Impact of M-Learning & O-Learning in Libraries

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Abstract: *Mobile devices have become an essential part of our everyday life. On public transport, in restaurants and during lectures people are actively using mobile devices. After the effect of computers and their application in education the introduction of E-Learning & M-Learning continuing transforming that were occurring in education. The positive impact of M-Learning and O-Learning on education not only enhanced the educational process but also it bringing the students and the teacher on one platform. In learning environment, smart devices enable instant communications between an educator and a learner. Classroom learning gives instructors and learners increased flexibility and new opportunities for interaction alongside Mobile Learning (M-Learning). Mobile learning is advantages of classroom teaching. This article revels with the changing forms of teaching-learning process. This paper describes the library services and uses of explanation and put forward the importance of M-Learning, E-Learning. ICTs system can also change the library services and effective environment for user in library. It describes O-Learning and its characteristics.*

Keywords: *Mobile, Internet, Mobile Learning, Library, E-Learning & O-Learning.*

I. INTRODUCTION

In this present era, when people carry Smartphone in their pocket alongside internet; teaching and learning must obviously reconsider. As today's cellular phones have more features and capabilities than ever before, including mp3 players, picture messaging, streaming video, and. become more data-capable, fewer people need a computer to collect information. People use a cell phone as their primary interface for surfing the Web, listening to music, watching television, reading books, and interacting with friends. So over the past ten years, the mobile phone has become one of the major interfaces people use to access and share information. Since the first iPhone was invented in 2007, mobile devices have progressed from a convenience in our daily lives to a necessity. In higher education, the use of mobile technologies in learning has also increased rapidly over that 10-year period. M-Learning can be interpreted as learning via mobile devices. Recent development of mobile and wireless technologies opened up new possibilities in knowledge acquisition and learning experience. These unique features are drawing worldwide attention to the potential of M-Learning in transforming the education landscape, as learners are now feasible to access, share and create knowledge anytime and anywhere. This scenario motivates learners to actively participate in their learning, impelling a change from the traditional knowledge transmission approach to a learner-centered knowledge construction paradigm. Given the new forms of learning mentioned above, it is impossible for libraries to ignore the potential impacts arising from m-learning, especially when mobile devices have already become major information accessing tools by their patrons. As most library users owning a mobile phone, and increasing numbers of these being smart phones, it is time for libraries to take advantage of mobile technology. M-Technology will help both novice and experienced librarians to stay relevant in an increasingly mobile society. They need to be aware of technological changes, peer forward, and prepare for the future of library mobile interaction. Librarians must be commensurate with this trend and integrate themselves into the mobile realm if they wish to deliver enhanced user services.

II. LITERATURE REVIEW

The purpose of the review of related literature is to gain background knowledge of the research topic. A relevant study on the review can help the researcher to formulate a sound research design and preparing appropriate tools for the successful completion of the study.

According to Li, Lou, Tseng, & Huang (2013), this scenario motivates learners to actively participate in their learning, impelling a change from the traditional knowledge transmission approach to a learner-centered knowledge construction paradigm.

Fok (2012) says that Mobile learning (m-learning) can be interpreted as learning via mobile devices. Indeed, there is already a long history of human applying technologies to learning activities.

Zaheer Polsani (2003) defined that "M-Learning is a form of education ehose site of production, Circulation and consumption is the network.

According to Binasaleh (2013), these unique features are drawing worldwide attention to the potential of m-learning in transforming the education landscape, as learners are now feasible to access, share and create knowledge anytime and anywhere.

Objectives
The objectives of the study are as follows-
1. To find out the advantages of M-Learning.
2. To find out the advantages & importance of O-Learning.
3. To find out the importance of E-Learning.
4. To find out M-Technologies' importance for user inside library.
5. To discuss M-Learning & O-Learning are curse or bless.
6. To ascertain users' opinion with regards to usefulness of M-Learning services.
7. To suggest the solution to the concern authorities to overcome the problems.

