

IMPACT OF TECHNOLOGY ON ACADEMIC LIBRARY SERVICES IN HIGHER EDUCATIONAL INSTITUTIONS

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Abstract *There have been tremendous transformations in the fields of higher education, majorly due to the influence of technology (information) to boost its practical effectiveness. Also, academic libraries have been and will continue to be the nucleus of higher education by enhancing its worth. The main aim of such library is to serve the needs of its users (teachers, students etc). However, the resources (collection, services) shown drastic changes from time to time, reflecting the temper and needs of users in the present situation (competition). As a result, academic libraries require to become more diversified in nature, in both (printed as well as electronic) formats of information. In fact, many of the past studies on readership patterns have indicated increased acceptance towards electronic/online formats of information. Therefore, to analyse the same, this study is conducted in college libraries (located in Jammu and Kashmir).*

Keywords: *Libraries, Users, Technology, Services, Facilities*

INTRODUCTION

Due to the rapid transformation in the present world, it is mandatory to have information about all fields of life. However, there is a need to develop the quality of resources in academic libraries, by evaluating the response of library users to the present services (being provided to them) and accordingly taking steps to improve existing services along with the potential for initiating new useful services, especially user centred services (Gunasekera, 2010). Professionals should understand the information needs by the intensification of collection, facilities and services to cater user needs (Tahir et al., 2008). Even, with the advent of Information and Communications Technology (ICT) dependence on the digital environment is increasing. Users (students/teachers) are exposed to wide range of education tools which makes the teaching/learning environment interesting, interactive and easy. This has changed the entire learning platform and gave more practicality for students to learn at their pace, due to which the educational institutions identified the need to change the teaching process and adopted the new modes of technology. However, higher educational institutions started using the digital tools to meet the requirements and expectations of various user communities (Surendher, 2022). Furthermore, provision of training to make suitable use of resources will increase the usage level (Simmonds & Saad, 2001). Therefore, to continue in this unpredictable determinant situation, libraries need to preserve their place as the main associates by concentrating on existing as well

as future challenges to efficiently boost academic activities by enriching the understanding of information sources. The present study focuses on college libraries, as they play an important role in the educational process by assisting their parent body to carry out its function and are considered the *heart of the institution*. Hence, it is important to know what kinds of services they make available to their users and will remain helpful in determining the influence of technology on libraries. The findings will enable stakeholders to identify “how to effectively and efficiently manage their libraries” by developing new technologies. Also, allow expansion of ICT use in libraries with the objective of identifying organisational performance. Thus, it could greatly boost the performance of academic libraries (by advancing activities like online learning, virtual learning, distributed learning, network, and web-based learning).

Modern Library Services

Libraries extend their services beyond physical walls (buildings), by providing materials accessible through electronic means. In other words, information technology has affected the trend of activities worldwide, including libraries. In addition to various digital tools assisting librarians in analysis and navigation. Digital reference service is an improved method of delivering reference services to users in this technological age. The Digital Reference Services does not eradicate traditional references but complements

them, by meeting the needs of users (Oluwabiyi, 2017). Even, modern libraries try hard to stay relevant to the rapidly changing needs of users and satisfy them (users). As a result, varied forms of services (such as periodicals, access to open and subscribed E-databases, collections of books in digitised form and Online Public Access Catalogue (OPAC), reserving library groups, study rooms, online reference services, online chat via Ask a Librarian, and managing the patron's library account are provided within the academic libraries. However, emphasis must be laid on improving quality services (e.g. support librarians knowledge and skills, implementation of mobile technologies, budget management, increasing the value of E-resources cost efficiency and quality assessment, and customer relationship management. Description of the library as a producer or aggregator, library marketing and social media activities for outreach and promotional purposes, because library users are not aware of their library's resources and services; and lifelong learning and continuous professional development of the library staff. On the other hand, it has been observed that the quality of library services largely depends on funding resources. Thus, more funds should be made accessible to libraries to support and develop various professional activities for the improvement of new and existing skills (such as library marketing, grant-writing, planning skills, problem solving abilities, analytical skills, information leadership capability, ability to work in collaboration, innovativeness / creativeness, etc) (Ismayilov, Ismayilov & Mammadova, 2019). Even, a continuous shift has taken place in libraries from spaces devoted for information collection to spaces of collaborative learning environments, often termed learning commons. Nowadays, library holdings are digitally accessible and libraries have the opportunity to make use of their physical space in new ways. Besides this, it has been pointed out that Google calendars is technically equipped to provide a free but very basic room reservation system for academic libraries. However, efforts are required from the staff to keep it stable and manage it well. As a result, it helps in making decisions regarding future room-reservation policies and system requirements. There can be also other forms that facilitate libraries - collaborative functioning (Atkinson & Lee, 2018). On the other hand, Artificial intelligence (AI) has got attention among information innovators. As it has been used progressively in various platforms and libraries, it is not exception. It offers an opportunity to adopt new technologies in libraries and

