Assessing the awareness and adoption of Mobile Information Services in Engineering College Libraries, Hyderabad

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Abstract

Libraries are the forerunners of new technological advancements, and librarians are looking for innovative ways to provide mobile-based library services. everyday life, mobile computing is changing how people search for, receive, and interact with information. Academic libraries, particularly those at engineering colleges in Hyderabad, are ready to adapt to current advancements in order to provide convenient library services to their patrons remotely. The research was a descriptive survey. The paper's findings emphasized that the majority of Library Professionals are acutely aware, and their awareness is not affected by demographic factors. However, majority of the colleges offer mobile information services, and even fewer are willing to adopt and promote them. The study also discovered that there is a moderate demand from students, as well as a positive appreciation for the value of mobile technology-based library services.
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Keywords
Mobile Technology; Mobile Information Services; Engineering College Libraries, Hyderabad

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1. Introduction

In today's information and communication technology explosion, the access to information is very convenient and timely to users from the comfort of their own homes and offices, and from wherever they are while on the move with their electronic gadgets like mobile devices. Most of the people spend their time on mobile devices for general information like browsing the Web, for entertainment like listening to music, watching television, for sharing the information like reading books and interacting with friends etc. Libraries being the social institutions for connecting the people with information may take it as an advantage for introducing current advancements in providing the mobile based library services to users. To remain relevant in an increasingly mobile world, both new and experienced library professionals must be fast-paced in acquiring new skills. They need to be aware of technological changes, peer forward, and prepare for the future of library mobile interaction. Implementation of mobile information services (MIS) in academic libraries is playing a vital role especially in Engineering & Technology college libraries of Hyderabad.

2. Review of Related Literature

Awareness is a key stride in any technology adoption (Kotler, 1999). Hence, unless the users become aware of the benefits and then develop interest in new technology innovation they cannot adopt such innovation. Nor Shahriza Abdul Karim, Siti Hawa Darus and Ramlah Hussin (2006) found that the perception of university students is positive towards the application of wireless hand services (mobile phone) for providing the library and information services. They have shown their willingness /acceptance for new services if offered. Librarians in collaboration with the ICT field should provide more advanced library services like OPAC, reference services a part from the basic SMS, borrow or return services using wireless technology. According to Codina-Vila, Miquel, Clavero-Campos, Javier & Pérez-Gálvez, Andrés (2010) implementation of these new technological services and their effectiveness in usage by the users has changed the image of the library. Current generation users need the information at their fingertips from anywhere, so the library professionals should open the mobile gates and reach them with relevant information. Catharine Bomhold, (2014) study describes how very High Research (UR/VH)

universities at Carnegie Foundation are providing the mobile library services to their patrons and their contribution to the research atmosphere with these on-the-go services. Most of the academic libraries at research universities have some form of mobile presence and the services offered in them are highly varied. The author insists that libraries of research institutions should be more competent with a comprehensive mobile plan and user requirement for implementing or providing the mobile services. Paula Torres-Pérez a, Eva Méndez-Rodríguez b and Enrique Orduna-Malea (2016) found that a good proportion of university libraries i.e. (88%) offer mobile web showing a high level of mobile adoption in universities. Majority of the libraries (80%) offer mobile website while only 34% (17) offer an app. The results shows that there is a high level of mobile web adoption in universities but the quality of services it provides through these new technology does not reach the general level of excellence. Dei, De-Graft Johnson. (2020) states that the students and library staff are strongly aware and shows a great appreciation towards the use of m-tech based library services. It also claims that for implementation of m-tech based library services there is poor response in libraries with diverse reasons such as lack of policy framework, lack of budget constraints, lack of skilled professionals and lack of inadequate ICT infrastructure etc. The author suggest or recommend the libraries to invest more on ICT infrastructure facility and human resources professional training on these emerging technologies. According to Cummings, Merrill & Borrelli (2010) "The integration of m-tech in academic libraries operations permits users to access the resources of the library and make enquires remotely without physically being present at the library".