III. METHODOLOGY

A pilot survey was done initially at the first stage of this study. Based on the pilot survey, a questionnaire was designed. Simultaneously for this study, data has been collected via telephone also. Data collected through questionnaires and interviews were processed into tabular form followed by interpretation and conclusion. In this study, we employed a quantitative questionnaire to collect the responses. The questionnaire contains 16 questions. The questionnaire was distributed via Google form. Online forms were distributed among few students, staffs & teachers & others from different institute in west Bengal to collect data about M-Learning & O-Learning. Users' opinions were taken through the interview also. The respondents are Students, Faculty, Technical Assistant, and Librarian & Others.
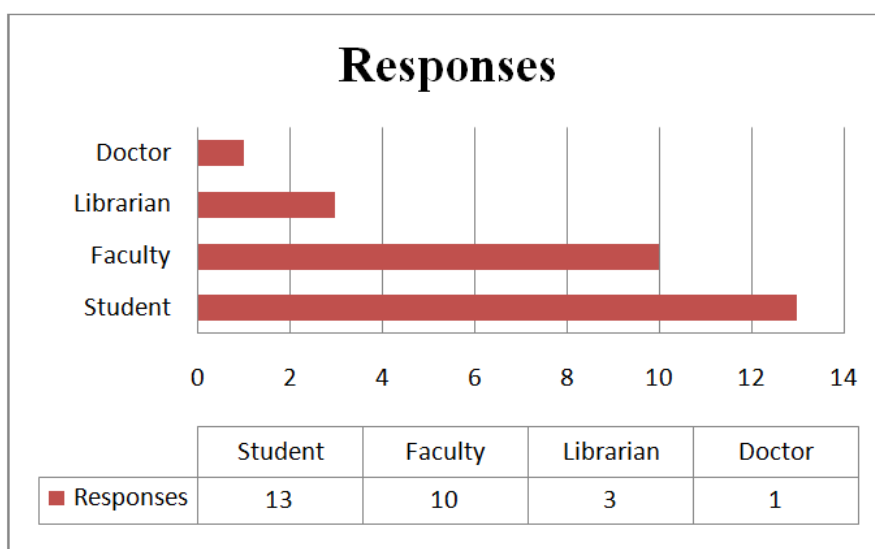

	Student	Faculty	Librarian	Doctor
■ Responses	13	10	3	1

Figure: 1
This **Figure: 1** revels total respondent from those is interested about this.

Online Learning with M-Technology
It wasn't too long ago that workplace training involved primarily face-to-face, classroom-based learning. A lot has changed since those days, however. Today, with rapid advances in technology, e-learning has quickly become the new norm. E-learning was developed to adapt to our growing online presence. But as that online presence itself starts to shift to mobile. Like e-learning, m-learning materials can be accessed online through various electronic devices. Mobile training, however, is designed specifically for users who are on the go and not tied to a single personal computer. As mobile devices become the dominant way in which we access

the web, m-learning will start to play a more important role in the online learning sphere. M-learning isn't necessarily going to replace e-learning, as some material may be too complex for a mobile platform. Instead, it is likely to supplement e-learning. By making online training available on different platforms, you can appeal to a wider variety of learning styles and techniques. This helps ensure learners are getting the full training experience. With the right learning management system (LMS), it's easy to offer training on phones, tablets, laptops, Macs and PCs, through any web browser, all using the same system. Despite the advantages of using mobile devices for online collaborative learning, users face a possible loss of functionality. We have mentioned below few online courses, where 497 videos & 433 tutorials can access by users via online from NPTEL.

