M-LEARNING

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Abstract

This paper aims to provide quantitative data on students' of Gujarat University Library for the Mobile learning to regard as the benefit to academic of mobile library services to library users. The M-learning research included an online survey through Google form that involved 80 participants. In addition, the paper provides data for libraries to establish the value of developing their own mobile learning and services. It also demonstrates the propagation of mobile device usage within the library and shows which services students would find most useful in M-learning. The paper provides coming into a rapidly moving area of technology as confirmed through the research. The increase use of mobile devices among students is vital to acknowledge. The role of the academic library is to hug changing student behaviour by provide services optimised for mobile devices.

Keyword: M-learning, Mobile Learning, Mobile Library Services, Remote learning

Mobile Learning (M-learning):

These days, our smart phone is stuck to our hands. We use it for everything like communicating with friends and family, online shopping, ordering food, playing games, and so on. Should we also use smart phones for learning and studying? M- Learning is a new way to access learning content via mobile instruments. The Mobile phone technology has changed rapidly since the advent of the smart phone almost a decade ago (Fling, 2009). Though, few libraries are thinking about the potentially dramatic implications the uptake of devices with sophisticated capabilities. It may have on the user community and more specifically on the use of digital information resources (Lippincott, 2010a, b). Previously students were in favour of being able to access the library catalogue from their mobile phones (Mills, 2009). This coupled

with an increase in power users of mobile internet and general usage among university students (Smith and Caruso, 2010) clearly indicates that mobile library services merit serious investigation.

M- Learning Development in India:

At the end of March, 2020, the subscriber base was 1177.97 million, out of which 1157.75 million were wireless subscribers. During the year, wireless subscriber base recorded a decrease of 4.06 million, with the overall tele density of 87.37% at the end of March, 2020. During the year 2019-20, 58.93 million subscribers submitted their porting needs for availing Mobile Number Portability (MNP) facility. With this, the cumulative MNP requests increased from 428.40 million at the end of March, 2019 to 487.33 million at the end of March, 2020, which shows that subscribers are exercising their preferences of service providers. The Internet subscriber base in the country as on 31 March, 2020 stood at 743.19 million as compared to 636.73 million as on 31 March, 2019. The total broadband subscriber base in the country has increased from 563.31 at the end of 31 March, 2019 to 687.44 at the end of March, 2020. Companies that specialize in content aggregation provide the actual content, while mobile value added services providers develop the mobile technology and delivery. Whereas in March, 2020, 5.74 million subscribers submitted their requests for the Mobile Number Portability (MNP). Overall, the growing MNP requests increased from 481.59 million at the end of February, 2020 to 487.33 million at the end of March, 2020, since implementation of MNP. The Number of active wireless subscribers in March, 2020 was 989.10 million. (https://www.trai.gov.in/sites/default/files/Annual_Report_02032021.pdf).

‘Libraries in hand’ is the latest slogan of the mobile services; the mobile services in India are quite affordable. The proliferation of mobile phones, PDAs (Personal Digital Assistant) and other mobile devices means that the platform has lot of potential in India. Major mobile manufactures such as Nokia, Sony Ericsson and Motorola in India have linked up with service providers like Airtel, Vodafone and others to provide mobile content, which also includes learning contented. The Mobile companies that specialize in contented aggregation provide the actual content, even as the mobile value added services providers develop the mobile technology and delivery.

Literature Review:

The increasing interest in mobile technology in providing library services is apparent in the number of research recently conducted and the growing number of mobile friendly websites and native applications being developed for libraries. It appears that the ubiquitous presence of mobile devices has made it virtually impossible for libraries to continue ignoring them (Speight, 2009). The recognised opportunity of new technology to libraries has been demonstrated through a number of studies. Such studies provide benchmarks with which to track attitudes to new services as technology advances. For example, Ryerson University Library performed a survey of student mobile device usage in November 2008 to gain a better understanding of how mobile devices were being used by students and to provide insights on what library services might best be adapted to the small screen. They found that top internet use on mobile devices was to access e-mail, Facebook, and browse the internet. Mobile devices were also primarily used for making calls, texting, taking photos and listening to music. Only 21 per cent of students surveyed owned a smart phone but almost 40 per cent were planning to purchase a smart phone next. Consequently, Ryerson predicted a sharp rise in smart phone ownership to between 40 and 80 per cent by the end of 2011 (McCarthy and Wilson, 2009).