can play positive role in giving right direction to the future library services (Lund, Omame, Tijani & Agbaji, 2020). But while using online resources, privacy (confidentiality) is matter of concern for library professionals as well as users of higher educational institutions. Hence, numerous queries were raised related to library users privacy have been raised. For online data collection library agents requires greater control over their personal data and ethical responsibility. However, it is recommended that librarians should assimilate privacy education and create awareness among their users as part of their educational efforts, to make good decisions. Furthermore, provide constant assurance in prioritising user needs and facilitating access to useful sources (Avuglah, Owusu-Ansah, Tachie-Donkor & Yeboah, 2020).

OBJECTIVE

- To analyse means of awareness about new arrivals to the users.
- To find out services and facilities provided in libraries.
- To find out the status of automation in libraries under the scope of study.
- To determine means used by library professionals to remain alongside with latest developments.

SCOPE AND METHODOLOGY

The scope of the present study is confined to the libraries of higher educational institutions (Colleges) in Jammu and Kashmir. Data collected from library professionals in the selective government degree colleges (by using simple random sampling) and response analysed by statistical means employed SPSS to draw inferences.

DATA ANALYSIS AND INTERPRETATION

Means of Awareness about New Arrivals to the Users: Updated collection in libraries is beneficial only, when users are familiar about its existence. Thus, in order to analyse modes of user awareness employed by library professionals about new library arrivals, for bringing new collection into the notice of users. Query was posed and data pertaining to it was collected from concerned respondents. The same is presented in Fig. 1.

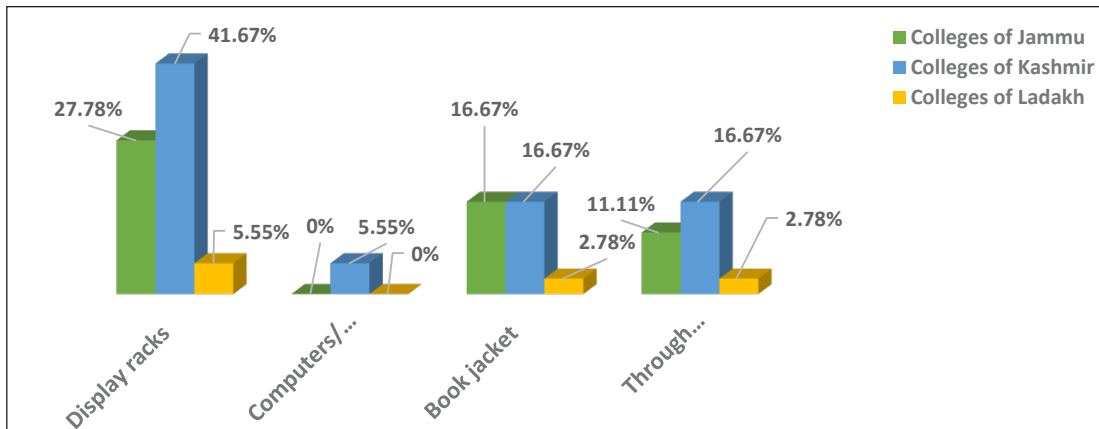


Fig 1: Modes of Awareness

Fig. 1 reveals that in college libraries (*that has been surveyed*) of Kashmir, *display racks* are adopted by majority (41%) of library professionals, for making users aware about the new arrivals. This is followed by 16% of libraries using *book jackets* and *display shelves* for creating awareness. However, 5% using *computers* for the same purpose (developing awareness about new arrivals). Further in Jammu region, quite identical response has been received for the given query. Results show 27% of library professionals spread awareness about new arrivals through display of racks, followed by book jackets (16%) and display shelves (11%). In addition to this, college libraries of Ladakh province,

recorded maximum (5%) response towards display racks, as the suitable way for letting users know about new arrivals. It is followed by book jackets and shelves as per the response collected (2.78%).