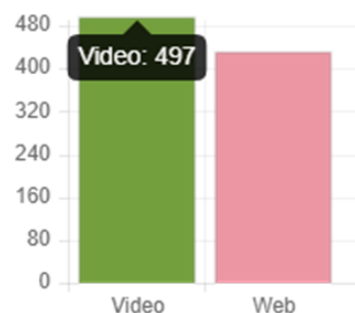| Content	No. of Courses
Video	497
Web	433
Total	930
NPTEL Courses Content Wise	

Figure: 2

Figure: 3

Figure: 2 & Figure: 3 has been figure out few content wise courses NPTEL as example of online courses.

E-Learning with changing nature of Classroom

The uses of computers can change the nature of teaching and learning at its most basic level. Electronics learning from Mobile & others electronics accessories that is learning across the web provides the necessary information, it can never replace classroom teaching totally. E-learning can't totally replace classroom teaching; the reason behind it is that classroom teaching involves face to face interaction with your students. Traditional classroom learning & modern technological learning are allows learners to interact with instructors in a live environment. Classroom training is not usually repeated where as with e-learning, it is possible to take the course multiple times. We recommended a question "Can Online Learning changes the nature of Classroom Teaching?" According to their response we have put forward a hart regarding this.

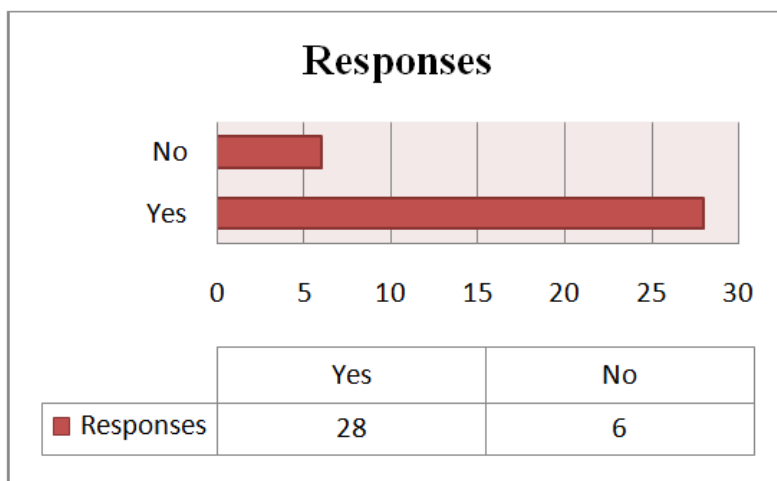|	Yes	No
■ Responses	28	6

Figure: 4

From Figure: 4 the above tabulated data it is observed that the number of respondent i.e. 28 of total respondents said that E-Learning can change the nature of classroom and no of 6 of them said E-Learning cannot change the nature of classroom. They have put forward that within short time possible to discuss syllabus and studying, not interfere between students and teachers. Discussion any questions are very difficult. So it is ascertained from the above table that maximum numbers of respondents take interest about usefulness of E-Learning. It's shown clearly in the below figure.

M-Learning can have positive effect on classroom learning

M-learning is defined as technological based learning. Lectures, homework's, quizzes and exams are delivered almost completely anytime. M-learning is increasing gaining respect with E-learning innovative and visible pedagogical tools. Face to face classroom learning that centers on instructors dictating contents and pedagogy. M-learning is a more learner-friendly, also allowing the role of to be quit environment. If anyone involves with full-time job, they may need a degree program that suits your busy schedule. On the other hand, a suitable time schedule may be less important for full-time learners. O-Learning provides many channels through which learners and instructors interact with each other, through E-mail, chatting, and video conferences. Teaching learning on campus provides communication through the same channels with the addition of in-person with classroom opportunities.

