# Users' Expectations and Perceptions of Engineering Students on Infrastructural Facilities and Services: A Study

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**Abstract**

In the present research study, the primary focus is on examining and analyzing the user perceptions, satisfaction and expectations related to libraries, infrastructure, and services offered by NAAC-accredited engineering institutions in Guntur District of Andhra Pradesh. The researchers have focused on identifying the user satisfaction with library services as perceived by engineering students by examining patterns, commonalities as well as variations in their views, satisfaction levels and expectations. It also examined the perception and expectations that engineering students shared about the amenities and facilities provided by the library in general. On a comprehensive evaluation of the results, it is noted that none of the infrastructure facility statements have met user expectations with respondents showing a significant degree of dissatisfaction in this respect.

Keywords: Users' expectations, Users' Perception, Infrastructural facilities, 　Services, engineering students

## 1. Introduction

A college library is sometimes referred as the nerve centre around which all academic and research activities revolve around since it gives both faculty and students in the engineering field a common place to interact, exchange and share academic ideas and knowledge. Maintaining the standards of infrastructure and service quality is an academic library's strategic goal as provider of educational services. The level of services provided ought to meet the expectations of user communities and make sure that the host institution continues to fulfil its foundational objectives and remain stable and dynamic as well. Many in society believe that libraries are an excellent instrument to spread the ideals and principles of democracy as they are easily accessible to everyone irrespective of their race, gender, or creed. All those who opt to utilize such institutional facilities are automatically guaranteed access to learning resources and experience career building possibilities. The relevance of college libraries is significant due to the life changing opportunities it offers practically to everyone.

The library is essential to the academic life at any institution. It is thought that libraries are subject to more scrutiny and responsibility to see if services satisfy user demands. This study aims to determine users' views of the quality services rendered in the library and users' expectations of the services that need to be rendered to them in light of the allocation of insufficient funding scenario that exists in the majority of academic libraries across the world. Since no research work has explored the problems associated

with significant levels of user issues at NAAC-accredited engineering college libraries in the Guntur District of Andhra Pradesh, there is an urgent need to launch an investigative study on this issue. Moreover, it is anticipated that this study will serve as a foundation for information and a template for subsequent user-perception surveys on the quality of library services. In fact, various user communities, especially the library personnel at NAAC-accredited engineering college library can experience clarity and empowerment about library resources, services and facilities and look forward to more improved services, allowing them to predict future user needs and expectations and fulfill them as well. Additionally, the research work has made three contributions: by filling in the gaps in the literature, enhancing library policy, and finally, by impacting practices in light of the study's results.

## 2. Purpose of the study

As a declaration of the researcher's intentions or the study's goals, the aim of the study is specified. In a quantitative study, the purpose statement is a declarative statement that specifies the kind of relationship being looked at between a group of variables. There will be an examination between a collection of variables in the research query because this is a quantitative study that is designed to be. The goal of this study is to investigate into the usage, perceptions and expectations of engineering students in relation to the library infrastructure and services in NAAC-accredited engineering college libraries in Guntur District of Andhra Pradesh. It also conducts an analysis into the real time user experiences with facilities and services in these colleges.

## 3. Objectives of the study

i. To assess expectations and perceptions among engineering students with regard to the following library infrastructural facilities and services:
   - Adequacy of the availability of computer workstations
   - Adequacy of the satisfaction towards the proper functioning of computers
   - Adequacy of the availability of photocopying facilities
   - Adequacy of the availability of printing facilities
   - Adequacy of the availability of furniture and space for reading

ii. To find out the ranking of infrastructural facilities and services as per engineering students' expectations and perceptions levels.

iii. To determine the gap between the engineering students' expectations and perceptions and the current state of the available library infrastructural facilities and services;

## 4. Methodology

The methodology used in the present study is clearly delineated in the following paragraphs.

**4.1 Sample Selection**

The study deals with examining users' expectation, perception and exploitations of library infrastructure and services in select NAAC accredited engineering college libraries in Guntur District of the state of Andhra Pradesh in India. There are 53 engineering colleges within the peripheral limits of Guntur District. Out of 53 engineering colleges, 11colleges have been accredited by NAAC. Hence, the researchers have selected users from these eleven colleges as the sample in the first instance.

