

## Assessment of Students-Faculty Satisfaction: A Case Study of Punjab Agricultural University Library Facilities

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### ABSTRACT

Libraries must provide supportive environments and unhindered services to their users to support their academic well-being. A survey of 202 Punjab Agricultural University Library users was conducted to determine users' satisfaction with the library webpage, library resources, infrastructure facilities, and library services. The study found differences in the satisfaction level and awareness of library services and facilities among the undergraduate, graduate, research scholars and faculty users. A compulsory credit-based course exists for postgraduate students only, leaving the other users uninformed about the services and facilities offered by the library. It was discovered that a robust ICT infrastructure is required since most of the users assessed the ICT infrastructure as 'average'. Data collected was analysed using Statistical Package for Social Science (SPSS).

**Keywords:** Satisfaction; Punjab Agricultural University; Information communication and technology; E-resources

### 1. INTRODUCTION

The University library is the academic hub established to serve the intellectual needs of the user. Efficiency in the delivery of library services, resources and prompt help by the staff significantly impact the users' satisfaction. User satisfaction is the key to success for any service-driven organisation. Valuable feedback regarding various library facilities and staff attitudes helps evaluate the system's strengths and weaknesses and set directions for better library services for the users<sup>1</sup>. The present study focuses on the assessment of student-faculty satisfaction with library resources and services, ICT infrastructure and manpower. The study was conducted at Punjab Agricultural University by using a survey-based questionnaire. The state of Punjab has two agricultural universities, viz. Punjab Agricultural University (PAU) and the Guru Angad Dev University of Veterinary and Animal Sciences (GADVASU). These two universities were established in 1962 and 2005, respectively. The oldest university focusing solely on agricultural sciences was thus chosen for the present survey and analysis.

The proposed study explores the gaps between the users' expectations and the actual provision of library resources and facilities in the PAU library. Besides, staff efficiency and attitude have also been viewed as a measure of satisfaction among students and faculty members.

### 2. LITERATURE REVIEW

User satisfaction studies are the key determinant factor in evaluating the academic excellence of higher education institutes. Focusing on the institute's vision and mission, the

university library's main objective is to satisfy the needs of its clientele. Some of the significant studies related to the topic have been discussed here. Ekeng & Esin<sup>2</sup> investigated that the users were delighted with library facilities and the attitude of staff in the National Library. Olusegun & Victor<sup>3</sup> revealed that, irrespective of gender, students frequently used library resources for academic and personal development. The students were satisfied with the availability of resources, staff attitude, internet use, and e-resources available in the library. Pal & Barman<sup>4</sup> studied users' satisfaction with library resources and services. The libraries were unable to meet the minimum satisfaction level of the users as far as law reports and e-resources were concerned. At the same time, it was seen that all 16 colleges lacked basic OPAC service, indicating that law college libraries were far behind in giving access to the documents available in their libraries. Younus & Hussain<sup>5</sup> examined that most users of the four public sector Health Sciences Institute Libraries were satisfied with the library environment (furniture, heating/cooling, noise level, lights and cleanliness), circulation service of the libraries and the library staff. Cox & Brewster<sup>6</sup> discussed the role of libraries in supporting outreach programmes. e Rodrigues & Mandrekar<sup>7</sup> studied the students' satisfaction with library resources and services, difficulties they face in accessing the library resources and its impact on their academic success and performance. It was found that a significant relationship existed between academic well-being and library usage. Morgan<sup>8</sup> discussed that the libraries should extend their facilities beyond essential academic services and provide a relaxation room or community centre services to the students on campus to relieve them of their anxiety.

Xu & Du<sup>9</sup> studied the differences and similarities between graduate and undergraduate students' satisfaction and comprehensively analysed the impact of individual differences on undergraduate and graduate students' satisfaction with digital libraries based on several constructs. It was observed that the graduate students were more satisfied with the digital library. Age and gender were found to impact the user satisfaction with digital libraries, and a need to develop a personalised setting function in the digital library interface was suggested. Willis, Hughes & Bland<sup>10</sup> studied the transformation of school libraries as learning spaces and wellness centres. The users valued the system's technology, while they aspired for peacefulness, comfort, and connectedness in their ideal libraries at the same time. Bhat & Ganaie<sup>11</sup> studied the level of satisfaction among the users of seven universities and observed that a great majority of users were satisfied with the availability of e-journals and e-abstract databases. It was observed that only three libraries subscribe to e-books. Users were satisfied with the thesis database (KrishiPrabha) and e-book collection. In another study, the print and e-resources were compared by Bhat & Ganaie<sup>12</sup>. Naqvi<sup>13</sup> investigated PG students' and research scholars' opinions concerning the collection and services of the IARI library. PG students and research scholars were least satisfied with the library's interlibrary loan and document delivery services. The PG students and research scholars exhibited a significant difference in their usage, purpose and satisfaction level. Tamrakar & Garg<sup>14</sup> inferred that most users found the Indian Institute of Technology library staff, Guwahati, courteous, very supportive, and assisted them in finding information resources. Also, the e-services of the library were overall effective. Besides, the library regularly invites users' feedback regarding any information constraints.