Discipline	No. of Courses		
Aerospace Engineering	37	Humanities and Social Sciences	46
Atmospheric Science	4	Management	33
Basic courses (Sem 1 and 2)	38	Mathematics	57
Biotechnology	24	Mechanical Engineering	132
Chemical Engineering	71	Metallurgy and Material Science	31
Chemistry and Biochemistry	33	Mining Engineering	2
Civil Engineering	100	Nanotechnology	5
Computer Science and Engineering	81	Ocean Engineering	19
Electrical Engineering	68	Physics	38
Electronics & Communication Engineering	74	Special Series	4
Engineering Design	11	Textile Engineering	16
Environmental Science	3	**Total**	**920**
General	3		

Below is an NPTEL statistics showing where the courses are mentioned. Where we recommended online courses anyone can choose.
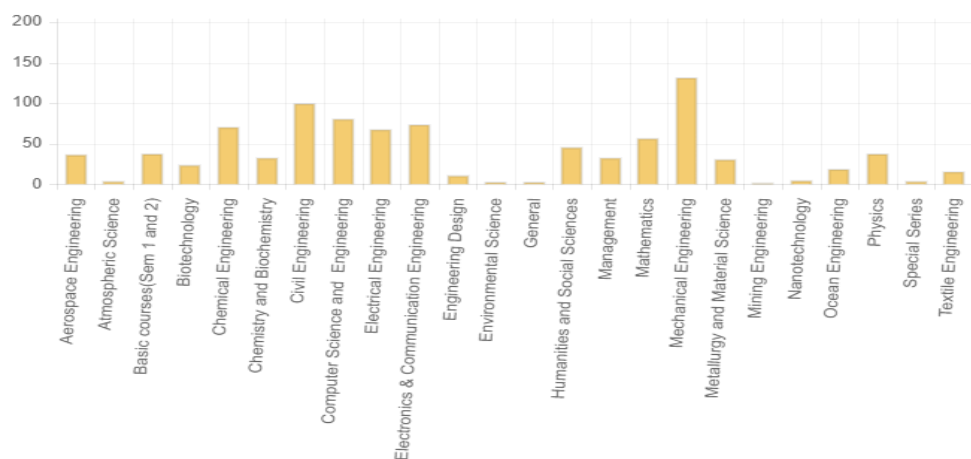

Figure: 5

From Figure: 5 most of online course are from Engineering disciplines. It is better for Engineering students & Faculties to improve their knowledge and as well as their future also.

M-Learning & Classroom Learning Statistics

The traditional classroom education experience requires learners to attend classes, on a campus. This is still the most common way of learning for learners. But classroom learning & M-Learning are both recommended for betterment. We recommended in questionnaires that "Which type of Learning would be preferred most?"
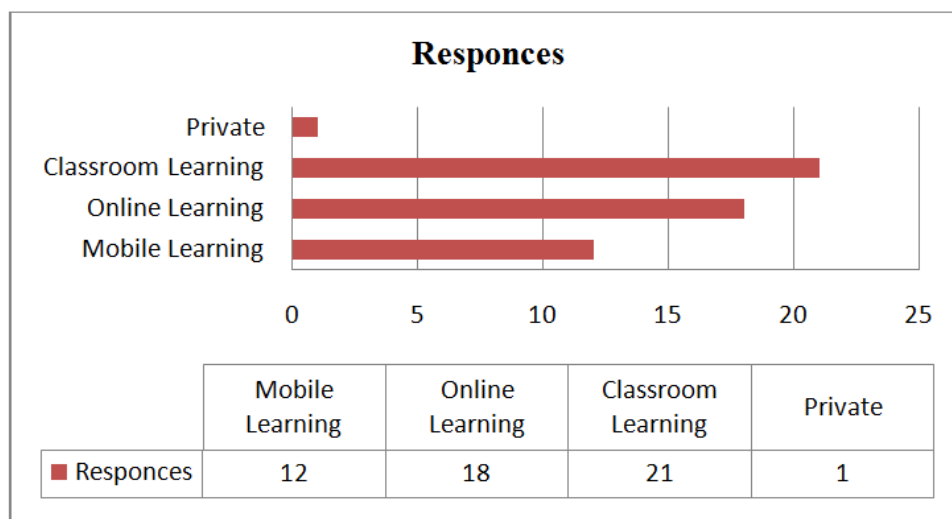
Responces

	Mobile Learning	Online Learning	Classroom Learning	Private
■ Responces	12	18	21	1

Figure: 6

Most of the respondent from **Figure: 6** have recommended that Classroom Learning is much better than M-Learning & O-Learning.

