

USE OF INFORMATION RESOURCES IN MINORITY ENGINEERING COLLEGE LIBRARIES UNDER THE JURISDICTION OF JAWHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA: A CRITICAL STUDY

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1. INTRODUCTION

Information is a key resource for the progress and development of any organisation. Academic libraries in engineering institutions are prominent information organisations and play a crucial role in fulfilling the information needs of users. Engineering education is a skilful, artful and constructive education. Technical education plays a vital role in the social and economic development of our nation. Engineers need latest information in their subjects to support their learning, teaching, and other research requirements. The library professionals working in these institutions should pay importance to acquire appropriate and need based literature in those subjects to meet the information needs of their users. Identifying information needs and usage pattern of information resources, facilities and services of the users of engineering institutions is important for the development of the library and information system.

All India Council for Technical Education (AICTE), an apex organization is responsible for the planning and the overall development of technical education in India. In Andhra Pradesh, Jawaharlal Nehru Technological University, Kakinada (JNTUK) was originally 'The College of Engineering, Vizagpatnam' at the time of its establishment in 1946. It is now a sprawling campus of 110 acres, green with mango trees in the fast developing Port city of Kakinada, East coast of peninsula India. Kakinada has a rich political literacy and cultural heritage passed on through generations This college became a constituent of the Jawaharlal Nehru Technological University w.e.f 02-10-1972 through an act of legislature along with other sister institutions under the control of the then Director of Technical Education, Government of Andhra Pradesh. Earlier, it was affiliated to Andhra University. In the year 2003 the college has become autonomous. The University offers undergraduate, post graduate and Ph.D programmes in the fields of engineering, management and computer applications. Presently, there are 262 colleges affiliated to the University. The colleges are categorised as government, private-aided, and private-unaided based on the type of funding. A few colleges are classified as Minority Linguistic and Minority Religious based on the minority status of languages and religions. Further, these colleges are placed under the Autonomous and Non-Autonomous category of institutions based on the autonomy granted by UGC.

2. OBJECTIVES OF THE STUDY

The main objective of the study is to know the extent of usage pattern on various information resources in minority engineering college libraries.

3. HYPOTHESIS OF THE STUDY

There would not be any significant differences in the usage pattern of various information resources among the undergraduate students, postgraduate students and faculty members.

4. SCOPE, LIMITATION AND METHODOLOGY

There are 262 engineering colleges affiliated to the Jawaharlal Nehru Technological University, Kakinada. These colleges are categorized as government, private-aided, and private-unaided based on the type of funding. A few colleges are classified as Minority based on the status of languages and religions. The researcher has selected the following minority engineering colleges for the study.

- Al-Ameer College of Engineering and Technology (AACET)
- Bennaiah Institute of Technology Sciences (BITS)
- NIMRA College of Engineering and Technology (NIMRA-CET)
- NIMRA Institute of Engineering and Technology (NIMRA-IET)
- Nova College of Engineering and Technology (NCET)

➤ St. Mary's Women's Engineering College (St.MWEC)

The users of these minority engineering college libraries can be categorized as under graduate students, post graduate students, faculty members and others. However, the study is limited to the first three categories of users. The total number of UG, PG and faculty members of the selected colleges are 10080, 1080 and 843 respectively. However, due to the constraints of time, money and efforts involved, a total of 889 users were selected by using the stratified random sampling method. Out of the 889 users selected, 504 are under graduate students, 216 are post graduate students and 169 are faculty members. While selecting the sample, the entire population is divided into various strata according to the type of college and category of users. From each stratum, a sample 20 percent is selected by applying a simple random method.

5. ANALYSIS OF DATA

The data was collected with the help of questionnaires. The end result of the outcome is presented in the form of analysis and Interpretation in the following tables.

6. USAGE PATTERN OF INFORMATION RESOURCES

The extent of usage pattern of various information resources, namely, textbooks, reference books, competitive books, periodicals/journals, project reports, old question papers, and newspapers in the library is described in the following paragraphs.

6.1 Text books

The distribution of users according to the level of usage pattern of textbooks is shown in Table 2.