There are different types of users such as B.Tech, M.Tech, M.B.A., M.C.A, Faculty Members and Supporting staff are using in these engineering college libraries, the researcher selected the undergraduate and postgraduate engineering students as sample in the second instance.

At present, there are 9046 (7740 UG students + 1306 PG Students) users in the selected eleven NAAC accredited engineering colleges in Guntur District. Since the population is too large to study, hence, in view of time and cost involved, a sample of 1800 (20% of the population) users have been drawn from the total population by simple random method. However, the researcher received responses from 1130 (62.78% of the sample) users only.

## 5. Analysis of the data

### 5.1 Expectation and Perception levels on library infrastructure facilities and services

To know engineering students' expectation and perception levels on various infrastructural facilities and services viz., Adequacy of the availability of computer workstations, Adequacy of the satisfaction towards the proper functioning of computers, Adequacy of the availability of photocopying facilities, Adequacy of the availability of printing facilities, and Adequacy of the availability of furniture and space for reading were examined in the following paragraphs.

**Table 1: Expectations on library infrastructure facilities and services**

| Statements | Strongly Agree | Agree | Neutral | Disagree | Strongly disagree | Total |
|---|---|---|---|---|---|---|
| Adequacy of the availability of computer workstations | 249 (22.04) | 316 (27.96) | 294 (26.02) | 203 (17.96) | 68 (6.02) | **1130 (100.00)** |
| Adequacy of the satisfaction towards the proper functioning of computers | 291 (25.75) | 396 (35.04) | 181 (16.02) | 215 (19.03) | 47 (4.16) | **1130 (100.00)** |
| Adequacy of the availability of photocopying facilities | 328 (29.03) | 441 (39.03) | 237 (20.97) | 79 (6.99) | 45 (3.98) | **1130 (100.00)** |
| Adequacy of the availability of printing facilities | 319 (28.23) | 393 (34.78) | 231 (20.44) | 113 (10.00) | 74 (6.55) | **1130 (100.00)** |
| Adequacy of the availability of furniture and space for reading | 233 (20.62) | 292 (25.84) | 199 (17.61) | 297 (26.28) | 109 (9.65) | **1130 (100.00)** |

A sizable proportion of respondents i.e., 27.96 percent have agreed to having 'adequacy of the availability of computer workstations'; while 26.02 percent of them are neutral; 22.04 percent of them have strongly agreed, 17.96 percent of them have disagreed, and only 6.02 percent of them have strongly disagreed to the above statement.

With regard to the responses to the statement of 'adequacy of the satisfaction towards the proper functioning of computers', 35.04 percent of the respondents have agreed; 25.75 percent of them have strongly agreed; 19.03 percent of them have disagreed; 16.02 percent of them are neutral; and 4.16 percent of them have strongly disagreed.

With regard to responses to the statement i.e., 'adequacy of the availability of photocopying facilities'; 39.03 percent respondents have agreed; 29.03 percent of them have strongly agreed; 20.97 percent of them are neutral; 6.99 percent of them have disagreed; and 3.98 percent of them have strongly agreed.

With regard to responses to the statement i.e., 'adequacy of the availability of printing facilities'; 34.78 percent of the respondents have agreed; 28.23 percent of them are strongly agreed; 20.44 percent of them are neutral; 10 percent of them are disagreed; and 6.55 percent of them are strongly disagreed.

With regard to the responses to the statement 'adequacy of the availability of furniture and space for reading', 26.28 percent of the respondents have disagreed, 25.84 percent of them are agreed, 20.62 percent of them are strongly agreed, 17.61 percent of them are neutral and 9.65 percent of them are strongly disagreed.

It may be concluded that a majority of the respondents have higher expectations on the library infrastructure facilities and services provided by the NAAC Accredited Engineering Colleges in Guntur District, Andhra Pradesh (Table 1)