M-Learning in Education

The uses of Internet deliver a broad array of solutions that enhance knowledge and performance for users. Internet has started reshaping education. Education will not be same in the next decades. The traditional classroom has to be transformed. Many university colleges may not survive by the end of the decade Chalk-and-board has long ruled the classroom. It will not be eliminated. On the hand mobile technology is more emphasis and on demand learning.
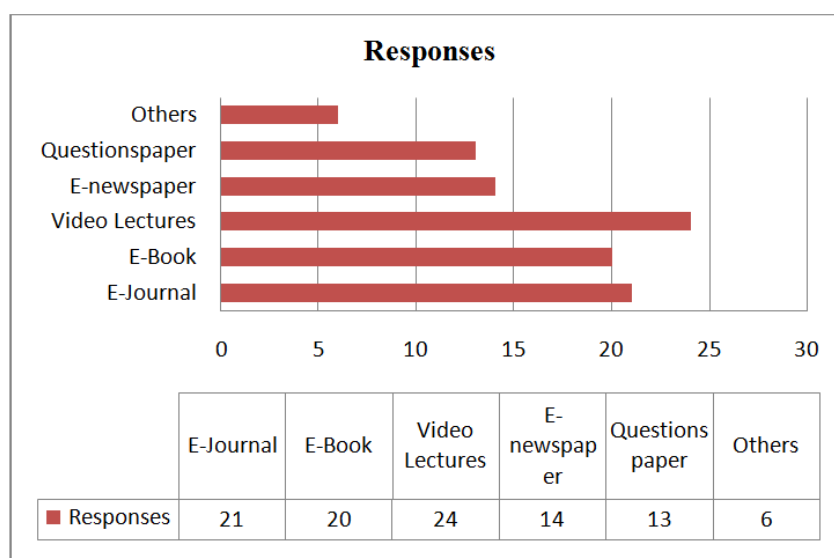

Responses

	E-Journal	E-Book	Video Lectures	E-newspaper	Questions paper	Others
■ Responses	21	20	24	14	13	6

Figure: 7

The above figure shows that 25% of the respondents prefer to Video Lectures, 56% take interest in E-resources and 6% of the respondents prefer both format. As clear from the above table, the maximum numbers of respondents take interest in Electronics format. It's shown clearly in the below figure.

How M-Learning is changing the face of education

If we see the start up Edu-Tech institutions are getting higher valuations than traditional classroom based colleges and schools. The educational institutions are using technological challenges to scale and reduce higher cost per unit of delivery. Undoubtedly one of the biggest benefits of an online lecture on mobile based. Anyone can access, pause, rewind, fast forward and replay in anywhere. Mobile is growing exponentially. We have put forwarded a question-

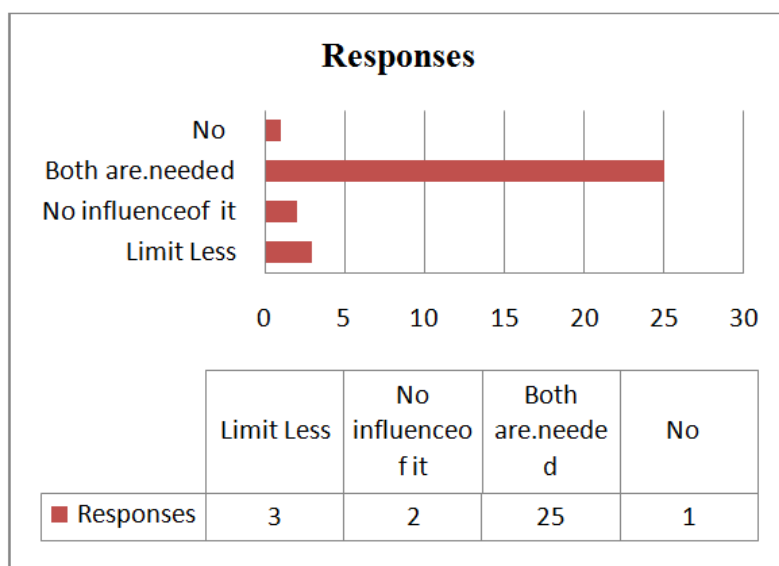"How much influence is the mobile learning in the Academic Year?"

