here are the basics of rapid e-learning, as well as an explanation as to how it can be applied to the learning process as well.

Objectives of the study:

The present study assumes the significance in the existing e- learning capability of Hindusthan College of Arts and Science, Coimbatore. The study would bring out a description of the status of internet usage and e- learning practices would help to understand the future trend and its implications of the academics. It is very encouraging to find that e- learning is given top priority in the development of modern education system. The new education policy and e-learning methodology implications in Arts and Science Colleges will helps to improve the student's academic progress. The following are the specific objectives of this research.

– To identify the e-learning attitude and its effects among the students studying various discipline in the college.

– To examine the provision of e-learning effects among the students studying various discipline in the college.

– To interpret the impact on weekly internet usage among various disciplines in the college.

Review of literature :

With the development of information technology, e- plus functions have been gradually replacing traditional activities to dominate both practice and academic research. E-Business, E-Government, E- Banking, and other such "E" words have appeared and become globally popular. E-Learning (EL) is one of them. EL refers to the way people communicate and learn electronically (Roffe, 2002). In Higher Education Institutions (HEIs), EL programs are applied in three different areas to fulfill different demands-off-campus study programs for classroom-based students; online distance study programs for distant students and E-Learning/Training programs for organizations.

This study is a part of IS&T development project funded by the University of Bolton (UB), of which the aim is to develop strategies for UB information systems and technologies (IS&T) service adaptation and application. The focus of this study is E-Learning that includes both tools application and virtual learning environment improvement. The first stage of this study is to explore the first two areas presented above to find out how current students utilize the available EL tools and channels and how they evaluate them. This is because students' experiences, demands and willingness toward using EL tools and channels are the key issues for HEIs to further develop proper and effective EL programs. Additionally, in the last two decades, HEIs and the government have consistently committed themselves to invest and introduce Information and Communications Technology (ICT) for teaching and learning purposes. ICT has been widely adopted at aiming to provide greater access for different target learners and has become vehicles for enriched pedagogical experiences. The underpinning assumption is that the use of ICT should allow universities to enhance their competence and compatibility and fundamentally change their teaching and learning environment. Based on this assumption, the development and implementation of EL tools and channels has become the dominant area among those investments (UNESCO, 2003). However, as revealed in literature, EL has been used more indirectly as a tool for organizing study courses and educational programs.

The questions of 'can E-Learning be made as a learning strategy and can EL replace classroom-based modes of learning and teaching' remain unanswered. Therefore, this study will start with the discussion on ICT implementation in HEIs and then focus on E-Learning. Through literature review and authors' practices, this research intends to explore various aspects with regards to how and to what extent EL tools have been used to improve teaching and learning activities in the University of Bolton as a case study. The study also intends to verify the main findings from the literature review via employing a case study approach and hence make comparison between the national trends in EL usage and chosen case.

Adopting and implementing e-learning into an educational system can be categorized into three reasons; first, the growth of information technology has made e-learning an ideal delivery vehicle for education and learning. Second, it is information rich as e-learning allows access to "information rich" resources by both teachers and learners anywhere, anytime. Third, it is an alternative learning strategy it can get in touch with those who were previously denied access (e.g. students with physical disabilities) and further the blended learning approach proposes that e-learning can supplement traditional classroom off thus freeing up valuable resources and expanding the offering to greater numbers students (Jamlan, 2004).

E-learning concept is existent since decades and is one of the most significant recent developments in the Information Systems (IS) industry (Wang, 2003). Overall institutional culture is not significantly associated with student outcomes but that major departments are important in the study of the impact of college on students. Faculty continues to be one of the important factors that influence the students' experiences in college, and a debate continues over the impact of the opposing roles of faculty work (Ewell, 1989) Hartnett and Centra (1977) in their research have also shown the impact that departmental culture and climate have on student learning and satisfaction. The impact of academic departments on students' satisfaction and development has been researched. The characteristics of departments such as faculty contact with students, research emphasis, and proportion of female undergraduates had a significant impact on satisfaction with education in the major and the perceived impact that college had on skill development (Umbach and Porter, 2002). Bebetsos and Antoniou (2009) in their study indicated that gender differences exist for perceived usefulness and affect, whereas no gender differences were indicated for attitude towards Physical activity. Egbo *et al.* (2011) in their research concluded that there is a tendency that female students would accept 1CT use more than their male counterparts.