Library Services and Facilities

Library Services: Libraries provide number of services, to give assistance to their users. In order to fulfil their requirement., constant vigilance is needed for betterment of services. Data collected in this regard is displayed in Fig. 2.

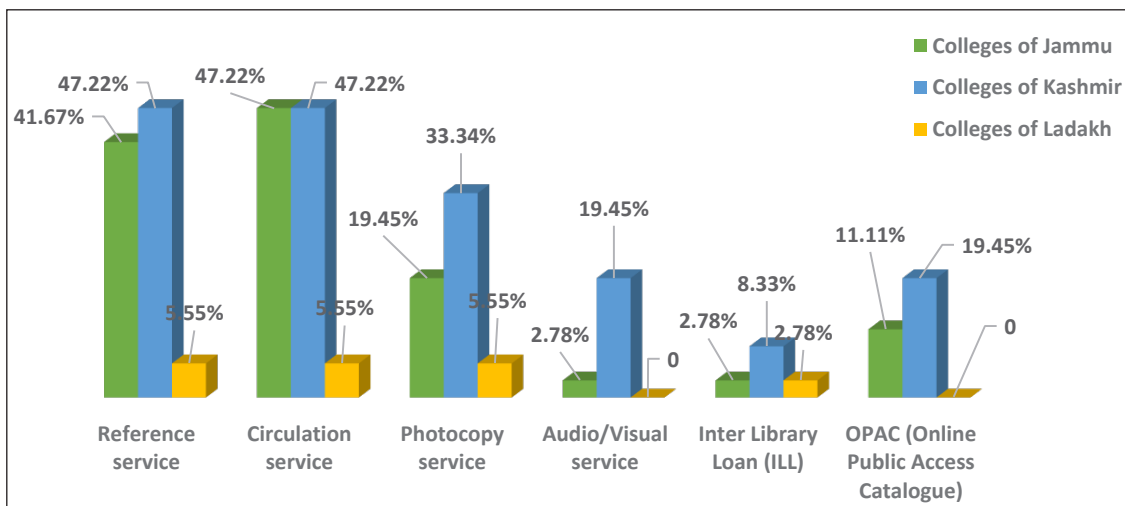


Fig. 2: Services Provided by Libraries

Fig. 2 demonstrates that in Kashmir region, majority (47.22%) of the college libraries have reference and circulation services. Similarly, these services (reference and circulation service) found at noticeable rate (in more than 40% colleges) in Jammu province. Also, in the colleges of Ladakh area, libraries show such services at higher rate (5.55%), comparatively to the other services. Although 33.34% of college libraries in Kashmir division, indicates

presence of photo copy services. Whereas, 19.45% of Jammu colleges show such service in their libraries and in Ladakh 5.55% colleges display its (photocopy service) existence. Moreover, Audio/visual service is found in 19.45% colleges libraries (surveyed in Kashmir domain). While as, in Jammu 2.78% colleges witnessed presence of Audio/visual service. However, no such service (Audio/visual service) was found

in the Ladakh colleges. Also, 19.45% colleges in Kashmir, 11.11% in Jammu specify availability of Online Public Access Catalogue (OPAC). On the other hand, libraries in Ladakh division are deprived of such service Online Public Access Catalogue (OPAC).

Facilities Provided by the Libraries

Library facilities help to made resources accessible to the user community in an efficient manner. Data collected in this connection is illustrated in Fig. 3.