Responses

	Limit Less	No influenceo f it	Both are.neede d	No
■ Responses	3	2	25	1

Figure: 8

From **Figure: 8** the above table it can be understood that majority of the respondents 81% prefer that both M-Learning & O-Learning are needed in Academic year.

Future of M-Learning in Library

Electronics Technologies (E-Technologies) & Mobile Technologies (M- Technologies) are now two part of our future. The future of M-Learning is all about the cloud & anywhere access. The cloud can also encourage independent learning. Librarians could adopt a flipped classroom approach more often. Users will take ownership of their own learning. Librarians put resources for users to online for use. These could be videos, documents, etc. All of those can be access via mobile, computer, Laptop, etc. rather than users can learn independently in their own way.
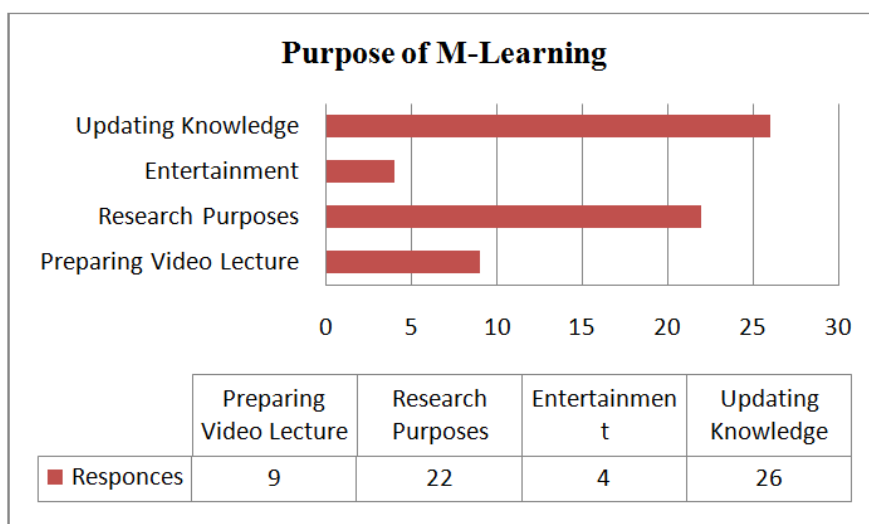
Purpose of M-Learning

	Preparing Video Lecture	Research Purposes	Entertainmen t	Updating Knowledge
■ Responces	9	22	4	26

Figure: 9

We put forwarded few recommendations from respondent that M-Learning will be useful in which purpose? The above figure' revels that 43% of respondents prefers to Updating Knowledge.