Bhuvaneswari and Padmanaban (2012) examined the attitude towards e-learning of secondary students of Delhi and found that demographic variables play a significant role for e-learning. Suri and Sharma (2013) conducted a study in Panjab University and found that the demographic variables such as gender, age and discipline (departments) have a considerable effect on the activities that students carry out with the help of computer.

Higher age and study year, usage of the Internet in education, more regular usage of Facebook, and more number of e-courses demonstrated a significant influence on positive attitude towards e-learning. Results of Brumini *et al.* (2013) revealed that while students of different disciplines did not vary a great deal in their daily usage of technology, there were differences in their level of confidence in using technology. The use of technology for teaching and learning also differed across disciplines (Lam *et al.*, 2014). Dhiman *et al.* (2014) in their study revealed that students have high attitude towards e-learning and their attitude scores did not differ significantly with their personal variables such as, gender, stream of study and residence.

E-Learning brings innovation to both teaching and learning experiences, no matter the adoption

is either because of proactive future orientation or reaction to whether competition pressure. It is not that the innovation should not come from outside of education, or that it can only come from within. It is simply that innovations must be presented in terms that are meaningful for teaching practice. New technology or teaching methods adoption will only increase significantly when innovations possess some of the following characteristics: simplicity; compatibility with existing methods and techniques; and relative advantages in comparison with these established methods and techniques (Carlsson, 2003).

Currently, both HEIs and the government have invested heavily on E-Learning technologies such as WebCT, Blackboard and Moodle (UNESCO, 2003). However, studies reveal that most of HEIs have only made limited formal academic use of EL tools for teaching and learning purpose (Selwyn, 2006; Ellis and Moore, 2005). Selwyn (2006) argues that the only way to achieve meaningful change in the ways in which computer technologies are used in EL is to strive to engineer a radical overall and wholesale restructuring of universities and university education.

For universities that substantially use a web-based virtual learning environment (VLE), almost all of them post core information about courses or taught topics electronically (Lewis and Goodison, 2004). Oliver (2002) found that VLE promoted independent leaning especially through access to up-to-date materials such as e-books and e-journals. He also indicated that, in order to be successful, EL initiatives should be driven by pedagogy, not technology. However, staff training in most of EL initiatives has more focused on the technology rather than on pedagogic issues (Lewis and Goodison, 2004).

Oliver (2002) revealed that EL initiatives have changed the way in which students learn. He *et al.* (1996) both stated that the use of EL could transform education from teacher-centered learning to student-centered learning, and provided strengths of constructive learning which emphasizes learning as a process of knowledge construction rather than the memorization of facts.

Breen *et al.* (2001) argues that although EL is often associated with the efficiency of delivering and supporting learning over traditional resource-based learning methods, its reality is far from these. Their study revealed that EL tools have become central to students' experience as a learning support.

Löfström and Nevgi (2007) reported in a study on strategic planning and implementation of EL in teaching that the use of EL tools can enhance teaching and assure student information literacy. Two basic functions of EL tools in teaching were identified including: distribution of course material via the web, and the creation of interactive and collaborative learning opportunities. However, the level of quality in terms of web-based teaching should be made aware to ensure the quality of learning.

From the above research reviews, an ambiguity of the content of E-Learning can be found. All the above studies states that the last standpoint is adopted that when conducting research study, the authors mentioned E-learning as all the activities that students and teachers do in virtual environment.

METHODOLOGY

Respondents and study area :

The study used a survey approach to examine e-learning attitudes of the students. The target population was the students studying in Hindusthan college of Arts and Science, Coimbatore. A total of 306 questionnaires were distributed among various discipline. It included Faculty of

Commerce, Visual Communication, Management, Computer Science and Bio Sciences.

Measurement :

Demographic profile of the respondents such as Gender, Age, and Discipline (Department) of student was covered in the first section. To draw a relationship between e-learning attitude and attitude towards computer technology are framed under the scaling which was determined. The scale on computer and e-learning attitude contained seventeen questions that covered variables on attitude and feelings towards computer/computer technology as well as e-learning. This was constructed to measure the attitude of students towards computer technology and e-learning on Likert scale.

Overview of data gathered :

A total of 306 questionnaires were distributed and it was considered for further analysis. Moreover, the data analysis and interpretation chapter will illustrate the overview of the sample profile. SPSS were used to analyze the questionnaire data and the subsequent data analysis were undertaken using statistical approach *i.e.* chi square analysis.

Hypothesis of the study :

$H0_1$: There is no significant difference of discipline of student on attitude for e-learning.