The studies reviewed indicate that user satisfaction is a primary indicator of an efficient library system. Hence, there is a need to assess student-faculty satisfaction with library resources, services, infrastructure and manpower. Besides, happiness is the core asset of satisfaction and is fundamental to all users. This study aims to assess student-faculty satisfaction by evaluating different parameters related to the library facilities and infrastructure present in the Mohinder Singh Randhawa Punjab Agricultural University Library, commonly known as the PAU library.

### 3. METHODOLOGY

In this study, the assessment of the usefulness of library webpage in transferring information, impact of user education programme, the satisfaction of users with ICT infrastructure, library resources, library services, efficiency, and attitude of library staff has been carried out based on the analysis of the following five research questions.

- Are you aware of the library webpage, and is it useful?
- Are you aware and satisfied with the user education programme?
- How do you rate the ICT infrastructure such as availability of OPAC terminals, computer terminals, networking, speed of the internet, printer and scanner facility?
- Are you satisfied with available e-resources and services?

- How do you rate the efficiency and attitude of the library staff?

The study adopted a survey research method to address the research questions. The first part collected the personal information such as name, gender, age, educational qualification, designation (for faculty), and department. The second part gathered information about the use of the library by asking the users if they visit the university library, the frequency of visiting the library, the hours they spend in the library, and the purpose of visiting the library. The third part of the questionnaire collected information regarding the use of e-resources. This included 12 questions to assess the awareness and usefulness of the library webpage, different e-resources and e-databases present in the library, the purpose of accessing e-resources and their preference, frequency of use of e-resources and e-databases. The fourth part collected the information on the user satisfaction with e-resources collection, library services, assessment of ICT infrastructure, the efficiency of the library staff in handling e-resources, and the attitude of the library staff towards users. Overall, eight questions were posed to the users in this part. The fifth and the final part enquired about the future perspective of electronic and print resources.

The tool used in this study was first validated through a pilot study conducted on 92 users. The suggestions of peers and academicians were incorporated into the tool to make it more relevant. After validation, a structured questionnaire was developed and distributed randomly to 300 students, and faculty members and 202 responses were received back.

Out of 202 responses, 82 were from UG respondents, 44 PG respondents, 40 research scholars and 36 faculty members. Data collected was analysed using Statistical Package for Social Science (SPSS). The level of significance of facts and the association between constants and the variables under study was derived with the help of the Chi-Square ( $\chi^2$ ) Test. Percentages, charts, and tables were also used for the analysis.

### 4. DATA ANALYSIS

Faculty members and students are the core asset of the academic community. It becomes imperative to conduct an assessment survey to understand the issues at an individual or team level. Significant aspects related to the above objective were investigated and analysed accordingly.

#### 4.1 Awareness and Usefulness of Library Web Page

Figure 1(a) presents the response to awareness and usefulness of a library web page. It was observed that PG students and research scholars are comparatively more aware than undergraduate students. The chi-square value,  $\chi^2 = 22.44$  (df:3),  $C=0.32$  shows a significant association between the users and the awareness of the library webpage.

The libraries must take feedback from the different users while designing webpage as is evident from Fig. 1(b). Statistically,  $\chi^2 = 15.08$  (df:9),  $C = 0.28$  shows no significant correlation.