3. Mobile Information Services in Academic Libraries

Library services which can be delivered through mobile technology applications on m-technology platforms are as follows:

- Mobile library websites
- Mobile apps
- Mobile catalogue/ M-OPAC
- Alert services
- Ask a librarian service
- Access to e-resources with mobile interface
- Location based services (Virtual/Audio tours, Maps to library)
- General information (library hours, library address etc)
- Contact Information Service
- Quick response codes (QR)
- Link to library guides
- Linking from print to electronic journal holdings
- Marketing/promotional materials
- Connecting to useful Web-sites for further information
- Providing an electronic alternative to physical books
- Promoting online audio visual materials
- Mobile Document Supply/ Inter Library Loan/ Document Delivery Service
- Mobile Services for Persons with Disabilities
- Mobile printing service

4. Objectives of the Study

1. To find out whether the library professionals working in the libraries are aware of mobile information services
2. To find out whether the awareness of service depends on gender, age, qualification, designation and experience of the library professionals.
3. To find out whether mobile information services are provided in the libraries
4. To find out the extent of demand from users for providing mobile information services in the libraries

4.1 Need of the study

The Review of Related Literature reveals that there are no studies on mobile information services in academic libraries in Hyderabad. So far, no one has conducted research; however, there is a need to investigate the state of the art of awareness, demand and provision of mobile information services in engineering college libraries of Hyderabad.

4.2 Scope and limitation of the study

The present study is confined to the library professionals of Engineering College libraries of Hyderabad. The population for the study is library professionals and the choice of selecting them is because they are the service renders and providers, it is prudent for the researchers to select them to serve as respondents for the study. Hence, the study is

geographically limited to Hyderabad and RangaReddy dist. empirically limited to AICTE approved Engineering colleges.

5.Methodology

The Methodology used for the study was descriptive survey method. A simple random sampling technique was used for data collection through a semi-structured questionnaire. The questionnaire was distributed to the respondents. A total of 60 responses received out of which, 45 questionnaires were filled in and considered for analysis. Data analyzed as tables using percentage, chi-square test using SPSS.

6. Data Analysis and Interpretation

Mobile Information Services in a current scenario are playing a vital role in library & information centers. The primary objective is to find out the whether the library professional working in engineering colleges are aware of mobile information services, assessing the relation between the awareness Vs Gender, Age, Qualification, Designation and Experience of the respondents? Is there any demand from the patrons for providing mobile information services?

6.1 Awareness of mobile information services

To market/promote our conventional library services using mobile technology in libraries, the question arises that whether the Library Professionals are aware of mobile information services or not. It is assumed that Library professionals working in the engineering college libraries may be aware of mobile information services. To find out the facts regarding the same, data was collected and presented in the below table.

Table 6.1: Awareness of mobile information services

Sl.No	Aware	Frequency	Percentage
1.	Yes	41	91.1%
2.	No	4	8.9%
	Total	45	100%

The data from the above Table 6.1 shows that considerable majority i.e. 91.1 % of the library professionals are aware of mobile information services in engineering college libraries which gives a good indication that there is a growing awareness of mobile information services among library professionals towards the current developments for promoting value added services to the users. A meager 8.9% seem to be unaware of mobile information services.

6.2 Distribution of the respondents according to their demographic features

The respondents are distributed according to their gender, age, qualification, designation and experience. Data were collected and presented in the following sections.

6.2.1 Gender-wise distribution of the respondents

Attempt is made to find out whether the respondents are proportionately distributed are not in engineering college libraries. Data are collected and the following table presents the data regarding the gender-wise distribution of the respondents.

Table 6.2.1: Gender-wise distribution

Sl.No.	Gender	Frequency	Percentage
1.	Male	25	55.6%
2.	Female	20	44.4%
	Total	45	100%

The above table 6.2.1 shows the distribution of the library professionals according to their gender. It is clear that 55.6% of the respondents are male and female respondents are 44.4%. It can be inferred that the sample of respondents is proportionately distributed.

