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A Study on E-Learning and its Usefulness with Special Reference to Library and Information Science Education

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ABSTRACT

E-learning helps the users to learn or to access information over the network connectivity. The purpose of this study is to know about the usefulness of e-learning and its impact on higher education and also in Library & Information Science (LIS) education. For the research work, 340 responses were collected from the LIS professionals and LIS students with the help of questionnaire form. The collected data highlights that most people are using the e-learning process for their teaching-learning and some other purposes. And for that, they are using various platforms, like Swayam, e-PG pathshala, etc. The study concluded that they are finding more reliability while studying from the electronic learning process.

Keywords: e-learning initiative, E-learning, e-PG pathshala, Information and Communication Technology (ICT), Library and information science education, Online education, Swayam

INTRODUCTION

E-learning, the most used term in this digital era. It made tremendous changes in the education system. It helps the netizens to access their required information remotely. It is an application of Information and Communication Technology (ICT). E-learning can also be called as Electronic learning, online learning or online education, etc. As its name says e-learning, this 'E' indicates to Electronic, it means to access the information, the user needs an electronic device, which can be a PC, laptop, Mobile phones etc. E-learning plays a major role in today's education system. It helps in developing the creativity of learners and helps them in taking out their skills. To learn something, there is a need for E-learning platforms, where they can search for their information by their subjects. E-learning platforms are becoming the most essential tool to access information. There are many platforms made by the government, various associations, information centers, etc. to give online education to the learners. Some e-learning platforms are synchronous and some are asynchronous. Synchronous, refers to learning something both learners and instructors have to be online, which means is real-time connectivity. And in an asynchronous learning system, learners and instructors don't have to stay online. Learners can access information by 24*7 and 365 days in a year.

E-learning can be instructor-led or without instructors. In the present era, many e-learning platforms are there which are giving courses along with certificates for diploma on any particular subjects. Learners can take the course anytime and after completion of the course, they will get certificates.

About e-learning and its Initiatives

There are many e-learning initiatives, which are made by the Govt. of India and also by some associations.

Some definitions of e-learning are given as follows:

According to Cambridge University Press, "E-learning means learning done by studying at home using computers and courses provided on the internet."

According to Market Business News, "E-learning refers to a learning system that we can obtain through the internet using an electronic device. We also called it 'Online learning' or 'Online education'. The 'e' in e-learning stands for 'electronic'. Hence, the original term is 'Electronic learning'."

According to Wikiversity, "E-learning is a learning environment that uses information and communication technologies (ICT's) as a platform for teaching and learning activities. It has been defined as 'pedagogy empowered by technology', though 'digital technology' is more accurate."

Some examples of e-learning initiatives, which are taken out by the Govt. of India and other Universities are briefly as follow as:

i. **Swayam**: Swayam or Study Webs of Active-Learning for Young Aspiring Minds, is a platform for e-learning, initiated by the Govt. of India and developed by the Ministry of Human & Research Development (MHRD) with the help of All India Council for Technical Education (AICTE) and Microsoft. It came into existence in the year 2014. It provides Massive Open Online Courses to the e-learners (from class 9 to post-graduation). It can be accessed by anyone and from anywhere.

The courses provided by Swayam are in 4 sections, i.e.; video lecture, specially prepared reading material and it can be downloaded and printed by the learners, self-assessment tests through tests and quizzes and an online discussion forum so that learners can clear their doubts. And after the completion of course, learners can register for a certificate and for that they have to pay a little fees.

ii. **National Digital Library of India (NDLI)**: It is a virtual repository of e-content on multiple disciplines from primary to PG levels. The NDLI has sponsored by National Mission on Education through Information and Communication Technology (NMEICT) and was funded by the Ministry of Human Resource and Development (MHRD) and developed by Indian Institute of India (IIT), Kharagpur. It has 4.3 crores content, which includes text / audio / video / simulation / graphics, harvested from 250 sources. It provides education in 300+ languages. NDL has 55 Lakhs + registered users. It provides courses in schools, colleges, engineering, humanities, science, literature, law & management.