Information & Knowledge in M-Learning & O-Learning

Knowledge involves understanding, comprehension and mastery of content; it's about acquiring, growing, sharing and applying information to achieve an impact whilst learning is the process of studying, teaching and education. Learning is the process of acquisition of knowledge. So knowledge is acquired after learning.
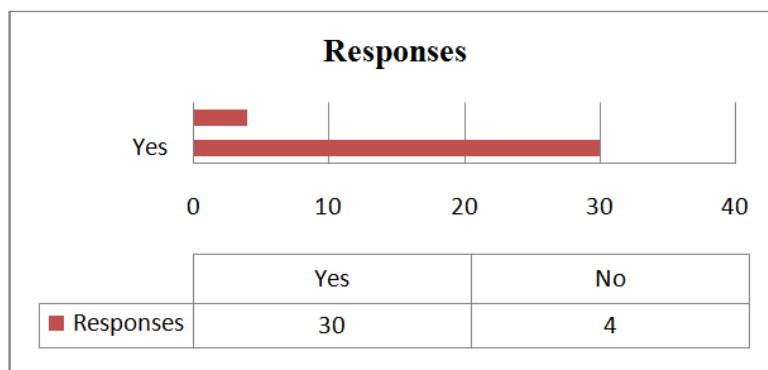

Figure: 10

We have put forwarded a questions to respondents that "Information & Knowledge, are it possible to get both of this Mobile Learning & Online Learning?" Majority of respondents negatively reply, the reason of their recommendation that some primary information is not available in online & sometime all information is not correct in internet.

M-Learning Components

M-Learning approaches can combine different types of e-learning components including-
* M-Learning Content.
* Collaborative Learning.
* Virtual Classroom.
* Open Access.
* 24 X 7 X 365 service.

Collaborative project work, online discussion and designed to facilitate communications and knowledge sharing among learners.

Importance of E-Learning

E-Learning's importance mentioned as below:
* Online Learning will keep updated with current technology.
* It's very helpful. More sources can be use through this.
* Physically presence will not be the necessity for learning something.
* It is more interactive.
* In this present era it is easier to access retrieved information for all.
* We can learn anywhere anytime. No fix timing for study will required.
* Because in E-Learning there is so many freedom in thinking, learning. On the other hand if a student gets all the learning materials and tutorial at website, he or she will show less interest in class room teaching. Because there is some obligations in class room teaching.
* The reason is being online learning besides classroom will be more effective in academic year.

Importance of O-Learning

It is wonderful in present situation that Online Learning (O-Learning) are much more important with Classroom. Some importance has mentioned below-
* Having access to all the books physically is next to impossible keeping in mind the cost and the availability. But online learning provides us with the scope to have access to all the books that we desire instantly at minimal expenses.
* By providing material remotely and for minimum cost.
* This will be better learning opportunities alongside traditional classroom learning.
* It's better because anyone can touch with worldwide & it's flexibility.
* Students will be able search questions whatever they want to know for their prior knowledge.

Advantages of O-Learning

The convenience and flexibility of online learning allows you to study any time, virtually anywhere you have an internet connection.

- Portable, comfortable, reliable, compact, control very nice.
- We can access everywhere in any time not require to open any Big size book.
- Anytime it can access.
- Handy and can be studied anywhere and everyone with internet connectivity
- Flexibility of operations from any place.
- One can access it from anywhere.
- It helps in remote accessing, save time and effort
- These days everyone at least has a mobile phone. So through this, O-Learning would be easier has students would have access to it 24X7.
- Through online we can study and work at our convenience.
- Convenience.
- Because of easy accessibility.

Advantages of M-Learning

Advantages of M-Learning are mentioned below-

- Technology has become the key to a new world of education. Online learning/ E-learning has become one of the most popular ways of gaining access to an education.
- Better visualization and repetition of the content
- Many of the students can't attend classes due to many reasons, it is also impossible to repeat the same tutorial again and again.
- Wider participation.
- Faster learning.
- No need for a formal classroom.
- Lifelong learning.
- Reduced overall cost.

Disadvantages of M-Learning & O-Learning

Few disadvantages are mentioned as below-

- Health issues and some time only information is not enough to understand as proper description of that particular information is not always available.
- In this present epoch students use devices just for entertainment instead of study purpose
- Basically they are using for playing mobile games, Chatting and calling friends. Following social media.
- It's small screen size
- Concentration, Eye problems, Headache.
- If many people come to mobile messages to read through the mobile, then the reading is interrupted. Leaving reading and sinking into chatting.
- If students use the phone for their benefit instead of watching movies and videos everyday then it has no harm. Using anything wisely is a choice.
- In classroom learning there is face to face interaction with classmates and teachers, we are able to ask questions and solve our problems immediately but in online learning it's not possible.