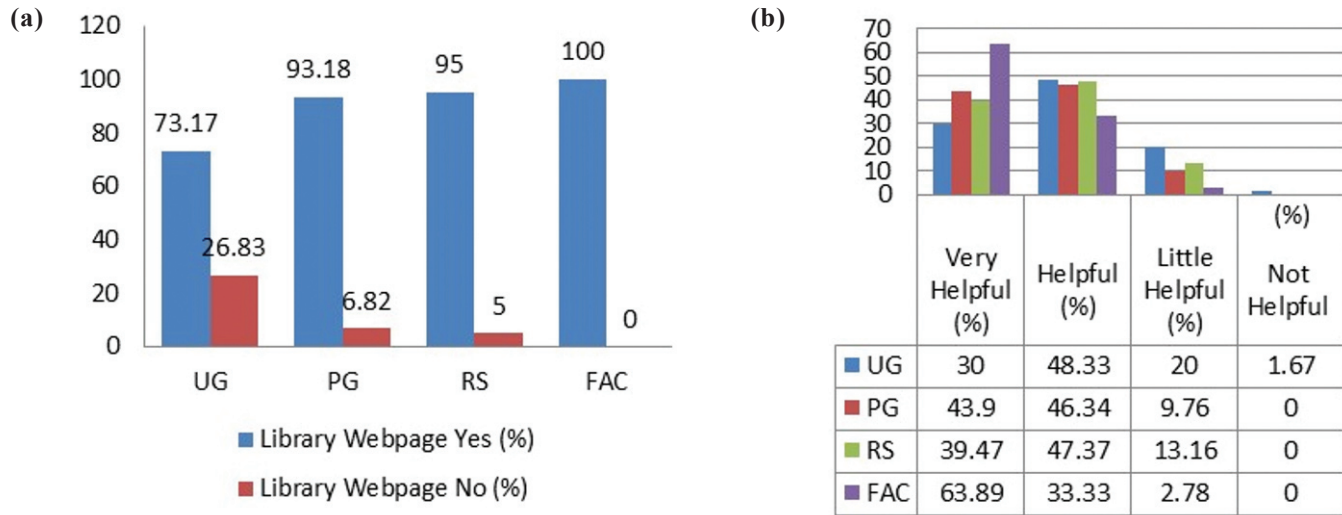


Figure 1. (a) Awareness of library webpage and (b) Usefulness of library webpage.

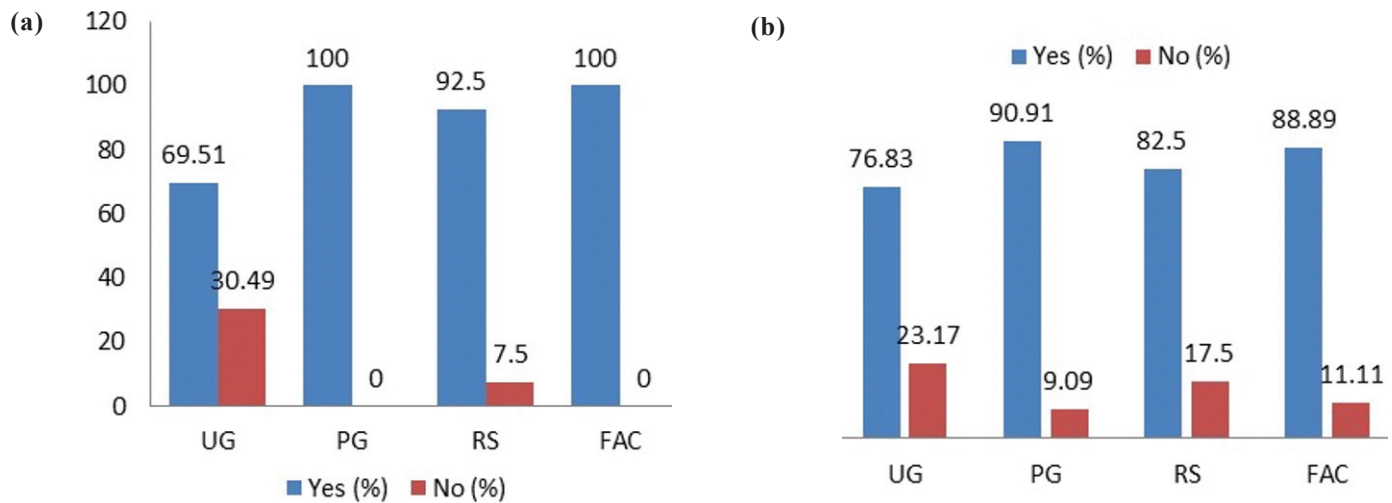


Figure 2. (a) Awareness of user education program, and (b) Satisfaction with a user education programme.