iii. **E-PG Pathshala**: MHRD have developed an e-learning initiative under National Mission on Education through Information and Communication Technology (NMEICT). It is a gateway for e-books of 70 subjects' up to PG level which provides curriculum based good quality and interactive content in different subjects of all disciplines.

iv. **Swayam Prabha**: It provides high quality educational programs 24*7 through 32 DTH channels. Around 56,000 total videos have been telecasted covering school & higher education. It has 3+ crores total views on YouTube since inception. The channels are linked from BISAG, Gandhinagar. NPTEL, IITs, UGC, IGNOU, NCERT etc. are providing the learning contents to the Swayam Prabha, so that learners can utilize it.

v. **Shagun Online Junction**: The e-learning platform was initiated by MHRD. For the students of schools. It is known as one of the world's largest integrated online junction for school education. The

word Shagun is mainly derived from two words- 'Shala' means Schools and 'gun' means quality.

vi. Virtual Labs: The e-learning platform is initiated by MHRD, Govt. of India under the NMEICT. The platform is a consortium activity of twelve participating institutes along with IIT Delhi as a coordinating institute. It has developed Web-enabled curriculum based experiments designed for remote – operation. It has a total 100 virtual labs which consist of 700+ web enabled experiments, and were designed for remote-operation and viewing. School students and students and teachers from the other discipline, like engineering, humanities etc. can be the beneficiaries of this e-learning platform.

vii. VIDWAN: It is an Expert Database and National Research Network which has collections of profiles of scientists/researchers and other faculty members, who were working at leading academic institutions. The online learning platform was initiated by MHRD, Govt. of India under NMEICT. The databases of VIDWAN is now developed and maintained by the Information and Library Network Centre (INFLIBNET).

Some e-learning initiatives in the field of Library and Information Science Education are briefly discussed below:

a. Indira Gandhi National Open University (IGNOU): The largest open university of India was established by an Act of Parliament in the year 1985. The university is offering a teaching-learning process through the Open and Distance Learning (ODL) mode. The university is offering various courses. In the field of LIS Education, it provides Bachelor Degree for 1 year duration and Master's degree for 1 year duration.

b. Vidya Online: It is a venture of Vidya Sagar University, West Bengal. The e-learning platform is developed for Library and Information Science education in India.

c. NPTEL: In the year 2003, Indian Institute of Technologies or IITs (Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati and Roorkee) and Indian Institute of Science (IISc), Bangalore had developed an e-learning initiative i.e., NPTEL (National Programme on Technology Enhanced Learning). The initiative was funded by the Ministry of Human Resource and Development. At present time, it provides civil engineering, computer science & engineering, electrical engineering, electronic & communication engineering and mechanical engineering and 235 courses in video format. NPTEL is also providing certificates after the completion of course.

d. e-Gyankosh: It is a national digital repository in which information can be stored, indexed, preserved and disseminated to the learners. E-Gyankosh is now maintained by IGNOU (Indira Gandhi National Open University).

e. YALSA: The Young Adult Library Services Association (YALSA) is an e-learning initiative developed for LIS education. The association helps in empowering library staff to help teens succeed.

f. SLA: Special Libraries Association is a non-profit global organization which is made for information professionals and their strategic partners in business, government; academic institutions etc. The association holds webinars or online seminars, meetings, conferences for the LIS professionals as well as LIS students.

Advantages of e-learning

The advantages of using e-learning for education process are discussed below:

● It saves the time of the learners. Students or teachers do not have to attend classes in the

institutions. They can study from anywhere and at any time.

- It is cost effective. The learners who are unable to afford books or documents can study online on e-learning platforms.

- It helps in creativity development of the learners. It is a way to developed personal skills of the learners.

- Through the synchronous teaching-learning method, both instructor and learners can interact with each other, which helps the learners to understand something in a better way.

Learners also can submit their assignments and give their examinations after the completion of course.

Disadvantages of e-learning

Every prospect has two sides- positive and negative. Hence, e-learning also has two sides. Likewise its advantages, it also has disadvantages. The disadvantages of e-learning are as follow as:

- It creates digital divide problems among the learners. Means, all the learners cannot afford electronic devices, that's why poor students cannot learn anything. They have to go to institutions to study and to complete their course.