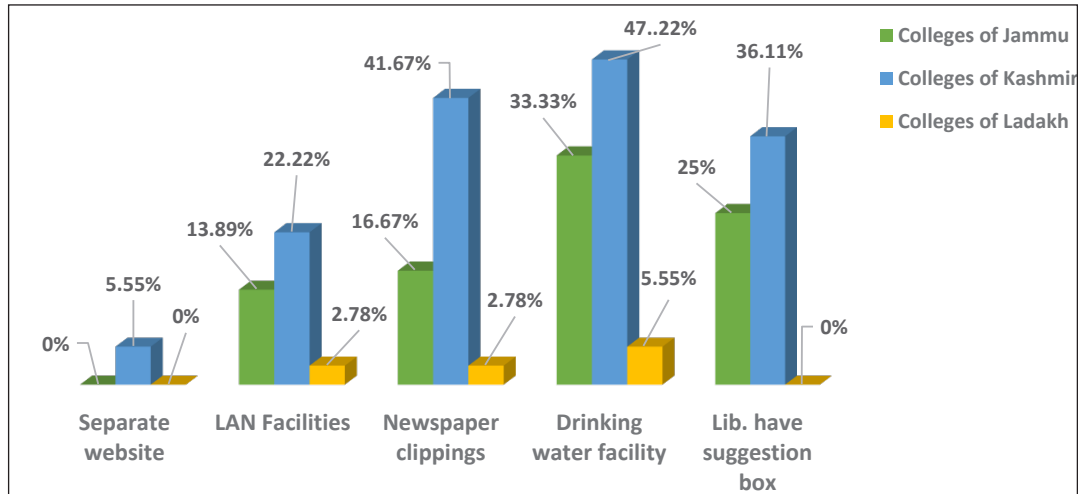


Fig. 3: Facilities Provided by Libraries

Fig. 3 reveals status of facilities in the college libraries under the scope of present study in Jammu, Kashmir and Ladakh. Fig shows that the majority (47.22%) of colleges in Kashmir region are providing drinking water facility, followed by newspaper clippings (41.67%). Then, 36.11% of libraries are recorded for having the suggestion box facility. However, least rating (5.55%) has been received for possessing separate website. On the other side, in Jammu 33.33% colleges are having drinking water facility in their concerned libraries. It is followed by 25% of libraries having suggestion box facility, 16.67% for keeping newspaper clipping facility. Whereas, attained response highlighted the absence of separate website facility in the college libraries

of Jammu region. Although, in Ladakh 5.55% of colleges are having drinking water facility in their libraries. While as, 2.78% libraries are possessing newspaper clipping and LAN facilities. Besides this, certain facilities (suggestion box and separate website) are not found within the surveyed colleges.

Circulation Process

Circulation is among the continuous operations of libraries to keep it (library) in active state, by provide maximum access to the materials. As a result, helps to develop connection between libraries and users. Data collected regarding circulation system adopted by the libraries is shown in Fig. 4