#### 4.2 User Education Programme

The Punjab Agricultural University runs a credit-based course (PGS-501) for PG students to impart the knowledge and skills required to learn basic and applied library and information science aspects. This is why 100 percent of postgraduate users were aware of the user education programme Fig. 2(a). This course is optional for research scholars. Besides, the university library conducts a faculty induction programme and orientation programme for fresh aspirants every year to acquaint students and faculty members with library resources and services. Fig. 2(b) shows that the orientation programme positively impacted them. The  $\chi^2 = 33.21$  (df:3),  $C = 0.38$  is significantly correlated at 0.01 level, indicating a strong association between respondents and user education programme, while no significant association was found between the respondents and satisfaction with the user education programme ( $\chi^2 = 5.09$  (df:3),  $C = 0.16$ ).

#### 4.3 Assessment of the ICT Infrastructure

Robust ICT infrastructure is required to support seamless users' demands. The response in Table 1 shows a difference in

opinion among students and faculty members. Unlike faculty members, the majority of the students found the availability of OPAC terminal 'average'. At the same time, nearly 16 per cent of UG students and nearly 17 per cent of faculty members opted for 'can't say'. A large percentage of the users assessed the availability of the Computer Terminals, Networking Facility, Printer and Scanner facility as 'below average'. However, there is a difference of opinion among students and between students and faculty members. These outcomes are in line with the findings of Xu & Du<sup>9</sup>.

The  $\chi^2$  value for different parameters like availability of OPAC terminals, availability of computer terminals, networking, printer and scanner facility shows significantly correlated, indicating a close association between respondents and the ICT infrastructure. This means that user satisfaction increases with an increase in ICT infrastructure.

#### 4.4 Library Resources and Services

Figure 3(a) presents the student-faculty satisfaction with the e-resources available in the library. A large percentage of undergraduate and postgraduate students were not satisfied

Table 1. Assessment of ICT infrastructure

ICT infrastructure	Respondents	Excellent (%)	Average (%)	Below Average (%)	Can't say (%)
Availability of OPAC terminals	UG	29.27	45.12	9.76	15.85
	PG	34.09	52.27	11.36	2.27
	RS	27.50	50.00	17.50	5.00
	FAC	50.00	33.33	0.00	16.67
Availability of computer terminals	$\chi^2 = 18.80^*$ (df:9), C = 0.29				
	UG	13.41	60.98	15.85	9.76
	PG	20.45	47.73	31.82	0.00
	RS	22.50	47.50	27.50	2.50
Networking	FAC	36.11	44.44	5.56	13.89
	$\chi^2 = 24.60^{**}$ (df: 9), C = 0.33				
	UG	18.29	47.56	26.83	7.32
	PG	27.27	47.73	25.00	0.00
Speed of the internet	RS	30	45.00	25.00	0.00
	FAC	41.67	55.56	0.00	2.78
	$\chi^2 = 21.70^{**}$ (df: 9), C = 0.31				
	UG	25.61	42.68	23.17	8.54
Printer facility	PG	31.82	40.91	25	2.27
	RS	25.00	57.50	17.50	0.00
	FAC	47.22	41.67	8.33	2.78
	$\chi^2 = 15.19$ (df:9), C = 0.26				
Scanner facility	UG	7.32	29.27	42.68	20.73
	PG	11.36	34.09	54.55	0.00
	RS	12.50	32.5	55.00	0.00
	FAC	36.11	13.89	30.56	19.44
Scanner facility	$\chi^2 = 39.13^{**}$ (df: 9), C = 0.40				
	UG	4.88	32.93	39.02	23.17
	PG	18.18	36.36	38.64	6.82
	RS	12.50	40.00	35.00	12.50
Scanner facility	FAC	33.33	16.67	27.78	22.22
	$\chi^2 = 24.84^{**}$ (df: 9), C = 0.33				