Difference between Online Learning and Classroom Learning

O-Learning has achieved such popularity that is now common in Engineering Courses that once offered various video lectures and off-line exam also. Now advancing technology is responsible for the rise of another kind of technological educational opportunity on mobile learning, or "M-Learning." Current and prospective online college students may surprise that what distinguishes O-Learning from M-Learning and whether or not which learning is the right choice for them. Within short time possible to discuss syllabus and studying, not interfere between students and teachers. Discussion any questions are very difficult in Classroom. In O-Learning we could not face to others but in class room we connected, listen and feel directly to our lecture. And in classroom teaching we can remember more than online learning. O-Learning also includes virtual learning/classroom facility. Online classes are so much resource full but classroom teaching is so much communicable teacher with students

Suggestions to improve Mobile Learning in Library

Internet connection uninterrupted, system software not changes rapidly in library with better connectivity and development of the portal with a user friendly interface. All journal and e books will be access for all users. Libraries need to procurement of more eBooks and good video lectures. Sometimes librarian will arrange online quiz during lecture with the help of concern teacher. It is most important for all type of academicians so a library provide all types of information relating their users demand. Device must be tab not recommended device like mobile phone or smart phone. Create student groups & improve engagement. Library can provide some required information to their members. Students must have access to the library anytime as library is the place for gaining knowledge and students these days need to know and learn more. Seating capacity must also be increased for the students in the library along with access to more computers. It is very much important to create an app which is very user-friendly for users.

Recommendation to improve M-Learning & O-Learning in Library

Leveraging the potential of Smartphone, tablets, and even wearable technologies allows academic librarians to further expand their reach to students and faculty beyond the library's walls. Furthermore, by understanding how mobile technology changes the behavior of our users, we can gain new insights into their needs and make improvements to our traditional services and spaces to better contribute to faculty research and student learning.

We have put forward some recommendation for improve M-Learning alongside O-Learning in libraries. As below-

- Library should be automated.
- Libraries must Cloud server.
- Staff training must be provided time to time.
- Sufficient space is required to procure all process to provide library facilities
- Relevant information would be shared. Encourage students to use course material available online.
- Recommended Video-Lecture will be collected for students.
- Firstly improving Internet and served document in e-forms.
- Library can provide SDI, CAS, WEB-OPAC, and SMS Reminder service, e resource like E-journals and E-books, etc
- Arrangement and awareness of different MOOCs through library
- More computers must be added. A separate place in the library with a smart board where online video lectures may be projected and students can learn in a group under the guidance of a teacher
- Librarians would create very user-friendly interface.
- Using study material for student to make notes, etc.
- Librarians would help people to find information whatever they need.
- News updates, new arrivals, video lectures.
- Library service with a smile, promptness service and anticipated service required. Depending upon staff strength and institutional goals service must be fixed. An information display board and users' training is very helpful.
- Access to library for students 24x7, increase in student capacity, access to more computers, more availability of books, journals.

IV. CONCLUSION

For Engineering students, who are pursuing their career as Engineer or Higher Education after graduation, this is necessary for them to get familiar with M-Learning techniques, to identify usage habits of learners, and to recognize recent trends and development of M-Learning. However, the frequency of reading e-books and journals by Smartphone's for academic purposes are much lower when compared with casual readings. Libraries as well as librarians should make conscious choices about what they want to offer in this arena and act accordingly and only time will tell if a completely mobile-accessible insight library, in terms of its library services and its collections, will become common place. It is expected that result in this study could serve as a good reference for future researches.

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