Table 2: Distribution of users with regard to the usage level of textbooks

Level of usage	Users			Total
	Undergraduate students	Postgraduate students	Faculty members	
Highly	161 (31.95)	62 (28.70)	34 (20.12)	257 (28.91)
Frequently	237 (47.02)	96 (44.45)	70 (41.42)	403 (45.33)
Occasionally	78 (15.48)	37 (17.13)	46 (27.22)	161 (18.11)
Rarely	28 (5.55)	21 (9.72)	19 (11.24)	68 (7.65)
TOTAL	n=504 (100.00)	n=216 (100.00)	n=169 (100.00)	N=889 (100.00)

(Note: Numbers indicated in parentheses are percentages)

$$\begin{aligned} \chi^2 (\text{UG} - \text{PG}) & : 4.8462 \text{ DF: } 3 \quad \text{TV: } 7.815 \quad \text{NS at } 0.05 \text{ level} \\ \chi^2 (\text{UG} - \text{FM}) & : 22.3133 \quad \text{DF: } 3 \quad \text{TV: } 7.815 \quad \text{Sig at } 0.05 \text{ level} \\ \chi^2 (\text{PG} - \text{FM}) & : 7.6918 \text{ DF: } 3 \quad \text{TV: } 7.815 \quad \text{NS at } 0.05 \text{ level} \end{aligned}$$

Table 2 shows that a majority of the users (45.33%) used the textbooks frequently, 28.91 percent of them used highly, 18.11 percent used occasionally and the remaining 7.65 percent of them rarely used.

It is also evident from Table 2 Chi-square values that there would not be significant difference in the level of use of textbooks between the under graduate and post graduate students one hand, and postgraduate students and faculty members on the other. It is proved by the χ^2 values, which are not significant at 0.05 level with three degrees of freedom. However, there is significant difference in this regard between the undergraduate graduate students and faculty members. This mean that undergraduate students used textbooks more compared to faculty members.

6.2 Reference books

The distribution of users according to the level of usage pattern of reference books is shown in Table 3.

Table 3 shows that a majority of the users (41.96%) used the reference books frequently, 27.11 percent of them used highly, 17.10 percent used occasionally and the remaining 13.83 percent of them rarely used.

Table 3: Distribution of users with regard to the usage level of reference books

Level of usage	Users			Total
	Undergraduate students	Postgraduate students	Faculty members	
Highly	136 (26.98)	61 (28.24)	44 (26.04)	241 (27.11)
Frequently	212 (42.06)	93 (43.06)	68 (40.24)	373 (41.96)
Occasionally	96 (19.05)	25 (11.57)	31 (18.34)	152 (17.10)
Rarely	60 (11.91)	37 (17.13)	26 (15.38)	123 (13.83)
TOTAL	n=504 (100.00)	n=216 (100.00)	n=169 (100.00)	N=889 (100.00)

(Note: Numbers indicated in parentheses are percentages)

χ^2 (UG – PG) : 8.2114 DF: 3 TV: 7.815 Sig. at 0.05 level

χ^2 (UG – FM) : 1.3767 DF: 3 TV: 7.815 NS at 0.05 level

χ^2 (PG– FM) : 3.5125 DF: 3 TV: 7.815 NS at 0.05 level

It is also evident from Table 3 Chi-square values that there would not be significant difference in the level of use of reference books between the under graduate and faculty members one hand, and postgraduate students and faculty members on the other. It is proved by the χ^2 values, which are not significant at 0.05 level with three degrees of freedom. However, there is significant difference in this regard between the undergraduate graduate students and postgraduate students. This mean that postgraduate students used reference books more compared to undergraduate students.

6.3 Competitive books

The distribution of users according to the level of usage pattern of competitive books is shown in Table 4.