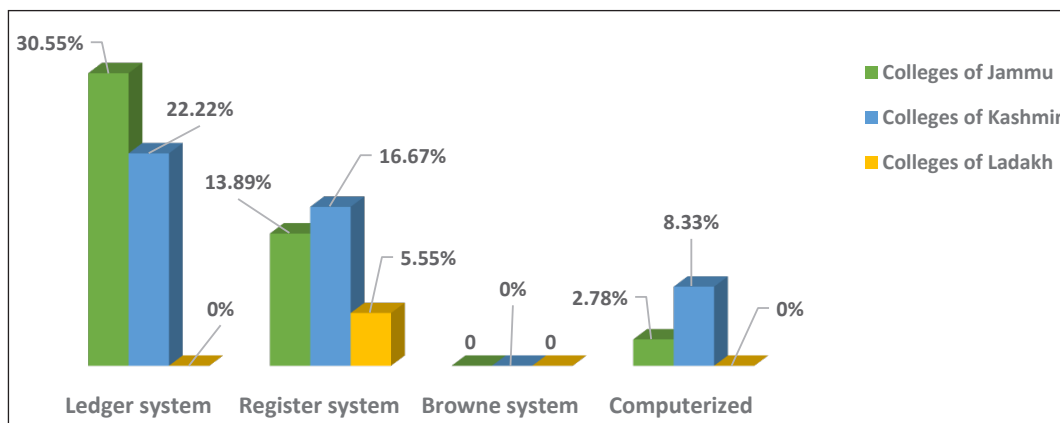


Fig. 4: Circulation Process

Fig. 4 indicates that for circulation purpose ledger system is adopted in majority (30.55%) of the colleges (surveyed) in Jammu, followed by register system (13.89%) and computerised system (2.78%). Similarly, maximum (22.22%) colleges of Kashmir display existence of ledger system, followed by 16.67% libraries using register system and 8.33% libraries adopt computerised process to perform circulation. On the other hand, in Ladakh region 5.55% of libraries shows practice of register system.

Automation in Libraries

In order to increase the efficiency of tasks and reduce

workload among library professionals (librarians and other staff members), libraries need to automate its operations (acquisition, cataloguing, circulation etc). That can help them (libraries) to serve their users in a better manner. Hence, data collected in this regard, is presented under following separate heading:

Status of Automation

To know the status of automation in college libraries, query has been raised to put forth relevant information as shown in Fig. 5.

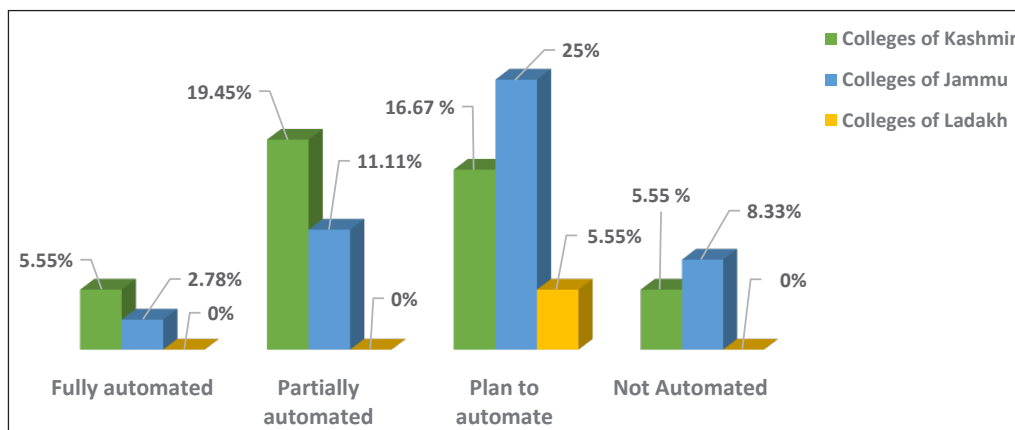


Fig. 5: Status of Automation

It is evident from Fig. 5 that in Kashmir region, 5.55% college libraries are fully automated, 19.45% are partially automated, and 16.67% libraries plan to automate their operations. On the other hand, in Jammu out of 17 surveyed college libraries, only 2.78% are fully automated and 11.11% are partially automated. However, 25% libraries plan to automate in near future. Further, in Ladakh province surveyed (5.55%) of colleges has shown consensus towards plan to automate library operations in future.

Technological Impact

Current technological era laid stress, upon the implementation of digital approaches in libraries. Accordingly, the users can perform important activities, to overcome constraints of the time and distancing through the pattern of access (24*7). Even, library collections as well as services can be put in more use through electronic media (in the form of computer facility, internet tool). In this regard collected data is displayed in Fig. 6.