The expanding interest in mobile innovation in giving library services is evident in the quantity of examination as of late directed and the developing number of versatile agreeable sites and local applications being produced for libraries. Apparently the pervasive presence of cell phones has made it for all intents and purposes incomprehensible for libraries to keep disregarding them (Speight, 2009). The perceived chance of new innovation to libraries has been exhibited through various examinations. Such examinations furnish benchmarks with which to follow mentalities to new administrations as innovation propels. For instance, Ryerson University Library played out a review of understudy cell phone use in November 2008 to pick up a superior comprehension of how cell phones were being utilized by understudies and to give experiences on what library administrations may best be adjusted to the little screen. They found that top web use on cell phones was to get to email, Facebook, and peruse the web. Cell phones were additionally principally utilized for settling on decisions, messaging, taking photographs and tuning in to music. Just 21 percent of understudies overviewed possessed a cell phone however very nearly 40% wanted to buy a cell phone straightaway. Therefore, Ryerson anticipated a sharp

ascent in cell phone possession to somewhere in the range of 40 and 80% before the finish of 2011 (McCarthy and Wilson, 2009).

Objectives:

- To know the awareness of M-learning.
- To know the access library information.
- To identify the mobile library services.
- To find out overall mobile learning.
- To know the effectiveness of remote learning.

Scope & Limitation:

The scope of the study is confined to only the Gujarat University Library users. The study population limited to Students of Gujarat University Library users of Ahmedabad.

Methodology:

In November 2020 overviewed Gujarat University understudies on versatile college library administrations. The examination led a subsequent overview seven months after the fact dependent on the versatile data review however with an extra segment focusing on portable library administrations. Doing so made it conceivable to analyze discoveries from the two studies and distinguish any progressions which may have occurred throughout some stretch of time. The extra area on library administrations gave knowledge into those administrations got to by understudies utilizing the cell phones. It additionally assisted with deciding those administrations understudies viewed as generally valuable on a cell phone. It was advanced by putting a declaration on the understudy and staff entrance. An email welcoming understudies to partake was likewise shipped off all understudies. Understudies were offered the opportunity to enter a prize endless supply of the review as a motivator to take part. During the fourteen day time frame a sum of 56 understudies finished the online study. This would address roughly average Gujarat University advanced education understudy populace.

Methodology plays a crucial role in any study, as it provides the practical foundation to support theoretical data. This research helps in identifying the effectiveness of using mobile technology for Gujarat University users for their study.

Mobile Learning and Library Services:

The Libraries can afford a wide range of mobile services to interested users. While this range of communication capabilities has significance for libraries, especially in the provision of reference service, it is possible that it will actually be the use of Mobile phones for reading, watching videos and online lectures, listening webinar's and lectures or any learning and producing digital content like presentation, videos, class notes, that will have the most impact on libraries.

Followings are library services provided by Mobile technology;

- Mobile Online Public Access Catalogue (watch <http://m.nypl.org/>).
- Mobile databases (watch <http://pubmedhn.nlm.nih.gov/>).
- Mobile collections (watch <http://itunes.apple.com/app/dukemobile/id306796270?mt=8>).
- Mobile Applications
- Mobile Library Instruction (watch <http://www.ecu.edu/cs/dhs/laupuslibrary/researchfirstaid.cfm>).
- SMS notifications (watch http://cpl.bibliocommons.com/search/t=smart&search_category=keyword@q=library+short+message+service)
- SMS Reference (watch <http://www.library.yale.edu/science/textmsg.html>)

Data Analysis:

The Analysis of collected data from the Google form is presented in this research article. The data elements gathered are grouped into different types of element such as awareness of mobile library services, use of mobile services.

Mobile frequency:

Table- 1- Mobile Device

Which mobile devices do you own?					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Smartphone	27	48.2	48.2	48.2
	Smartphone, Desktop	3	5.4	5.4	53.6
	Smartphone, Laptop	15	26.8	26.8	80.4

Smartphone, Laptop, Desktop	8	14.3	14.3	94.6
Smartphone, Tablet	1	1.8	1.8	96.4
Smartphone, Tablet, Laptop	1	1.8	1.8	98.2
Smartphone, Tablet, Laptop, (Desktop is not Mobile Device)	1	1.8	1.8	100.0
Total	56	100.0	100.0

Chart- 1- Mobile Device

Most of the respondents 27 (48.2%) to be the topmost preferred use own Smartphone. The second most 15 (26.8%) use Smartphone, Laptop. Other respondents use 8 (14.3%) Smartphone, Laptop, Desktop, 3 (5.4%) Smartphone, Desktop and 1 (8.4%) use Smartphone, Tablet, and Smartphone, Tablet, Laptop and Smartphone, Tablet, Laptop, (Desktop is not Mobile Device).