Table 4: Distribution of users with regard to the usage level of competitive books

Level of usage	Users			Total
	Undergraduate students	Postgraduate students	Faculty members	
Highly	166 (32.94)	67 (31.02)	43 (25.44)	276 (31.05)
Frequently	257 (50.99)	106 (49.07)	72 (42.60)	435 (48.93)
Occasionally	74 (14.68)	31 (14.35)	28 (16.57)	133 (14.96)
Rarely	7 (1.39)	12 (5.56)	26 (15.39)	45 (5.06)
TOTAL	n=504 (100.00)	n=216 (100.00)	n=169 (100.00)	N=889 (100.00)

(Note: Numbers indicated in parentheses are percentages)

χ^2 (UG – PG) : 10.2409 DF: 3 TV: 7.815 Sig. at 0.05 level

χ^2 (UG – FM) : 54.9651 DF: 3 TV: 7.815 Sig. at 0.05 level

χ^2 (PG– FM) : 11.4745 DF: 3 TV: 7.815 Sig. at 0.05 level

Table 4 shows that a majority of the users (48.93%) used the competitive books frequently, 31.05 percent of them used highly, 14.96 percent used occasionally and the remaining 5.06 percent of them rarely used.

It is also evident from Table 4 Chi-square values that there are significant differences in the level of use of competitive books among the under graduate students, postgraduate students and faculty members as evidenced by the χ^2 values, which are significant at 0.05 level with three degrees of freedom. This mean that undergraduate students used competitive books more compared to postgraduate students and faculty members.

6.4 Periodicals/Journals

The distribution of users according to the level of usage pattern of periodicals/journals is shown in Table 5.

Table 5: Distribution of users with regard to the usage level of periodicals/journals

Level of usage	Users			Total
	Undergraduate students	Postgraduate students	Faculty members	
Highly	136 (26.99)	58 (26.85)	45 (26.62)	239 (26.88)
Frequently	212 (42.06)	91 (42.13)	64 (37.87)	367 (41.28)
Occasionally	106 (21.03)	31 (14.35)	34 (20.12)	171 (19.24)
Rarely	45 (8.93)	13 (6.02)	16 (9.47)	74 (8.32)
Not at all	5 (0.99)	23 (10.65)	10 (5.92)	38 (4.28)
TOTAL	n=504 (100.00)	n=216 (100.00)	n=169 (100.00)	N=889 (100.00)

(Note: Numbers indicated in parentheses are percentages)

χ^2 (UG - PG) : 41.388 DF: 4 TV: 9.488 Sig. at 0.05 level
 χ^2 (UG - FM) : 14.4139 DF: 4 TV: 9.488 Sig. at 0.05 level
 χ^2 (PG- FM) : 6.2698 DF: 4 TV: 9.488 NS at 0.05 level

Table 5 shows that a majority of the users (41.28%) used the periodicals/journals frequently, 26.88 percent of them used highly, 19.24 percent used occasionally, 8.32 percent used rarely, and the remaining 4.28 percent of them not at all used.

It is also evident from Table 5 Chi-square values that there is significant difference in the level of use of periodicals/journals between the under graduate and postgraduate students one hand, and undergraduate students and faculty members on the other. It is proved by the χ^2 values, which are significant at 0.05 level with four degrees of freedom. This mean that postgraduate students used periodicals/journals more compared to undergraduate students and faculty members. However, there is no significant difference in this regard between the postgraduate graduate students and faculty members.

6.5 Project reports

The distribution of users according to the level of usage pattern of project reports is shown in Table 6.

Table 6: Distribution of users with regard to the usage level of project reports

Level of usage	Users			Total
	Undergraduate students	Postgraduate students	Faculty members	
Highly	146 (28.96)	65 (30.09)	47 (27.81)	258 (29.02)
Frequently	217 (43.06)	94 (43.52)	71 (42.01)	382 (42.97)
Occasionally	96 (19.05)	47 (21.76)	25 (14.79)	168 (18.90)
Rarely	45 (8.93)	10 (4.63)	26 (15.39)	81 (9.11)

TOTAL	n=504 (100.00)	n=216 (100.00)	n=169 (100.00)	N=889 (100.00)
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(Note: Numbers indicated in parentheses are percentages)

χ^2 (UG – PG)	: 4.2905 DF: 3	TV: 7.815	NS at 0.05 level
χ^2 (UG – FM)	: 6.3659 DF: 3	TV: 7.815	NS at 0.05 level
χ^2 (PG– FM)	: 14.4093	DF: 3	TV: 7.815 Sig. at 0.05 level

Table 6 shows that a majority of the users (42.97%) used the project reports frequently, 29.02 percent of them used highly, 18.90 percent used occasionally, and the remaining 9.11 percent of them used rarely.