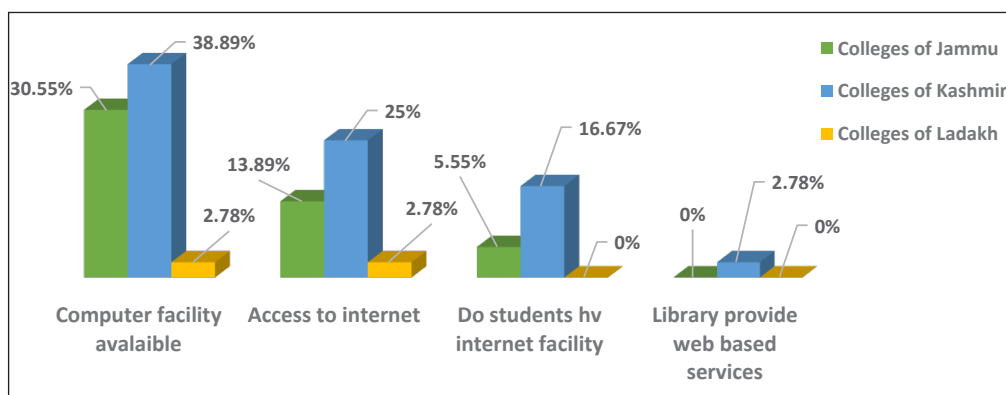


Fig. 6: Technological Impact

Fig. 6 reveals that in Kashmir division, computer facility is present in majority of the colleges (38.89 %). Also, considerable proportions of libraries (25%) have shown access to internet and 16.67% libraries depict availability of internet facility for students. Further, among the surveyed colleges, only 2.78% are providing web-based services. Whereas, in Jammu noticeable number of colleges (30.55%) were showing availability of computer facility. However, 13.89% libraries indicate presence of internet facility and 5.55% of the colleges are having internet facility for students. Moreover, in Ladakh region, out of the 2 colleges, only 1 (2.78%) college show existence of computer and internet facility.

Library Promotion

For the promotion of library resources, proper means are required to keep users informed (what libraries have and what their future plans are), so that they (*users*) will get benefited from libraries and accordingly their needs will be fulfilled. Data collected regarding, how libraries are promoting their services and resources are shown under the following headings:

Means Used by LIS Professionals to Keep Themselves Well-Informed

Data Collected regarding how library professionals remain updated of the latest information in the field is shown in Fig. 7.

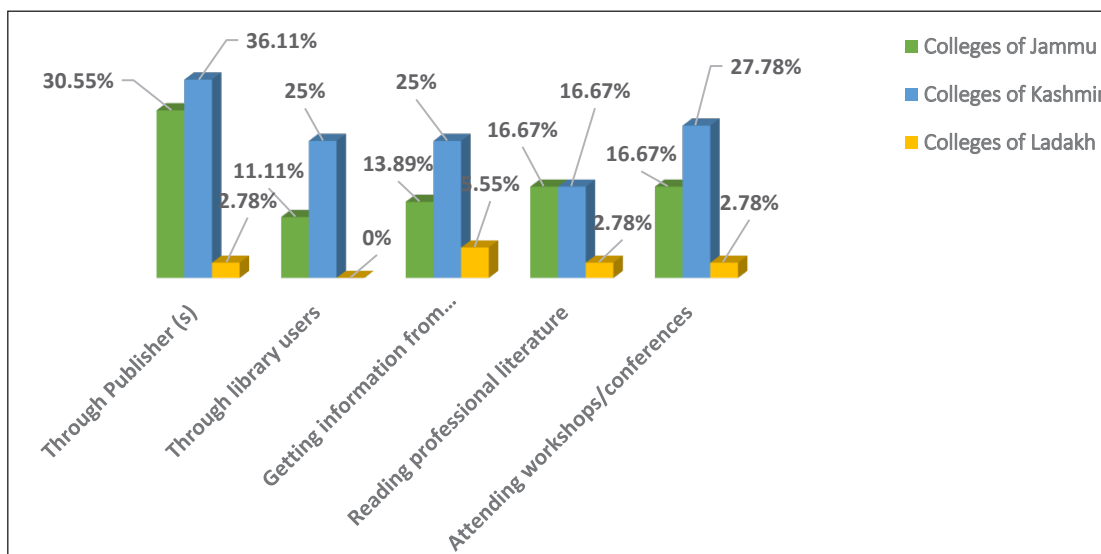


Fig. 7: Modes of Latest Information

From Fig. 7 it can be seen that majority (36.11%) of the college library professionals in Kashmir, *approach publishers* as the means to keep up to date with latest information. It is, followed by attending *workshops/ seminars* (27.78%) and *consulting library users as well as colleagues* (25%) to attain information about latest collection. However, a low response (16.67%) is obtained towards *reading professional literature* for remaining alongside with the latest collection. Similarly, from Jammu colleges 30.55% respondents obtain information about latest collection *through the publishers*, followed by 16.67%, who prefer to attend *workshops/ seminars and reading professional literature*. While as,

11.11% of respondents points out *library users* as the source for acquiring information about latest collection. On the other hand, in college libraries of Ladakh region, maximum numbers of respondents (5.55%) specify *consulting colleagues* as the most preferred way to know about latest collection. It is, followed by *consulting publishers* and *reading professional literature* (2.78%).