6.2.2 Age-wise distribution of the respondents

Professional staff in the engineering colleges belongs to the age ranges from 21 to 60 yrs. Data were collected and presented in the following table.

Table 6.2.2: Age-wise distribution

Sl.No.	Age (Yrs)	Frequency	Percentage
1.	21-30	2	4.4%
2.	31-40	22	48.9%
3.	41-50	18	40.0%
4.	51-60	3	6.7%
	Total	45	100.0%

The data from the below table 6.2.2 presents the distribution of the library professionals according to their age. It shows that 48.9% of the respondents belong to the age group of 31-40, followed by 41-50 age group contains 40.0%, 6.7% are from the age group of 51-60 and meager 4.4% of the respondents belong to the age group of 21-30. Age-wise distribution does not seem to be considerable propionate.

6.2.3 Qualification-wise distribution

Engineering colleges prefer Master degree in library and information science and desirable MPhil and PhD qualified for their librarians and library assistant's staff recruitments. The following table presents the data in this aspect.

Table 6.2.3: Qualification-wise distribution

Sl.No.	Qualification	Frequency	Percentage
1	MLISc	40	88.9%
2	MPhil	2	4.4%
3	Ph,D.	3	6.7%
	Total	45	100.0%

From the above below Table 6.2.3 qualification-wise distribution, it is found that the majority 88.9% of the respondents qualified MLISc, followed by MPhil (4.4%) and PhD (6.7%).

6.2.4 Designation-wise distribution

Designation of the professional's staff attains with their level of excellence in their discipline. The followed table presents the data regarding the same.

Table 6.2.4: Designation-wise distribution

Sl.No.	Designation	Frequency	Percentage
1.	Librarian	9	20.0%
2.	Asst. Librarian	11	24.4%
3.	Library Asst.	25	55.6%
	Total	45	100.0%

With regard to the Designation-wise distribution of the library professionals the above table shows 55.6% are designated as Library Assistants, Asst. Librarians (24.4%) and Librarians (20%). It is remarkable to note that little more than half of the respondents are Library Assistants.

6.2.5 Experience-wise distribution

Experience of the library professionals ranges from 1 to more than 30 years grouping the respondents with the class interval of 5 years as 0-5, 6-10, 11-15, 16-20, 21-25, 26 & above respectively. It is assumed that Engineering College library have experienced library professionals in educating the students and faculty.

Table 6.2.5: Designation-wise distribution

Sl. No.	Experience(Yrs)	Frequency	Percentage
1	0-5	2	4.4%
2	6-10	11	24.4%
3	11-15	15	33.3%
4	16-20	8	17.7%
5	21-25	5	11.1%
6	26 & above	4	8.8%
	Total	45	45(100.0%)

The data from the above table 6.2.5 illustrates that the experience-wise distribution of the respondents. It is clear that 33.3% of the respondents having 11-15 years of experience followed by 24.4% with 6-10 years, 17.7% have the experience of 16-20 years, 11.1% of them are having 21-25 years of experience, 8.8% with experience of 26 & above and 4.4% with 0-5 years respectively. However, it is clear that the majority of the respondents 33.3% have 11-15 years of experience.

6.3 Awareness Vs Demographic features of the library professionals

An Attempt has been made to find out whether awareness part of library professionals working in the engineering college depends on the demographic features. The data is collected to realize the objective **"**To find out whether the awareness of services depends on gender, age, qualification, designation and experience of the library professionals" with the corresponding hypothesis **"**The awareness of mobile information services does not depend on gender, age, qualification, designation and experience of the library professionals". The following sections present data regarding Awareness Vs Gender, Awareness Vs Age, Awareness Vs Professional Qualification, Awareness Vs Designation and Awareness Vs Experience.