- In the rural areas in India, there are so many network problems, for which users cannot access the information easily.

- There are some security problems in e-learning. Therefore, many users do not use these e-learning for learning processes.

- In asynchronous learning processes, sometimes learners face problems while studying. It is because they can't understand the learning objects.

Objectives

i.   To define the uses of e-learning;

ii.   To know the most used e-learning initiatives by the users;

iii. To know, how e-learning effects on LIS education;

iv.   To find out, which e-learning initiatives are taken for higher educational institutions in India;

v.   To find out the importance of e-learning or online learning.

RESEARCH DESIGN

Statement of the Problem

Online education or e-learning is playing a very important role in the education system. It helps the learners to learn something from anywhere and at any time. Learners are using various e-learning platforms for different purposes. So, it is very much necessary to know which e-learning platforms are mostly used by the user and for which significant purpose.

Hence, the problem of this research study is "A study on e-learning and its usefulness with special reference to library & information science education".

METHODOLOGY

In the present study survey method has been used for the collection of data and an online questionnaire tool, made using Google Docs has been circulated amongst the LIS professionals as well as students. This questionnaire is basically a combination of both closed-ended and open-ended questions. A total number of 340 responses have been received by the e-learning users of India. For the analysis of data, MS-excel has been used and through various charts it has been interpreted.

LITERATURE REVIEW

Saifi *et al.* (2018), in their paper "Effects of E-learning on students' academic learning at university level" states that, e-learning helps the students, so that it can

help in their learning process, because, it is time flexible to the students and they found it comfortable for browsing and surfing the internet.

Khan and Ahmad (2006) in their paper "Role of e-learning Library and Information Science" discussed e-learning for its learner and instructor and how it can be pursued and managed in a digital library environment and its impact on teaching in Library and Information Science.

Alexander (2001) in her paper "E-learning developments and experiences" studies that e-learning helps in improvement of understanding of concepts, in which students were finding difficulty, through the use of interactive multimedia animations, through the use of interactive multimedia animations, simulations and micro worlds. It enhances the communications between students and the lecturers.

Arkorful and Abaidoo (2014), in their paper "The role of e-learning, the advantages and disadvantages of its adoption in Higher Education" showing the effectiveness of using e-learning in teaching in tertiary institutions.

K.B. and A.N. (2018), in their research paper "E-learning initiatives in technical education: India's perspective" states that e-learning helps in technical education to develop critical skills of students of technical education.

Babu and Sridevi (2018) in their paper "Importance of e-learning in higher education: A study" states that utilization of modern ICT for teaching-learning is very important. And it can be made effective by improving network connectivity, software, and appropriate content etc.

Goyal (2012) in his paper "E-learning: future of Educations" discussed the significance of e-learning in modern education. E-learning gives the advantages to access to information to the learners 24*7 and 365 days a year. E-learning is a very interesting and entertaining way of learning and from these statements; it can be said that it will soon replace the traditional methods of learning, i.e., paper books in the form of touch screen tablets.

Ravi and Mohan (2005), in their paper "E-learning: a new way of library and information science education through distance mode" shows that the challenges faced by the Indian universities can be solved by implementing e-learning mechanisms which are for LIS education to fit into the e-learning environment and it will help the learners to learn through distance mode.

Noesgaard and Orngreen (2015) in their paper "The effectiveness of e-learning: an explorative and integrative review of the definitions, methodologies and factors that promote e-learning effectiveness" shows that e-learning is the solution for an effective learning process.

Chandwani and Anilkumar (n.d.), in their paper, "E-learning initiatives in India" states about concepts, tools and initiatives taken by several institutions and library centers in India as well as around the world. They revealed the e-learning initiatives in LIS field, which are SLA (Special Libraries Association), NELINET, IMARK, LEAD, ACRL, YALSA, RUSA etc.