Ascertain Information Needs of Users

College library professionals apply different ways for ascertaining the information needs of users. Data collected

from respondents in this connection is presented in Figs. 8 and 9.

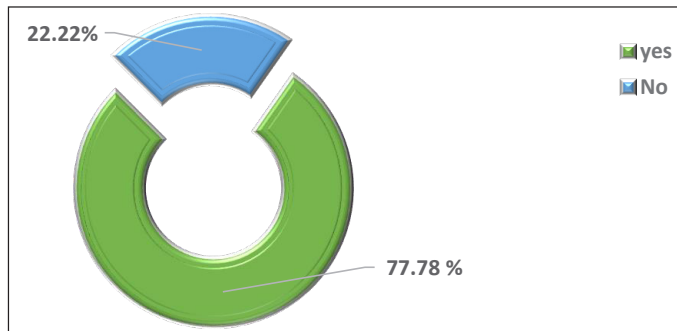


Fig. 8: Ascertain Information Needs

From Fig. 8 it is clear that the majority of college libraries (77.78%) ascertain information needs of users and only small percentage (22.22%) does not determine the user needs.

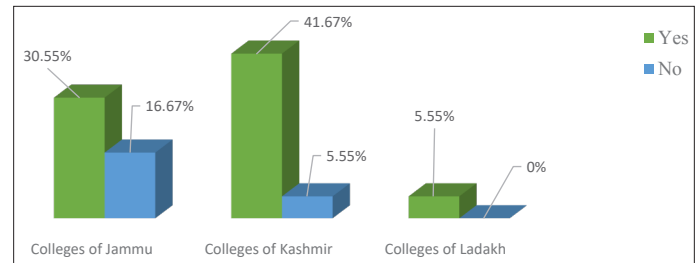


Fig. 9: Division Wise Information Needs

Fig. 9 highlights that among the surveyed colleges in Kashmir, 41% ascertain information needs of library users. It is followed by 30% libraries of Jammu province. However, in Ladakh division 5.55% libraries were found to ascertain the user needs.

Ways of Ascertaining Information Needs

To know ways of ascertaining user needs in college libraries, data was collected from respondents as displayed in Fig. 10.

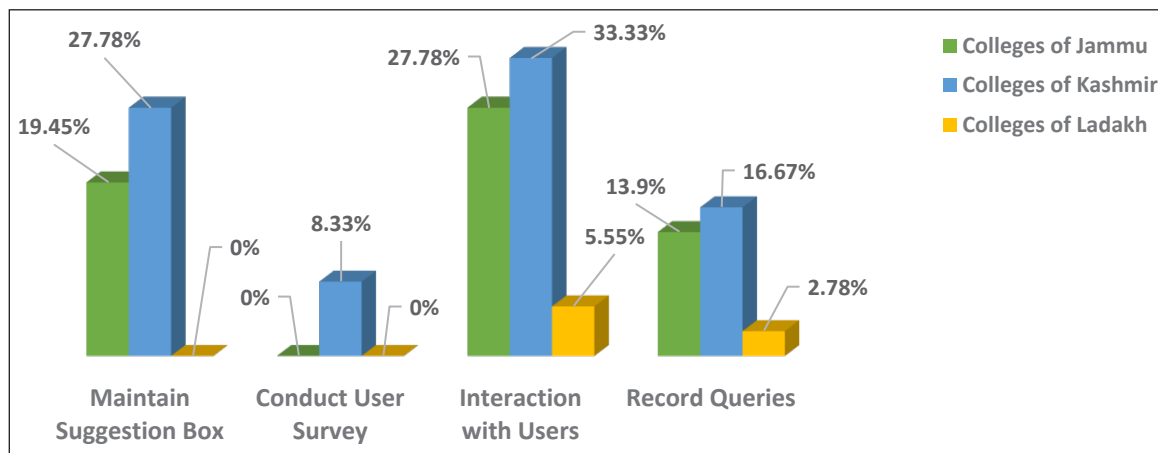


Fig. 10: Ascertaining User Needs (Modes)