$H0_2$: There is no significant difference between the respondents perceived usage of E-learning and their different disciplines.

$H0_3$: There is no significant difference of respondents discipline of the study and sentiments towards e-learning.

$H0_4$: There is no significant difference of respondents discipline of study and their Computer/ E-learning fear.

$H0_5$: There is no association between discipline of student and their weekly Internet usage.

Data analysis and interpretations :

Section –I discusses about demographic characteristics (Table 1-3), *i.e.* Gender, Age, Discipline of the study. The sample size under the study had students from multiple subjects studying students from Hindusthan College of Arts and Science, Coimbatore.

Table 1 : Gender wise frequency distribution of the respondents

Gender	Male	Female	Total
Percentage	32.4%	67.6%	100%
Total	99	207	306

The Gender wise distribution of males and females in the sample as 32.4 % and 67.6% .

Table 2 : Age wise frequency distribution of the respondents

Age	< 20 Years	21-23	>23 Years	Total
Percentage	35.2%	62.7%	2.0%	100
Total	108	192	6	306

All of the respondents of the survey the total out of which 35.2 % were less than 20 years and they are all studying under graduate programs in various disciplines. 62.7 % were between 20-23

years and they are doing post graduation programs in various disciplines and 2.0 % were more than 23 years age group and they are pursuing research programs in various disciplines.

Table 3: Discipline wise frequency distribution of the respondents

Discipline of the study	Commerce	Visual Communication	Management	Computer Science	Bio Sciences	Total
Percentage	34.6	8.2	16.3	27.8	13.1	100
Total	106	25	50	85	40	306

The discipline under study had 34.6% representation from Commerce and 8.2% from Visual Communication followed by 16.3% and 27.8% from Management and Computer science. Representation from Bio Sciences discipline was 13.1%.

Table 4 : Discipline wise responds towards the provision of e-learning enhancements

Question		Discipline of the students				
		Commerce	Visual Communication	Management	Computer Science	Bio Science
Do you think that online availability of classroom lectures will enhance your learning?	Yes	94	7	39	73	35
	No	12	18	11	12	5

The students' response towards provision of e-learning when compared with the discipline to which the student belongs shows that students from all discipline are in favor of provision for e-learning facilities. Students agree that online availability of class room lectures will enhance their learning and they would also like to access classroom lectures enhanced their academic performance.

Table 5 : Discipline wise responds towards the provision of e-learning and its access

Question		Discipline of the students				
		Commerce	Visual Communication	Management	Computer Science	Bio Science
Would you like to access classroom lectures online also?	Yes	92	23	40	72	36
	No	13	2	10	13	4

The students' response towards provision of e-learning and its accessibility for their academic purpose, when compared with the discipline to which the student belongs shows that students from all discipline are in favor of provision for e-learning facilities. Students agree that online availability and its access in the class will enhance their learning was improved.

Table 6 : Discipline wise responds towards the provision of e-learning offered by the department

Question		Discipline of the students				
		Commerce	Visual Communication	Management	Computer Science	Bio Science
Do you think your department should provide e-learning facilities?	Yes	97	24	44	79	36
	No	6	1	6	5	3

The students' response towards provision of e-learning facility offered by the various disciplines (Department) which was significantly improved the student's academic performance. The above table reveals that the overwhelming response of the students was accepted and also availing the e-learning facility offered by the department.

Table 7 : Percentage wise E learning usage and its gratifications among the respondents