Mobile Device:

Table-2- Access Library Information

Would you like to use a mobile device to access library information?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	5	8.9	8.9	8.9
	Yes	51	91.1	91.1	100.0
	Total	56	100.0	100.0

Chart- 2- Access Library Information

As shown in the table and chart very high majority of respondents 51 (91.1%) like to use a mobile device to access library information. 5 (8.9%) respondents lazy. They do not use a mobile device to access library information.

Library services:

Table- 3- Mobile Library Services

What are the library services below you would use on your mobile?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ask us	3	5.4	5.4	5.4
	Ask us, My library accounts, News & events, research guides	1	1.8	1.8	7.1
	Ask us, News & events	3	5.4	5.4	12.5
	Ask us, News & events, research guides	3	5.4	5.4	17.9

Ask us, Text a librarian, My library accounts, News & events, research guides	6	10.7	10.7	28.6
Ask us, Text a librarian, research guides	1	1.8	1.8	30.4
My library accounts	7	12.5	12.5	42.9
My library accounts, News & events	2	3.6	3.6	46.4
My library accounts, News & events, research guides	1	1.8	1.8	48.2
My library accounts, research guides	1	1.8	1.8	50.0
News & events	7	12.5	12.5	62.5
News & events, research guides	4	7.1	7.1	69.6
None service	1	1.8	1.8	71.4
research guides	2	3.6	3.6	75.0
Text a librarian	6	10.7	10.7	85.7
Text a librarian, My library accounts	1	1.8	1.8	87.5
Text a librarian, My library accounts, News & events	1	1.8	1.8	89.3
Text a librarian, My library accounts, News & events, research guides	2	3.6	3.6	92.9
Text a librarian, News & events	2	3.6	3.6	96.4
Text a librarian, News & events, research guides	2	3.6	3.6	100.0
Total	56	100.0	100.0	

As shown in Table 7 (12.5%) respondents use their own mobile to access library services for library accounts and News & events. Second most 6 (10.7%) respondents use their own mobile to access library services for Ask us, Text a librarian, My library accounts, News & events, research guides, and also Text a librarian. Other respondents 4 (7.1%) News & events, research guides, 3 (5.4%) Ask us, Ask us, News & events and Ask us, News & events, research guides. 2 (3.6%) My library accounts, News & events, research guides, Text a librarian, My library accounts, News & events, research guides, Text a librarian, News & events and Text a librarian, News & events, research guides and 1 (1.8%) respondents use own mobile to access for library services ask us, My library accounts, Ask us, Text a librarian, research guides, My library

accounts, News & events, research guides, My library accounts, research guides, None service,
Text a librarian, My library accounts, Text a librarian, My library accounts, News & events

Mobile Services:

Table- 4 – Use of Mobile Learning

Which mobile services do you use for learning?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	meeting	2	3.6	3.6	3.6
	Online lecture	11	19.6	19.6	23.2
	Online lecture, meeting	3	5.4	5.4	28.6
	Online lecture, other	1	1.8	1.8	30.4
	Online lecture, Webinar	6	10.7	10.7	41.1
	Online lecture, Webinar, meeting	17	30.4	30.4	71.4
	Online lecture, Webinar, meeting, other	3	5.4	5.4	76.8
	other	3	5.4	5.4	82.1
	Webinar	7	12.5	12.5	94.6
	Webinar, meeting	3	5.4	5.4	100.0
	Total	56	100.0	100.0

Chart- 3 – Use of Mobile Learning

As shown in Table and chart 17 (30.4%) respondents use mobile services for Online lectures, webinars, meetings. 11 (19.6%) use mobile service for online lectures. 7 (12.5%) Webinar, 6 (10.7%) Online lecture, Webinar. 3 (5.4%) Online lecture, meeting, Webinar, meeting, other. 2 (3.6%) meeting and 1 (1.8%) user's use mobile service for Online lecture, other

Mobile Learning:

Table- 5- Overall Mobile Learning

How do you feel overall about mobile learning?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.0	2	3.6	3.6	3.6
	2.0	3	5.4	5.4	8.9
	3.0	14	25.0	25.0	33.9
	4.0	16	28.6	28.6	62.5
	5.0	21	37.5	37.5	100.0
	Total	56	100.0	100.0

Chart- 4- Overall Mobile Learning

The majority of respondents 21 (37.5%) feel about mobile learning to rating 5.0 and other respondents 16 (28.6%) to rating 4.0, 14 (25%) respondents to rating 3.0, 3 (5.4%) respondents to rating 2.0 and 2 (3.6%) respondents feel about mobile learning to rating 1.0

Time Spend each day:

Table- 6- Time Spend each day

How much time do you spend each day on an average on distance education?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-3 hours	44	78.6	78.6	78.6
	3-5 hours	7	12.5	12.5	91.1
	5-7 hours	4	7.1	7.1	98.2
	more than 7 hours	1	1.8	1.8	100.0
	Total	56	100.0	100.0

Chart- 5- Time Spend each day

The majority of respondents 44 (78.6%) time spent 1-3 hours for distance education every day in own mobile. Other respondents 7 (12.5%) time spent 3-5 hours, 4 (7.1%) time spent 5-7 hours, and 1 (1.8%) respondent's time spent more than 7 hours for distance education every day.

Remote leaning:

Table- 7- Effectiveness of Remote Learning

How effective has remote learning been for you?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely effective	7	12.5	12.5	12.5
	Moderately effective	13	23.2	23.2	35.7
	Slightly effective	12	21.4	21.4	57.1
	Very effective	24	42.9	42.9	100.0
	Total	56	100.0	100.0

Chart- 6- Effectiveness of Remote Learning

As shown in Table and chart 24 (42.9%) respondents very effective to remote learning. 13 (23.2%) Moderately effective, 12 (21.4%) Slightly effective, and 7 (12.5%) Extremely effective to remote learning by own mobile device.

Enjoy mobile leaning:

Table- 8- Enjoy Mobile Learning

Do you enjoy mobile learning?				
	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	No	8	14.3	14.3	14.3
	Yes	48	85.7	85.7	100.0
	Total	56	100.0	100.0

Chart-7 – Enjoy Mobile Learning

In the Technology world every respondent uses a smart phone for learning new technology. As shown in the table very high majority of respondents 48 (85.7%) enjoy mobile learning. Only 8 (14.3%) respondents do not enjoy mobile learning.

Findings:

After data analysis some findings are found as under:

- Most of the Gujarat University users are using smart phone for the M-learning.
- Maximum users are uses mobile device to access library information.
- Major users are uses mobile library services like ask us, text a librarian, my library accounts, news & events and research guides.
- For the users of Gujarat University, they are uses mobile device for the m-learning like online lectures, webinars and meetings.
- Users are feeling overall satisfied about mobile learning.
- Maximum users are spending 1-3 hours each day on an average on distance education.
- Most probably, very huge users are feeling very effective has remote learning for them in pandemic situation.
- Very waste users are enjoying mobile learning for their career conscious.

Suggestions:

Some suggestions drawn as under;

- Mobile learning is a exciting and capture the participant's attention immediately.
- It is very relevant to the daily work of the any users.
- It is interactive and easy to use.
- Librarians have to encourage collaboration through social media and leverage on video based learning.
- It's also used in personalize and customize learning and employ game mechanics

Conclusion:

More and more changes are expected in the last two years in the field of mobile technology and its application to libraries. The technology is now available to use phones to read barcodes of RFIDs (radio frequency identification) in the library, and OPACs are developing GIS (Geographical information systems) sensitive and the ability to communicate with users through mobiles for reservations, fines, late notices, alerts, etc. Mobile web 2.00 and 3.0 applications for social networking for the library society are obtainable, thus enabling discussions, blogs, wikis and other features beneficial for all library developments.

Mobile Technology has become a very significant part of our lives these days. Mobile phones were developed primarily for communication purpose. Mobile phones have gained importance in both the developed and developing countries. The mobile phone is devices that enable users to communicate, connect, transact and innovate. Mobile devices and mobile technologies have potential to facilitate the teaching and learning process in a enormous way. Mobile applications can support learning by making library resources more omnipresent, by bringing new users to the library through increased accessibility to the library resources, and by creating a new way to increase relations between users and libraries. This increased use of mobile learning provides an untapped resource for deliver library resources to users. The mobile learning is the next step for libraries in providing universal access to resource and information.

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