Table 6.3: Awareness Vs Gender

Sl.No.	Gender	Aware	%	Not Aware	%	Total
1.	Male	24	96%	1	4%	25(100%)
2.	Female	17	85%	3	15%	20(100%)
	Total	41	91.1%	4	8.9%	45(100%)

The above table 6.3.1 analyzes that male 96% and female 85% are aware of mobile information services. A meager percentage of 8.9 stated to be unaware of mobile information services. The calculated chi-square value 1.801 is lower that the chi-square table value 6.635 at (0.01) level of significance. Therefore the Awareness is statistically recognized as insignificant with gender of the respondents.

Table 6.3.2: Awareness Vs Age

Sl. No.	Age (Yrs)	Aware	%	Not Aware	%	Total
1.	21-30	1	50%	1	50%	2(100%)
2.	31-40	19	86.4%	3	13.6%	22(100%)
3	41-50	18	100%	0	0	18(100%)
4	51-60	03	100%	0	0	3(100%)
	Total	41	91.1%	4	8.9%	45 100%)

The above table 6.3.2.1illustrates awareness Vs gender. Data from the table shows that highest percentage 100.0% of respondents having awareness belong to the age group of 51-60, 41-50 followed by the age-group 31-10 86.4%. Only 50.0% of the respondents under the age group of 21-30 have awareness. Chi-square test is conducted. Since the computed chi-square value is 6.94. At 3 df (0.01) level of significance the chi-square table value is 11.34 and calculated chi-square value is 6.94 is less than the table value. Hence, the awareness is statistically recognized as insignificant and does not depend on the age of the respondents.

Table 6.3.3: Awareness Vs Qualification

Sl. No.	Qualification	Aware	%	Not Aware	%	Total
1	MLISc	36	90%	4	10%	40(100%)
2	MPhil	02	100%	0	0	2 (100%)
3	Ph,D.	03	100%	0	0	3(100%)
	Total	41	91.1%	4	8.9%	45(100%)

With regard to the qualification, that highest percentage 100.0% of the respondents with PhD and MPhil followed by 90% of the respondents with MLISc Qualification seem to be aware of mobile information services.Whereas, 10% of the MLISc qualified professionals stated to be unaware. Hence, the chi-square test is conducted and the computed chi-square value is 0.438. At 0.01% level of significance the chi-square table value is 9.21 and calculated chi-square value is 4.51 is less than the chi-square table value. Hence, the awareness is statistically recognized as insignificant and it does not depend on the qualification of the respondents.

Table 6.3.4: Awareness Vs Designation

Sl. No.	Desig nation	Aware	%	Not Aware	%	Total
1	Librarian	09	100%	0	0	9 (100%)
2	Asst. Librarian	11	100%	0	0	11(100%)
3	Library Asst.	21	84%	4	16%	25(100%)
	Total	41	91.1%	4	8.9%	45 (100%)

From the above table, the data depicts designation of the respondents Vs Awareness. It is interesting that highest percentage 100% of the respondents designated as Librarians and Asst. Librarians following which 84% of the Library Assistants are aware of mobile information services. Hence, chi-square test is conducted and the computed chi-square value is 4.491. At 0.01% level of significance the chi-square table value is 9.21 and calculated chi-square value is 4.491 is less than the chi-square table value 9.21. Consequently, the relation between the Awareness is statistically identified as insignificant with respect to designation of the respondents

Table 6.3.5: Awareness Vs Experience

Sl. No.	Experience (Yrs)	Aware	%	Not Aware	%	Total
1	0-5	1	50%	1	50%	2(100%)
2	6-10	10	90%	1	10%	11 (100%)
3	11-15	14	90%	1	10%	15(100%)
4	16-20	7	90%	1	10%	8(100%)
5	21-25	5	100%	0	0	5(100%)
6	26 & above	4	100%	0	0	4(100%)
	Total	41	91.1%	4	8.9%	45 (100%)

With regard to the experience of the respondents, It can be observed from the above table that highest

percentage 100.0% of the respondents having 26 & above and 21-25 years of experience, followed by 90% 16-20 years, 11-15 years, 6-10 years, and 50% with 0-5 years of experience are aware of mobile information services respectively. The chi-square test is conducted and the computed chi-square value is 5.136. At 0.01% level of significance the chi-square table value is 15.09 and calculated chi-square value is 5.136 which is less than the chi-square table value 15.09. Hence, the relation between the Awareness is statistically identified as insignificant with respect to Experience of the respondents

6.4 Provision of Mobile information services in engineering college libraries

Engineering colleges are technically advanced with the application of current developments in every aspects. Likewise, the libraries are also forerunners with these technologies. Therefore, an attempt is made to find out whether the engineering college libraries are providing mobile information services are not. The following table presents the data regarding the same.