Dimensions	Sr. No.	Statement	SA	A	N	DA	SDA
Attitude towards e-learning	1.	I feel at ease learning about computer technology	53.2%	33.3%	12.4%	0.9%	0%
	2.	I am the type to do well with computer technology	56.2%	31.3%	11.1%	0.6%	0.6%
	3.	The thought of using computers is not frightening	25.4%	52.2%	20.2%	0.6%	1.3%
	4.	I do not feel threatened by the impact of computer technology	26.8%	51.6%	16.9%	2.6%	1.9%
Perceived usage of E-learning	5.	I feel comfortable about my ability to work with computer technology	22.5%	48.0%	25.8%	2.2%	1.3%
	6.	I like working with computers	34.6%	53.2%	9.4%	1.6%	0.9%
	7.	Once I get on the computer I find it hard to stop	9.4%	23.5%	38.5%	15.6%	12.7%
	8.	I would choose to use a computer in my spare time	23.2%	22.5%	24.8%	18.9%	10.4%
	9.	I prefer to use a computer to write my assignments	39.8%	33.9%	21.2%	3.2%	1.6%
	10.	I would choose to use computers in my seminar	21.5%	42.4%	15.6%	13.0%	7.1%
Sentiments towards E-learning	11.	E-learning is a suitable alternative to the pen/paper based system	26.7%	30.0%	37.5%	3.5%	2.2%
	12.	With e-learning my course will be more enjoyable	35.2%	58.1%	4.9%	0.9%	0.6%
	13.	Class notes of any lectures will be easily accessible even if I miss one	25.8%	37.5%	33.9%	0.6%	1.9%
	14.	With e-learning I would interact more with other students	16.9%	40.1%	30.3%	7.1%	5.2%
	15.	Studying through online medium will help me retain more	36.6%	38.5%	22.5%	1.3%	0.9%
Computer/ E-learning fear	16.	Physical presence of teacher is extremely essential for learning the course	20.5%	36.6%	22.2%	13.7%	6.8%
	17.	More topics can be covered in less time by use of e-learning as compared to conventional medium of blackboard and notes.	37.2%	32.0%	26.4%	1.9%	2.2%

SA- Strongly Agree, A-Agree, N-Neutral, DA-Disagree, SDA- Strongly Disagree

The study finds an overwhelming response from the respondents in favor of e- learning education as the major tool for their academic as well as seeking information and entertainment medium of communication in the study area. As shown in the Table 7 consists 17 statements related to e-learning attitude of respondents, perceived usages, Sentiments towards e- learning and their computer/

e- learning fear.

Attitude towards E- learning :

86.5% of respondents agreed that they feel at ease learning about computer technology, and also they believe that, 87.5% they do well with computers technology. This indicating the wide spread use of internet. A great majority of respondents consider internet as the very useful medium for the information. These are all clear from the respondents to the statements relating to the attitude towards e- learning.

Perceived usage of E- learning :

Accordingly 70.5% agreed that they feel comfortable about their ability to work with computer technology, it has been proven that their grown up with computer 87.8% of the respondents have been like to working with computers. 73.7% of the respondents prefer to use a computers to write their assignments indicates the reference of library sources is very less than internet surfing. 63.9% of the respondents specifically chosen to use computers for their seminars. However the response regarding their usage time is not highly favorable. 32.9% of the respondents agreed once they get on computer they find it hard to stop and 45.7% of them agreed they would choose to use a computer in their spare time.

Sentiments towards computer :

While comparing Internet and e- learning 93.3% of the respondents favored that e- learning of their course will be more enjoyable while e- learning by and large, is considered as a major tool of acquiring education in a simple and flexible way 75.1% of the respondents agreed that studying through online medium will help them to retain more and around 57% of the respondents agreed that e- learning education is the best backup for class notes of any lectures and its accessibility along with the interaction of other students if they missed one.

Computer/ E- learning fear :

According 69.2% of the respondents agreed that they feel more topics can be covered in less time by the use of e- learning. But 57.1% represented the physical presence of teacher is extremely essential for learning the course. However the equal response towards computer/ e- learning fear is found in this study which helps to determine the quality parameters of the education criteria as well as the student's knowledge.

Table 8 : Attitude towards e-learning among the respondents between various disciplines of the study

	Opinion	Observed value	Df	(O-E)2 /E	F	Sig.
Attitude towards e-learning	SA	124	(5-1)	4.74	9.488	Highly Significant
	A	129		27.53		
	N	46		3.77		
	DA	4		33.19		
	SDA	3		14.84		
	Total	306	N=5	84.07		

$H_0$1 : There is no association between the attitude towards e-learning among the students and their discipline of the study"

The above chi square table reveals that the calculated X^2 is 84.07 much greater than the table

value. Hence the null hypothesis $H_0$1. "There is no association between the attitude towards e-learning among the students and their discipline of the study" is rejected. Thus we can conclude that there is an association between the attitude towards e-learning and their discipline of the study.

Table 9 : Perceived usage of e-learning between the respondents various disciplines of the study

	Opinion	Observed value	Df	$(O-E)^2/E$	F	Sig.
Perceived usage of E-learning	SA	85	(5-1)	2.83	9.488	Significant
	A	109		9.20		
	N	75		3.11		
	DA	22		8.66		
	SDA	15		1.42		
	Total	306	N=5	25.22		

$H0_2$: There is no significant difference between the respondents perceived usage of E-learning and their different disciplines.