Velmurugan and Ramasamy (2015) in their paper outline of "E-learning initiatives for librarians" studies about understanding of e-learning for e-learners and characteristics of e-learning. It also studies the changing role of information centers and LIS professionals in the e-learning environment.

DATA ANALYSIS AND INTERPRETATION OF THE STUDY

The purpose of this research was to know the e-learning initiatives and its uses in the teaching-learning process of LIS professionals. So, here the analysis parts of this research study:

Purposes of using e-learning by the users

From the data analysis, I got the following results, which shows that among the 340 respondents 140 (41.2%) are using e-learning for teaching purpose as well as 264 (77.6%) are using for learning purpose, 192 persons (56.5%) are using e-learning for their research purpose and 4 person (1.2%) are using for other purposes in Figure 1.
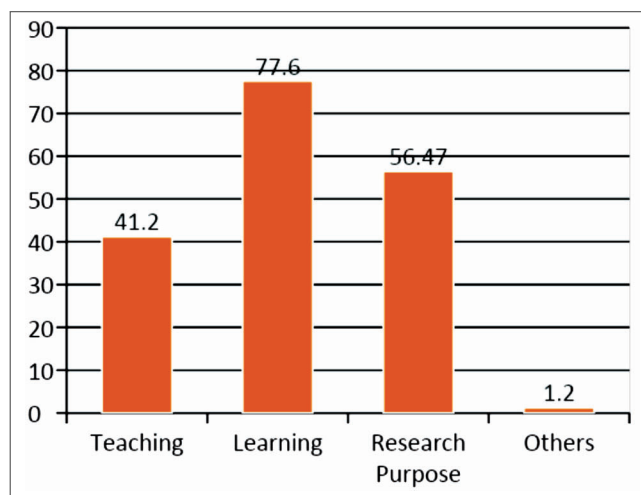

Figure 1: Purposes of using e-learning

The mostly used e-learning platform by the users

The mostly used e-learning platform by the various users are, among the 340 respondents 216 person (63.5%) are using Swayam platform, 44 (12.9%) are using VIDWAN online platform, 220 (64.7%) are using e-PG pathshala, 16 (4.7%) are using Shagun Online Junction, 112 (32.9%) are using NPTEL, 48 (14.1%) are using Swayam Prabha, 208 (61.2%) are using NDLI platform, 12 (3.5%) are using Virtual lab and 20 (5.8%) are using other different platforms in Figure 2.

Impacts of e-learning on teaching-learning process of the users

E-learning has different effects on the teaching and learning process of the users. From the data analysis I got the following results. Among the 340 respondents,
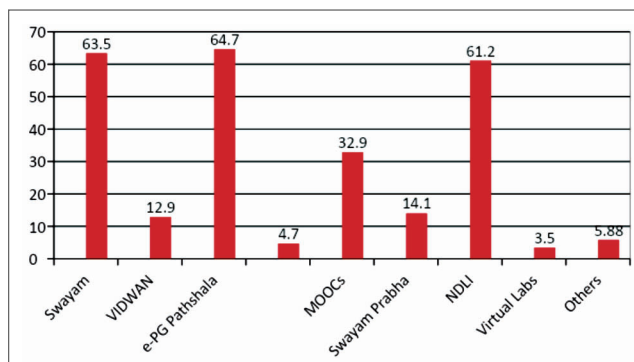

Figure 2: Mostly used e-learning platform by the users

50.6% are saying that it is cost-effective, 47.1% are saying it is time flexible, 36.5% are saying that it helps in developing plans in their learning process, according to 51.8% respondents it helps in improving communication among all the learners, 27.1% respondents are saying that it helps in management of time in their learning process, 57.6% respondents are saying it helps in developing their skills, and 63.5% are saying that it helps in remote access to their information, which they needs in Figure 3.