It is also evident from Table 6 Chi-square values that there is no significant difference in the level of use of project reports between the under graduate and postgraduate students one hand, and undergraduate students and faculty members on the other. It is proved by the χ^2 values, which are not significant at 0.05 level with three degrees of freedom. However, there is significant difference in this regard between the postgraduate graduate students and faculty members. This mean that postgraduate students used project reports more compared to faculty members.

6.6 Old question papers

The distribution of users according to the level of usage pattern of old question papers shown in Table 7.

Table 7 shows that a majority of the users (48.26%) used old question papers frequently, 23.73 percent of them used occasionally, 21.03 percent used highly, and the remaining 6.98 percent of them used rarely.

Table 7: Distribution of users with regard to the usage level of old question papers

Level of usage	Users			Total
	Undergraduate students	Postgraduate students	Faculty members	
Highly	111 (22.02)	44 (20.37)	32 (18.93)	187 (21.03)
Frequently	247 (49.01)	106 (49.07)	76 (44.97)	429 (48.26)
Occasionally	105 (20.84)	51 (23.62)	55 (32.55)	211 (23.73)
Rarely	41 (8.13)	15 (6.94)	6 (3.55)	62 (6.98)
TOTAL	n=504 (100.00)	n=216 (100.00)	n=169 (100.00)	N=889 (100.00)

(Note: Numbers indicated in parentheses are percentages)

χ^2 (UG – PG)	: 1.0061 DF: 3	TV: 7.815	NS at 0.05 level
χ^2 (UG – FM)	: 12.1084	DF: 3	TV: 7.815 Sig. at 0.05 level
χ^2 (PG– FM)	: 5.1875 DF: 3	TV: 7.815	NS at 0.05 level

It is also evident from Table 7 Chi-square values that there is no significant difference in the level of use of old question papers between the under graduate and postgraduate students one hand, and postgraduate students and faculty members on the other. It is proved by the χ^2 values, which are not significant at 0.05 level with three degrees of freedom. However, there is significant difference in this regard between the undergraduate graduate students and faculty members. This mean that undergraduate students used old question papers more compared to faculty members.

6.7 Newspapers

The distribution of users according to the level of usage pattern of newspapers is shown in Table 8.

Table 8: Distribution of users with regard to the usage level of newspapers

Level of usage	Users			Total
	Undergraduate students	Postgraduate students	Faculty members	
Highly	141 (27.98)	56 (25.92)	44 (26.03)	241 (27.11)
Frequently	223 (44.25)	97 (44.91)	73 (43.20)	393 (44.21)
Occasionally	116 (23.01)	51 (23.61)	29 (17.16)	196 (22.05)
Rarely	24 (4.76)	12 (5.56)	23 (13.61)	59 (6.63)
TOTAL	n=504 (100.00)	n=216 (100.00)	n=169 (100.00)	N=889 (100.00)

(Note: Numbers indicated in parentheses are percentages)

χ^2 (UG – PG) : 0.4607 DF: 3 TV: 7.815 NS at 0.05 level
 χ^2 (UG – FM) : 16.4059 DF: 3 TV: 7.815 Sig. at 0.05 level
 χ^2 (PG– FM) : 8.7278 DF: 3 TV: 7.815 Sig. at 0.05 level

Table 8 shows that a majority of the users (44.21%) used newspapers frequently, 27.11 percent of them used highly, 22.05 percent used occasionally, and the remaining 6.63 percent of them used rarely.

It is also evident from Table 8 Chi-square values that there is significant difference in the level of use of newspapers between the under graduate students and faculty members one hand, and postgraduate students and faculty members on the other. It is proved by the χ^2 values, which are significant at 0.05 level with three degrees of freedom. This mean that faculty members used newspapers less compared to undergraduate students and postgraduate students. However, there is no significant difference in this regard between the undergraduate graduate students and postgraduate students.

6.8 Overall usage level of information resources

In order to know the overall usage level of various information resources by the users of selected minority engineering college libraries, responses of highly frequently, occasionally, rarely and not at all used are assigned the weightages of 4, 3, 2, 1 and 0 respectively. The total weightage and mean weightage is calculated for each information resource. Each information resource has been ranked on the basis of its mean weightage.