The above chi square table reveals that the calculated X^2 is 25.22 is greater than the table value. Hence the null hypothesis "$H0_2$ There is no significant difference between the respondents perceived usage of E-learning and their different disciplines" is rejected. Thus we can conclude that there is an association between perceived usage of e-learning and their discipline of the study.

Table 10 : Sentiments towards e-learning between the respondents various disciplines of the study

	Opinion	Observed value	Df	$(O-E)^2/E$	F	Sig.
Sentiments towards E-learning	SA	84	(5-1)	3.17	9.488	Significant
	A	127		25.25		
	N	63		0.05		
	DA	21		9.60		
	SDA	11		4.33		
	Total	306	N=5	42.4		

$H0_3$: There is no significant difference of respondents discipline of the study and sentiments towards e-learning.

The above chi square table reveals that the calculated X^2 is 42.4 is greater than the table value. Hence the null hypothesis "$H0_3$ - There is no significant difference of respondents discipline of the study and sentiments towards e-learning" is rejected. Thus we can conclude that there is an association between sentiments towards e-learning and their discipline of the study.

Table 11 : Computer/ e-learning fear between the respondents various discipline of the study

	Opinion	Observed value	Df	$(O-E)^2/E$	F	Sig.
Computer/ E-learning fear	SA	65	(5-1)	13.42	9.488	Highly Significant
	A	119		17.141		
	N	99		23.34		
	DA	12		20.32		
	SDA	11		4.33		
	Total	306	N=5	78.55		

$H0_4$: There is no significant difference of respondents discipline of study and their Computer/ E-learning fear

The above chi square table reveals that the calculated X^2 is 78.55 is greater than the table value. Hence the null hypothesis "$H0_4$ - There is no significant difference of respondents discipline of study and their Computer/ E-learning fear" is rejected. . Thus we can conclude that there is an association between Computer/ E-learning fear and their discipline of the study.

Table 12 : Frequency distribution of weekly usage of internet among various disciplines of the study

Discipline of the study	Less than 20 hrs	21-25 hrs	More than 25 hrs	Total
Commerce	37	42	27	106
Visual Communication	10	09	06	25
Management	17	20	13	50
Computer Science	32	33	20	85
Bio Science	10	14	16	40
Total	106	118	82	306

N= 306 df= 6 Calculated x^2 value = 4.783 Table value: 12.592

$H0_5$: There is no association between discipline of student and their weekly Internet usage.

The above table reveals that the weekly internet usage among the various disciplines of the respondents. Here the calculated value 4.783 is lesser than the table value. Hence the null hypothesis "$H0_5$ - There is no association between discipline of student and their weekly Internet usage." Is rejected.

RESULTS AND DISCUSSION

– The study consists the gender specified male and female response as 99 (32.4%) and 207 (67.6%), respectively.

– The study consist of 35.2 % were less than 20 years and they are all studying under graduate programs in various disciplines. 62.7 % were between 20-23 years and they are doing post graduation programs in various disciplines and 2.0 % were more than 23 years age group and they are pursuing research programs in various disciplines.

– The respondents studying various major subjects in the arts colleges. Out of the total sample, 34.6% representation from Commerce and 8.2% from Viscom followed by 16.3% and 27.8% from Management and Computer science. Representation from Bio Sciences discipline was 13.1%.

– The overwhelming response of the students agree that online availability of class room lectures will enhance their learning and they would also like to access classroom lectures enhanced their academic performance where commerce students preferred more.

– The majority of the students agree that online availability and its access in the class will enhance their e- learning which could be improved where as commerce and management students preferred at the high level.

– The overwhelming response provided by the students who are all accepted and also availing the e-learning facility offered by their department.

The results of chi square revealed that factor on attitude towards e-learning level through chi square is 84.07, the factor on sentiments towards computer/e-learning level through chi square is 42.4, and for computer/ e-learning fear level through chi square is 78.55 is much greater than the critic value. Hence the null hypothesis was not rejected i.e. there is no significant relationship exists between discipline of student and factors of scale on computer and e-learning parameters (Table

nos 8, 10 and 11).

The results of chi square towards the factor perceived usage of e-learning level is, 25.22 is little higher than the table value. thus the null hypothesis was not rejected and this shows that there is no significant relationship exists between discipline of students and the factor of scale towards the perceived usage of e-learning among the respondents

Weekly internet usage :

For examining the effect of discipline of student on their weekly Internet usage chi square test of association was used for attaining objective three. The calculated Chi-squared statistic came out to be 4.783 which is less than critic value. Hence, the null hypothesis of no association between discipline of students and their weekly Internet usage is rejected .