E-learning initiatives taken for higher education in India: according to users perspectives

From the analysis of data, I got the following results. Among the 340 respondents, 260 users (76.5%) are saying that Swayam is taken in the higher education in India, 152 users (44.7%) saying that NPTEL is taken
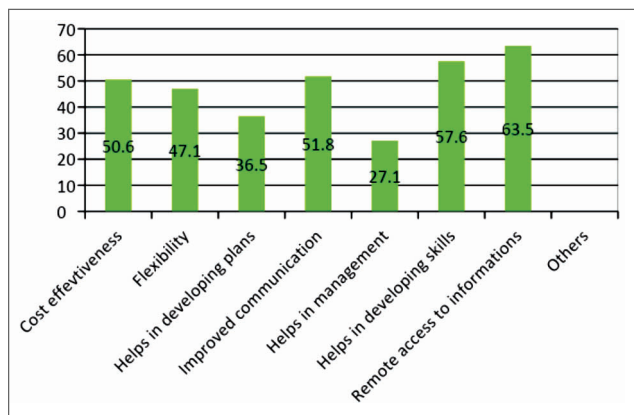

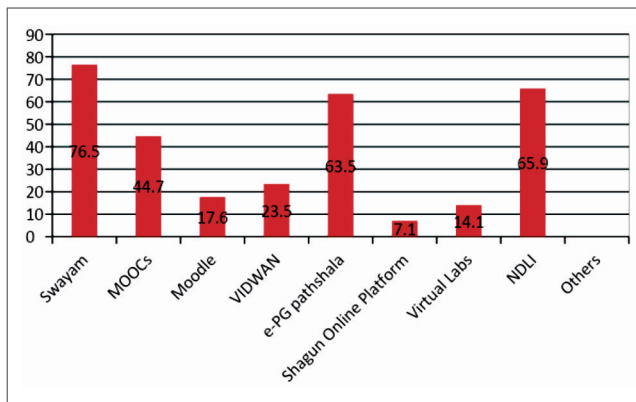**Figure 3: Impacts of e-learning on teaching-learning process**

Figure 4: E-learning initiatives taken for higher education in India

for the higher education, 60 users (17.6%) are saying that Moodle is taken for the higher education, 80 person (23.5%) are saying VIDWAN is taken for the higher education in India, 216 (63.5%) are saying e-PG pathshala are taken by the higher educational institutes in India, 24 (7.1%) are saying Shagun online junction is taken for the higher education, according to 48 (14.1%) Virtual labs are taken for higher education and 224 respondents (65.9%) are saying NDLI is taken for higher education in India in Figure 4.

Usefulness of e-learning

From the data given by 340 respondents, I found that 90.6% of respondents are saying that the e-learning is very useful for the teaching-learning and other purposes and the remaining 9.4% are saying that the
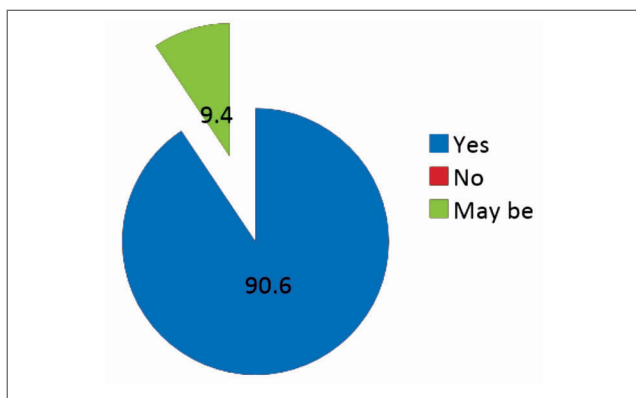

Figure 5: Usefulness of e-learning

e-learning is useful somewhere in their learning process in Figure 5.