Table 6.4: Provision of Mobile information services in engineering college libraries

Sl.No.	Demand	Frequency	Percentage
1.	Yes	35	77.7%
2.	No	10	22.3%
	Total	45	45 (100%)

It is clear from the data presented in the above table 6.4, majority of the respondents 86.7% are providing mobile information services to the users. 11.1% of the respondents stated that they are in under planning for mobile information services which indicates that they are adapting to new technologies towards the implementation of mobile technology in their libraries and a meager 2.2% do not provide mobile based library services.

6.5 Demand for Mobile information services

As it is observed from the above that majority of the engineering college libraries are providing mobile information services. An attempt is made to find out whether there is any demand for mobile information service. Data were collected and presented in the following table.

Table 6.5: Demand for mobile information services

Sl. No	Provision of Mobile information services	Frequency	Percentage
1.	Yes	39	86.7%
2.	No	1	2.2%
3.	Under planning	5	11.1%
	Total	45	100%

According to the table 6.5 above, demand for provision of mobile information services in engineering college libraries, it is good to see that the majority of respondents 77.8% indicate that there is a demand for the provision of mobile information services. Whereas, only 22.3% of the respondents indicate no demand for the mobile based library services.

6.5.1 Extent of demand for mobile information services

When there is demand it is necessary to what extent the users demand for providing mobile information services need to be found out. An attempt is made to find out the extent of demand for providing mobile information services. Data are collected and presented on this aspect.

Table 6.5.1: Extent of demand for mobile information services

Sl.No.	Extent of demand	Frequency	Percentage
1.	High demand	6	6(13.3%)
2.	Moderate demand	22	22 (48.9%)
3.	Low demand	7	7 (15.6%)
4.	No demand	10	10(22.2%)
	Total	45	45(100.0)

As it can seen from the above table 4.1 shows the extent of demand for the provision of mobile information services in engineering college libraries. The data shows that though there is demand for providing mobile information service it is not clear whether high demand or moderate demand. 48.9% shows moderate demand, 15.6% shows low demand, 13.3% shows high demand all put together 77.8% of the respondents indicate there is a demand for providing mobile information services. 22.2% of the respondents reveals that there is no demand towards the provision of mobile information services.

7.Findings of the Study

- Majority 91.1 % of the library professionals are aware of mobile information services in engineering college libraries
- The study found that (55.6%) male and (44.4%) female respondents are proportionately distributed in engineering college libraries.
- The study reveals that the awareness of mobile information services does not depend on gender, age, qualification, designation and experience of the library professionals.
- Majority of the respondents 86.7% are providing mobile information services to the users.
- Majority of respondents 77.8% indicate that there is a demand for the provision of mobile information services

8. Conclusion

The potential for mobile information services in Engineering & technology libraries is quite great. Library Professionals must be commensurate with irrespective of their gender, age, qualification, etc with these new trends and involve themselves into the mobile realm for promoting enhanced library services to their patrons on demand. The study found that that there is a demand for the provision of mobile information services in engineering college libraries. Academic Libraries especially engineering colleges may also provide better services to their patrons, like offering mobile access to their websites and online public access catalogues (M-OPAC), giving on-the-go mobile reference services are different possible ways to promote and extend their existing library conventional services. Most of the Engineering & technology libraries would benefit from adopting and providing these new technologies available in libraries as users are increasingly interact with library resources and their demand for mobile information services using mobile devices. Libraries and library professionals must stay relevant and update with current advancements in the developing technological world.

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