Conclusion :

The main contributions of this study are as follow. First, he research reveals that discipline of student (department) is not a significant criterion that affects attitude towards e - learning, sentiment towards computer and computer/ Technology fear which aligns with the findings reported by Dhiman *et al.* (2014); whereas a significant relationship exists between discipline of student and perceived usage of computers (Suri and Sharma, 2014). Chi square test of association disclosed that a moderate association exists between discipline of student and weekly internet usage. The connection/ association between discipline of student and weekly internet usage hints at the varied comfort evels that students will have from various disciplines with respect to usage of Internet/ computer technology. In the present scenario, a large scale implementation of an e-learning project can be carried out at lower cost since no significant difference exists across departments. This can help in lowering the financial burden. These results also reveal that online study enhances students' learning and that their department must provide e-learning facilities. These results can be used as inputs for proper implementation of e-learning process at any education setting. Proper analysis of the various discipline with respect to students' comfort with technology/ Internet usage should be done before implementing any technology based learning methodology.

REFERENCES

Bebetsos, E. and Antoniou, P. (2009). Gender differences on attitudes, computer use and physical activity among Greek university students. *Turkish Online J. Educational Technol.,* **8**(2) : 09,63-67.

Bhuvaneswari, A.S. and Padmanaban, T. (2012). Attitude of senior secondary students towards e-learning. *Elixir Educational Technol.,* **51** : 10886-10888.

Brumini, G., Spalj, S., Mavrinac, M., Bio6ina-Lukenda, O., Strujic, M. and Brumini, M. (2013). Attitudes towards e-learning amongst dental students at the universities in Croatia. *European J. Dental Edu.,* 18(1) : 15-23.

Dhunan, K., Saha, B. and Mondal, B.C. (2014). Attitude of University Students towards E-learning in West Bengal. *American J. Educational Res.,* **2**(8) : 669-673, doi: 10.12691/education-2-8-16.

Egbo, O., Okoyeuzu, C.R., Ifeonacho, I.C. and Onwumeru, J.U. (2011). Gender perception and attitude towards e-learning: A case of business students. *Internat. J. Computer Application,* **1**(2) : 135-148.

Ewell, P.T. (1989). Institutional characteristics and faculty/administrator perceptions of outcomes: An exploratory analysis. *Res. Higher Educ.,* **30**(2) : 113-136.

Hartnett, R.T. and Centra, J.A. (1977). The effects of academic departments on student learning. *J. Higher*

Edu., **48**(5) : 491-507.

Homan, G. and Macpherson, A. (2005). E-learning in the corporate university. *J. European Industrial Training,* **29**(1) :75-90.

Jamlan, M. (2004). Faculty Opinions towards Introducing e-Learning at the University of Bahrain. *Internat. Rev. Res. Open & Distance Learning,* **5** (2) :

Liaw, S.S. and Huang, H.M. (2011). A study of investigating learners attitudes toward e-learning, *5th International Conference on Distance Learning and Education,* 28-32.

Lam, P., McNaught, C., Lee, L. and Chan, M. (2014). Disciplinary difference in students' use of technology, experience in using eLearning strategies and perceptions towards eLearning. *Computers & Education,* **73** : 111-120.

Sambrook, S. (2003). E-learning in small organizations. *Education + Training,* **45**(8/9) : 506-516.

Suri, G. and Sharma, S. (2012a). Impact of age and internet access and usage on student's attitude towards e-learning: A study On Panjab university. *International J. Applied Services Marketing Perspectives* [Online], 188-194.

Suri, G. and Sharma, S. (2012b). Impact of internet access and usage on student activities on computer-A study on Panjab University, India. *IFRSA Business Review,* **2**(4) : 395-400.

Suri, G. and Sharma, S. (2013). The impact of gender on attitude towards computer technology and E-Learning: An exploratory study of Punjab University, India. *Internat. J. Engg. Re-search,* **2**(2) : 132-136

Suri, G. and Sharma, S. (2014). Students' attitude towards e-learning: A case study. *Skyline Business J.,* **10**(I).

Wang, Y. (2003). Assessment of learner satisfaction with a synchronous electronic learning system. *Information & Mgmt.,* **40**, 2003.

Umbach, P.D. and Porter, R. (2002). How do academic departments impact student satisfaction? Understanding the contextual effects of departments. *Research in Higher Education,* **43**(2), AIR Forum Issue 209-234.

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