Importance of e-learning for education

From the data analysis, the data are showing the following results. Among the 340 respondents, 228 (67.1%) are saying that it improves their learning quality, 136 (40%) are saying that it helps in creativity development, 172 (50.6%) are saying it helps in enhancing the efficacy of knowledge, 168 (49.4%) are saying it individualize the learning experience of users, 176 (51.8%) are saying that through the e-learning platforms learners can share their ideas with everyone and 232 (68.24%) are saying that it helps in finding information in Figure 6.
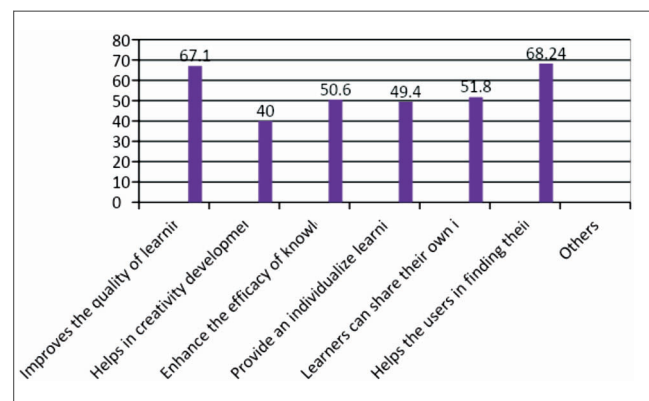

Figure 6: Importance of e-learning for education

Most useful e-learning for the users

From the data analysis, I found that, 244 persons (71.8%) among the 340 respondents are saying Swayam is most useful for learning, 40 (11.8%) choose VIDWAN as useful e-learning initiatives, 132 (38.8%) choose NPTEL as useful e-learning initiative, 80 (23.5%) choose Swayam Prabha, 180 (52.9%) have choose NDLI, 40 (11.8%) have choose Moodle, 20 (5.9%) have choose Shagun, 236 (69.4%) have choose e-PG pathshala and remaining 4 users (1.2%) have choose other platforms (e.g. YouTube etc.) as most useful e-learning initiatives in Figure 7.
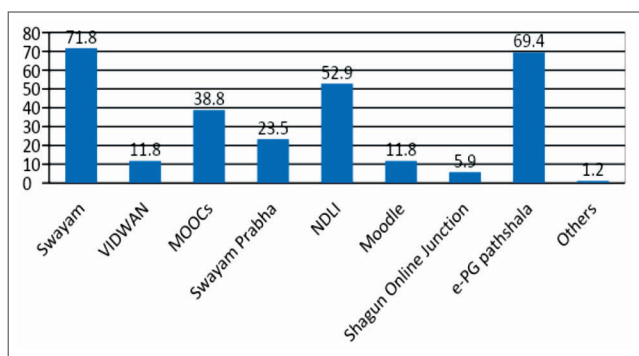
Figure 7: Most useful e-learning for the users

Most useful e-learning initiative for Library and Information Science (LIS) education

There are different e-learning initiatives developed in the field of LIS education. From the analyzing of data, I got that 208 (61.2%) are using IGNOU for LIS education, students get more information from the IGNOU online courses, 24 (7.1%) are using Vidya Online for LIS education, according to 204 (60%) e-PG pathshala is more useful, because it has full text database of every topics of Library and Information Science, 120 (35.3%) choose NPTEL for Information science, 180 (52.9%) saying eGyankosh as most useful e-learning platform for LIS education, 52 (5.3%) have choose YALSA as useful online learning platform for LIS education, 84 (24.7%) have choose SLA as one
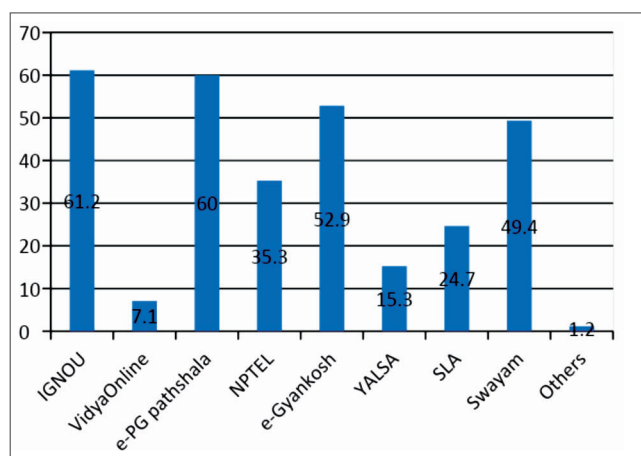

Figure 8: Most useful e-learning initiative for Library and Information Science (LIS) education

of the useful e-learning platform in LIS field, 168 respondents (49.4%) are saying that Swayam as useful e-learning for LIS education and 4 (1.2%) have choose other e-learning platform (e-Shodh Sindhu) for LIS education in Figure 8.