\*\* Significant at the 0.01 level \* Significant at the 0.05 level

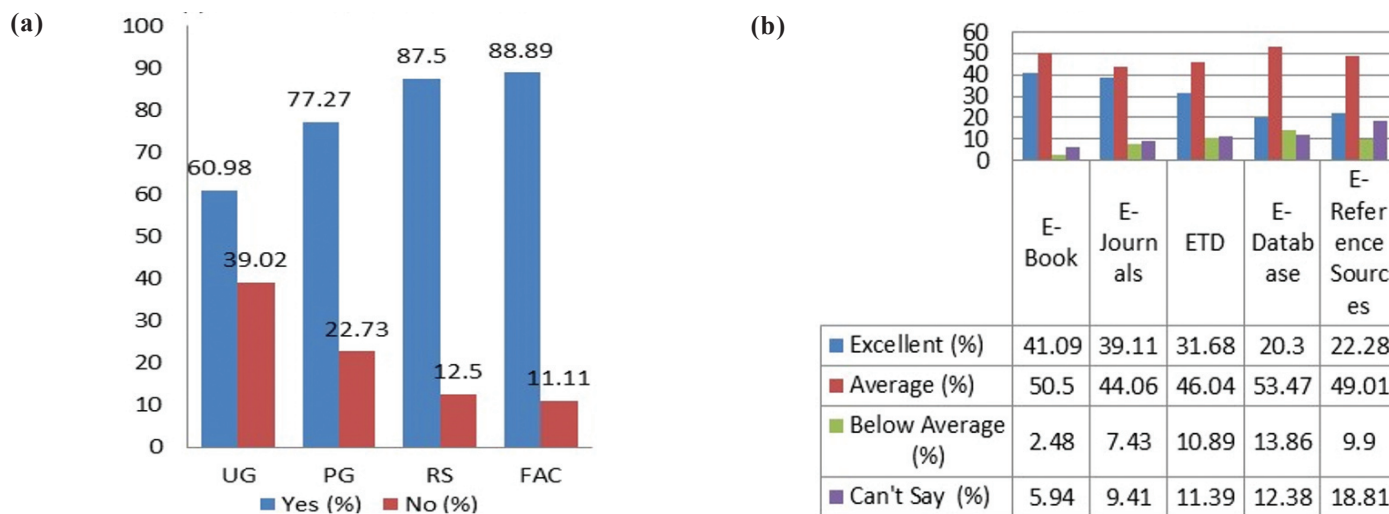


Figure 3. (a) Satisfaction with e-resources and (b) Ranking of e-resources.



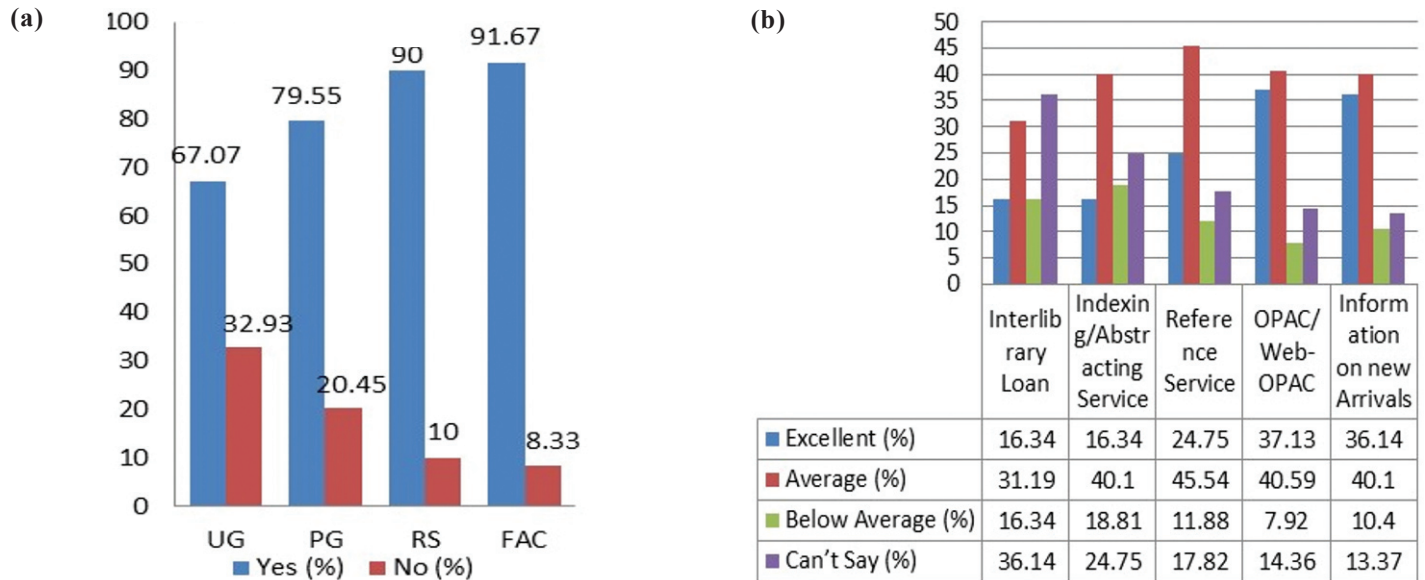


Figure 4. (a) Satisfaction with library services and (b) Ratings of different library services.