Fig. 10 depicts that in Kashmir province majority of the colleges libraries (33.33%) adopt interaction with users, followed by maintaining suggestion box (27.78 %) among the possible means for ascertaining information needs. Also, 16.67% respondents display use of recorded queries to ascertain user needs. Similarly, in Jammu it is evident that majority of respondents (27.78%) adopt interaction with users for ascertaining their user needs followed by maintenance of suggestion box (19.45%) and record queries (13.9%). Besides, from Ladakh maximum respondents (5.55%) use interaction with users for ascertaining user needs. It is followed by record queries (2%). While as, no response attained in favour towards maintaining suggestion box, conducting user survey for ascertaining needs of users from Ladakh division.

FINDINGS

It is evident from findings that reference and circulation appeared as the most common forms of services provided by the libraries. While as, Inter Library Loan, OPAC, Audio/ Visual services are rarely offered in the libraries that have been surveyed. Furthermore, study clearly reveals that there is absence of web-based services (Ask-A-Librarian, Virtual reference service) among the libraries. Although, there are 41.67% colleges with internet facility within their library, with 22.22% colleges having such (internet) facility accessible for students also. Moreover, results reveal that the most common facilities (i.e., drinking water facility) are available within the maximum number of colleges. Although, presence of OPAC

is observed in 30.56% libraries. However, separate webpage facility is marked hardly in any of the institution (college library). On the other hand, Ledger system along with the register system emerges as the dominant forms of circulation in libraries. But using computerised arrangements for the same (circulation procedure) are found still in its infancy phase. Even, such phase appears in very few colleges. In other words, at large computerised circulation marks its absence in the libraries (colleges) under the scope of study. Moreover, it is found that the traditional reference services carried out face-to-face or by telephone or fax within the library are very much dominant. Even knowing the fact that when the library is closed such services are absent to patrons, but still the libraries are working on same pattern. However, the varied information needs, demands for incorporating new technology to make users get the most of the library with convenience. Therefore, to serve this purpose, no doubt that digital reference provides more substitutes and flexibility to users. Further findings highlight that the majority of colleges (72.22%) are having computer(s) within their campus. 47.22% of libraries (colleges) plan to automate their libraries and 30.55% of libraries, witnessed as the part of partial automation. In other words, large numbers of library personnel's are considering their library as the part of partial automation process. Further, when the respondents in the libraries were asked about the implementation of software for automation purpose, then the most leading names emerged as SOUL, KOHA. Not only as the part of their existing automation procedure. But also, for future course towards the stated drive (automation) professionals express their interest in the above mentioned names. On the other hand findings reveals that the large percentage (69.44%) of library professionals attain information about latest collection through publishers. Although, only few (36.11%) of them (professionals) get information through library users to remain updated with the latest developments in the field. On the other hand, to make users aware about new arrivals, majority of the libraries (75%) are making use of display racks. However, only 5.55% libraries (i.e., from Kashmir division) adopt computers for spreading awareness regarding new arrivals. Further investigation shows, lesser rate of libraries (33.33%) participates in orientation programmes. While as, no such programme commenced at colleges (libraries) of Ladakh division. On the other side, dominant ways that were adopted for library orientation emerged in the form of Library tours and through book exhibition as per the attained response (22.22%) among the colleges under the scope of study. Study also reveals that the literacy programmes in libraries are present at quite low rate (25%). Even in the college libraries of Ladakh, no such programmes are found. Results indicates that the large number of libraries are (i.e., 77.77%) showing involvement in ascertaining information needs of users. In this concern,

predominant response (66.66%) recorded towards interaction with users. While as, conducting user survey for ascertaining information needs has received extreme low response (8% that's too in Kashmir only).

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