Barriers of using e-learning platforms

From the collected data of the 340 respondents, I got the following result which shows that which are creating problems in online learning process of the netizens. 52 respondents (15.3%) says that e-learning process is somewhere expensive for which, many people are unable to learn from it. 252 (74.1%) peoples are facing networking problems, because it creates difficulties to study from online. 64 (18.8%) respondents are facing problems while studying, because they were unable to understand the content sometimes, 56 (16.5%) respondents are finding problems in contents of the documents they are searching for, because the contents are not inappropriate, 68 (20%) are finding problems because of time flexibility, the problem they found in synchronous online learning. 88 (25.9%) respondents are finding problems in software, as we all know that to learn something in online platform we need software, so sometimes software problems are arises during the study process. 180 (56.5%) users are finding technical problems in their teaching learning activities. 92 (27.1%) respondents getting security problems, because we, the netizens know that there are many cyber related issues which are effecting in users learning process. 140 (41.2%) are unaware of better e-learning platforms for their learning. And 4 (1.2%) are facing other problems in their learning process in Figure 9.

Online learning decreased the value of traditional learning method

After the analysing of data, I found that out of 340 respondents, 20 (5.9%) are strongly agree with it that the e-learning has decreased the value of traditional
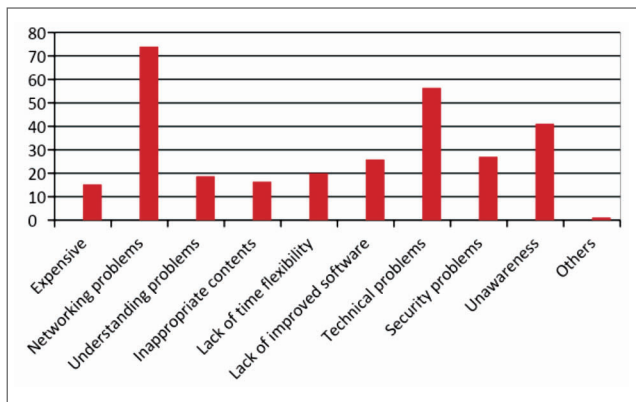
Figure 9: Barriers of using e-learning platforms

learning method, 76 (22.4%) are somewhere agree that e-learning has decreased the value of traditional learning, 116 (34.1%) are neutral with the statement because they believe that online learning and traditional learning method both are equally most important for education. 76 (22.4%) respondents out of 340 disagreed that online learning has decreased the value of traditional learning method and 52 (15.3%) users out of 340 strongly disagreed that the e-learning has reduced the value of traditional method of learning in Figure 10.

The time spend by the learners in e-learning process

From the data analysis, I came to know that, 124 users (36.5%) out 340 are spending 2 hour for e-learning process, 100 (29.4%) are spending 4 hours in e-learning,
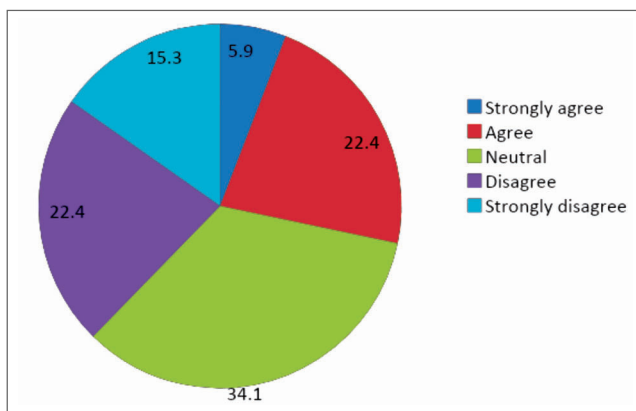