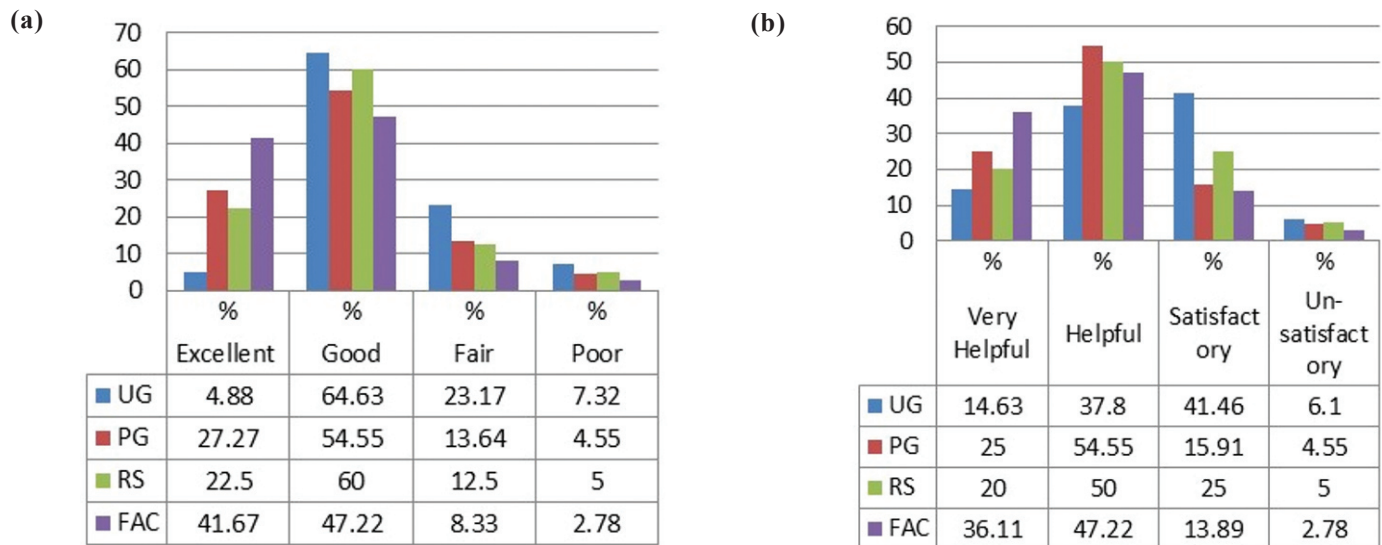


Figure 5. (a) Rating of efficiency of library staff and (b) Attitude of library staff.

with the collection. The  $\chi^2=15.65$  (df:3),  $C=0.27$  was found highly significant at the 0.01 level, indicating a close association between respondents and satisfaction with library e-resources.

Figure 3(b) shows that the library needs to improve the collection of e-resources especially e-databases, and e-reference resources.

Figures 4(a) show the satisfaction of students and faculty members with the library services. The undergraduate students are less satisfied than PG students, but research scholars and faculty members are appreciative of the library's services.

The  $\chi^2 = 3.30$  (df:3),  $C=0.25$  shows a significant association (at 0.01 level) between the users and satisfaction with library services. This means any decrease in library services will have an adverse impact on user satisfaction.

Furthermore, Fig. 4(b) shows that many users opted 'can't say' for Inter-library loan facilities and Indexing/Abstracting

services of the library. While OPAC/Web-OPAC services were rated excellent (37.13 %), the Indexing/Abstracting services was rated the lowest.

#### 4.5 Efficiency and Attitude of Library Staff

The efficiency of the library staff in handling library e-resources is presented in Fig. 5(a). It shows that most users found the efficiency of library staff 'good'. However, a large percentage of students still found staff efficiency 'fair', which indicates a need to stimulate the library staff for the improved and enhanced handling of resources.