Table 9 shows the ranks given to various information resources by the users for their usage level of their study.

Table 9: Relative usage level of information resources

S.No	Information resources	Total weightage	Mean	Rank
1	Competitive books	2720	3.06	1
2	Text books	2627	2.96	2
3	Project reports	2595	2.92	3
4	Newspapers	2594	2.92	4
5	Old question papers	2519	2.83	5
6	Reference books	2510	2.82	6
7	Periodicals/journals	2473	2.78	7

It is evident from Table 9 that users prefer using the competitive books heavily compared to other information resources. It is followed by text books, project reports, newspapers, and old question papers, which have got second, third, fourth and fifth ranks respectively. Reference books and periodicals/journals have got the sixth and seventh ranks respectively for their usage.

7. FINDINGS

The following are the findings obtained from the analysis of data collected from users of minority engineering college libraries under the jurisdiction of Jawaharlal Nehru Technological University, Kakinada.

1. A majority of users (45.33%) frequently used textbooks for their study, 28.91 percent used highly, 18.11 percent used occasionally and the remaining 7.65 percent used rarely.
2. There would not be significant difference in the level of use of textbooks between the under graduate and post graduate students one hand, and postgraduate students and faculty members on the other.
3. There is significant difference in this regard between the undergraduate graduate students and faculty members. This mean that undergraduate students used textbooks more compared to faculty members.
4. A majority of users (41.96%) frequently used reference books for their study, 27.11 percent used highly, 17.10 percent used occasionally and the remaining 13.83 percent used rarely.
5. There would not be significant difference in the level of use of reference books between the under graduate and faculty members one hand, and postgraduate students and faculty members on the other.
6. There is significant difference in this regard between the undergraduate graduate students and postgraduate students. This mean that postgraduate students used reference books more compared to undergraduate students.
7. A majority of users (48.93%) frequently used competitive books for their study, 31.05 percent used highly, 14.96 percent used occasionally and the remaining 5.06 percent used rarely.
8. There are significant differences in the level of use of competitive books among the under graduate students, postgraduate students and faculty members. This mean that undergraduate students used competitive books more compared to postgraduate students and faculty members.
9. A majority of users (41.28%) frequently used periodicals/journals for their study, 26.88 percent used highly, 19.24 percent used occasionally, 8.32 percent used rarely, and the remaining 4.28 percent not at all used.
10. There is significant difference in the level of use of periodicals/journals between the under graduate and postgraduate students one hand, and undergraduate students and faculty members on the other. This mean that postgraduate students used periodicals/journals more compared to undergraduate students and faculty members.
11. There is no significant difference in this regard between the postgraduate graduate students and faculty members.
12. A majority of users (42.97%) frequently used project reports for their study, 29.02 percent used highly, 18.90 percent used occasionally, and the remaining 9.11 percent used rarely.
13. There is no significant difference in the level of use of project reports between the under graduate and postgraduate students one hand, and undergraduate students and faculty members on the other.
14. There is significant difference in this regard between the postgraduate graduate students and faculty members. This mean that postgraduate students used project reports more compared to faculty members.
15. A majority of users (48.26%) frequently used old question papers for their study, 23.73 percent used occasionally, 21.03 percent used highly, and the remaining 6.98 percent used rarely.
16. There is no significant difference in the level of use of old question papers between the under graduate and postgraduate students one hand, and postgraduate students and faculty members on the other.
17. There is significant difference in this regard between the undergraduate graduate students and faculty members. This mean that undergraduate students used old question papers more compared to faculty members.
18. A majority of users (44.21%) frequently used newspapers for their study, 27.11 percent used highly, 22.05 percent used occasionally, and the remaining 6.63 percent used rarely.
19. There is significant difference in the level of use of newspapers between the under graduate students and faculty members one hand, and postgraduate students and faculty members on the other. This mean that faculty members used newspapers less compared to undergraduate students and postgraduate students.

20. There is no significant difference in this regard between the undergraduate graduate students and postgraduate students.
21. The users prefer using the competitive books heavily compared to other information resources. It is followed by text books, project reports, newspapers, and old question papers, which have got second, third, fourth and fifth ranks respectively. Reference books and periodicals/journals have got the sixth and seventh ranks respectively for their usage.

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