Figure 10: Online learning decreased the value of traditional learning method
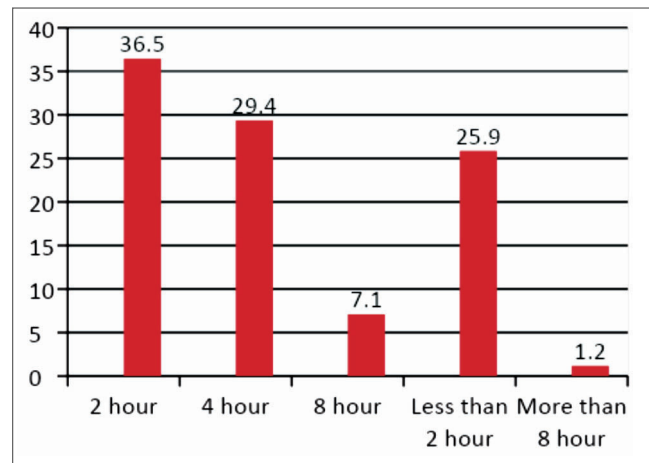

Figure 11: The time spend by the learners in e-learning process

24 (7.1%) are spending 8 hours for studying through e-learning process, 88 (25.9%) are spending less than 2 hour in e-learning process and remaining 4 (1.2%) are spending more than 8 hours in e-learning process in Figure 11.

FINDINGS AND CONCLUSION

I conclude the study with the following findings. We came to know that e-learning holds an important place in learners' education. From the above discussions we can know that 77.6% people are using e-learning platforms for their learning process, 56.5% are using it for their research purposes and 41.2% are using e-learning for teaching. People use most useful e-learning platforms for their study purpose, amongst them the most used e-learning platforms are e-PG pathshala (64.7% of the total respondents are using this platform), Swayam (63.5% are using this platform), NDLI (61.2% are using this) and NPTEL (32.9% are using this) etc.

E-learning has effects differently on learning. Approximately 63.5% users are saying that e-learning helps remotely accessing the information at any time. 57.6% users are saying that it helps in developing skills of personnel's, 51.8% are saying it improves the communication among all the learners from all over the world, 50.6% respondents says that the e-learning

process is cost-effective, 47.1% are saying it as time flexibility, because learners can learn anytime without any difficulties because of its 24*7 hours availability. 36.5% of users are saying that it helps in developing plans etc.

There are so many e-learning initiatives there, which are taken for higher education in India. Those are Swayam, NPTEL, Moodle, e-PG pathshala, NDLI, Shagun online junction etc. On the other hand, the useful e-learning initiatives, which are taken in the field of LIS education are; IGNOU, VidyaOnline, e-PG pathshala, NPTEL, e-Gyankosh, YALSA, SLA, Swayam etc.

Most of the online learners are frequently facing many problems which hinder their studying. As we know that for e-learning, we have to spend some cost, which creates a digital divide among the net users, because all the online learners are equally not able to afford online learning whenever they want. The other problems which users face during their learning are, they are facing networking problems very frequently. Some of the learners are finding problems in the contents of the learning objects, according to them it is not appropriate and some are irrelevant for them, the problem arises because of the explosion of information. Some online users are facing problems during the synchronous (real time online teaching-learning process) online learning, because all the learners are equally not getting time for their online classes and also unaware of the exact online learning platform from where they can learn on time.

So, from the above discussions we came to know that e-learning is becoming most useful for learning for the users.

SUGGESTIONS

Suggestions on a topic helps in developing new ideas and further research processes. Hence, on the basis of the above discussed topic the following suggestions are put forward:

i. Improvement of new e-learning initiatives will help in betterment of e-learning process.

ii. It is very important to hold online meetings, so that people can know more about e-learning.

iii. Solving the networking problems in the rural areas of India will help the learners, so that learners from the rural or hilly areas can get access to the information easily.

iv. The courses offered by the many e-learning initiatives should be less cost effective, because for all the e-learners it is not easy to pay much for the degree of the course they have taken. It will help those learners, who were unable to complete their traditional method learning because of the financial problems.

v. The e-learning contents should be diagrammatic with animation so that it can help the learners in better understanding.

vi. It should focus on more skill development of the learners, and also should give the chances to the learners so that they can share their ideas with everyone.

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