The  $\chi^2 = 26.14$  (df:9),  $C=0.34$  shows a significant association at 0.01 level between the ratings and the users. Fig. 5 (b) clearly shows that majority of the students, and the faculty members found the attitude of the staff 'helpful'. Here,

$\chi^2 = 18.61$  (df:9),  $C=0.29$ ) shows that there exists a significant association at 0.05 levels between the attitude and the users.

## 5 DISCUSSION

The survey results show that student-faculty satisfaction is significantly correlated with user awareness of the library webpage, user education programme, ICT infrastructure, library resources and services, efficiency and attitude of library staff. Any increase or decrease in the ICT infrastructure, library resources and services, and efficiency and attitude of the staff will directly impact student-faculty satisfaction. In line with the outcomes of Xu & Du<sup>9</sup>, the faculty, research scholars and PG students were more aware and satisfied with the library services and infrastructure.

It is evident from the findings that UG students were less aware of the library web page than PG students, research scholars and faculty members. Anderson<sup>15</sup> “highlighted that library websites are a gateway to library resources, services, contact information, and events”. Scoulas<sup>16</sup> & De Groote noticed that the users who use the library webpage need lesser help from the library staff for simple tasks like finding a book. The awareness of user education programme results shows a need to introduce a compulsory credit-based course in the curriculum of undergraduate and research scholars. Xu & Du<sup>9</sup> too stressed the need to conduct user education programmes or orientation courses for all users so that the gap between the undergraduate students and other students could be minimised. Comparing the results regarding the assessment of ICT infrastructure, the majority of the results had rated different facilities as ‘average’ contrary to the lower user assessment in Anmol *et al.*<sup>17</sup>. Boachie<sup>18</sup> correlated the lack of ICT infrastructure with the high cost of procuring them in African countries and suggested that the vendors need to support the infrastructure needs of the libraries through great pricing of the equipment. The results regarding satisfaction with library staff are consistent with the results of Stokić *et al.*<sup>19</sup>, Xu & Du<sup>9</sup>, and Anmol *et al.*<sup>17</sup>. Further, there is a need to stimulate the library staff for improved and enhanced handling of e-resources. Tiemo & Ateboh<sup>20</sup> attributed the user’s dissatisfaction with the up-to-date collection in the libraries. Unlike the results of Nyantakyi-Baah & Tetteh<sup>21</sup>, this study doesn’t show a high level of satisfaction level with library resources and services. UG students, the research scholars and faculty members were appreciative of the library services. The study is limited to one university. The effect of age, gender and stream of the users was not considered while making assessments, unlike Xu & Du<sup>9</sup>.

## 6. CONCLUSIONS

A survey conducted on the undergraduate, postgraduate, research scholars, and faculty members of Punjab Agricultural University, Ludhiana, reveals that the libraries need to conduct special orientation programmes focusing on the undergraduate users to enhance the usability and awareness of the facilities available in the library. The library web page must satisfy the needs of all types of users, display important

notices or circulars, and have a virtual library tour facility. The postgraduate users had a compulsory credit-based course, which enhanced their awareness and satisfaction with the library’s facilities compared to other student users. The satisfaction with the ICT infrastructure, library resources, and services was most commonly rated average, but the percentage of users opting for the ‘can’t say’ option was also high. Hence, the librarian must examine the causes and consider interventions for improving users’ satisfaction.

Further, information on new arrivals must be flashed on the web page and the notice board. The efficiency of the library staff was good and was considered helpful by the users. Again, the library and the information providers should concentrate on the undergraduates and research scholars as they are among those who consider the efficiency of the staff poor and the services unsatisfactory. Based on the above outcomes, the following significant suggestions are made to enhance user satisfaction:

- The Punjab Agricultural University library must focus on frequent library tours for its users.
- Strong motivation is the first step to achieving learning. The library should organise an e-learning week for its users and therefore interact with them to provide individual services to the different categories of users.
- A suitable feedback system should be devised to take feedback from the users.
- The university library needs to consider the credit-based user education programme for the students at different levels.
- There is a need to enhance the ICT infrastructure and make it robust.
- The library needs to improve its e-resource collection, especially e-database and e-reference sources.
- There is a need to conduct orientation programs/workshops for the library staff to enhance their efficiency in handling e-resources.
- There is a need to acquire and study the feedback of students.
- The library should expand its outreach program and focus on the well-being of its users.

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