**Table 2: Perceptions on library infrastructure facilities and services**

| Statements | Strongly Agree | Agree | Neutral | Disagree | Strongly disagree | Total |
|---|---|---|---|---|---|---|
| Adequacy of the availability of computer workstations | 89 (7.88) | 118 (10.44) | 377 (33.36) | 294 (26.02) | 252 (22.30) | **1130** (100.00) |
| Adequacy of the satisfaction towards the proper functioning of computers | 102 (9.03) | 283 (25.04) | 316 (27.97) | 327 (28.94) | 102 (9.02) | **1130** **(100.00)** |
| Adequacy of the availability of photocopying facilities | 215 (19.03) | 407 (36.02) | 305 (26.99) | 141 (12.48) | 62 (5.48) | **1130** (100.00) |
| Adequacy of the availability of printing facilities | 158 (13.98) | 372 (32.92) | 282 (24.96) | 221 (19.56) | 97 (8.58) | **1130** **(100.00)** |
| Adequacy of the availability of furniture and space for reading | 98 (8.67) | 121 (10.71) | 353 (31.24) | 321 (28.41) | 237 (20.97) | **1130** (100.00) |

Table 2 indicates that majority of the respondents (33.36%) were neutral on the perception of the library having 'Adequacy of the availability of computer workstations'; 26.02 percent respondents have disagreed; 22.30 percent respondents have strongly disagreed; 10.44 percent have agreed and 7.88 percent of them are strongly agreed.

With regard to the responses to the statement 'adequacy of the satisfaction towards the proper functioning of computers'; 28.94 percent of the respondents have disagreed, 27.97 percent of them are neutral, 25.04 percent of them have agreed, 9.03 percent of them have strongly agreed and 9.02 percent of them have strongly disagreed.

With regard to the responses to the statement 'adequacy of the availability of photocopying facilities', 36.02 percent of the respondents have agreed, 26.99 percent of them are neutral, 19.03 percent of them have strongly agreed, 12.48 percent of them have disagreed and 5.48 percent of them have strongly disagreed.

With regard to the responses to the statement 'Adequacy of the availability of printing facilities', 32.92 percent of the respondents have agreed; 24.96 percent of them are neutral; 19.56 percent of them have disagreed; 13.98 percent of them have strongly agreed; and 8.58 percent of them have strongly disagreed.

With regard to the responses to the statement 'adequacy of the availability of furniture and space for reading', 31.24 percent of the respondents are neutral, 28.41 percent of them have disagreed; 20.97 percent of them have strongly disagreed;10.71 percent of them have agreed; 8.67 percent of them have strongly agreed.

It may be concluded that the respondents have varying experiences with regard to the perception on library infrastructure facilities and services. Furthermore, a majority of the respondents i.e., 49.38% , 48.32% and 37.96% have disagreed on the perceptions of 'adequacy of the availability of furniture and space for reading', 'adequacy of the availability of computer workstations' and 'adequacy of the satisfaction towards the proper functioning of computers', respectively, whereas 55.02% and 46.90% have agreed on the perceptions of 'adequacy of the availability of photocopying facilities' and 'adequacy of the availability of printing facilities', respectively (Table 2)

## 5.2 Overall expectations and perceptions on library infrastructural facilities

In order to know the overall expectations and perception on library infrastructural facilities and services by the engineering students of NAAC accredited engineering college libraries, the responses of strongly agreed, agreed, neutral, disagree and strongly disagreed are assigned the weightages of 5, 4, 3, 2, and 1, respectively. The total weightage and mean weightage is calculated for each infrastructure facility and service. Each infrastructural facility and service has been ranked on the basis of its mean weightage

Table 3 shows the ranking of library infrastructural facilities and services as per the expectations of respondents.

The respondents (Engineering students) have demonstrated maximum preference for the statement 'Adequacy of the availability of computer workstations' as compared to other infrastructural facilities and services. It is followed by Adequacy of the availability of photocopying facilities, Adequacy of the availability of printing facilities, Adequacy of the satisfaction towards the proper functioning of computers and Adequacy of the availability of furniture and space for reading (Table 3).

**Table 3: Relative expectation levels of library infrastructural facilities**

| Statements | Total Weightage | Mean Weightage | Rank |
|---|---|---|---|
| Adequacy of the availability of computer workstations | 3865 | 4.42 | 1 |
| Adequacy of the availability of photocopying facilities | 4318 | 3.82 | 2 |
| Adequacy of the availability of printing facilities | 4160 | 3.68 | 3 |
| Adequacy of the satisfaction towards the proper functioning of computers | 4049 | 3.58 | 4 |
| Adequacy of the availability of furniture and space for reading | 3633 | 3.22 | 5 |

Table 4 shows ranking of library infrastructural facilities and services as per perceptions levels of engineering students.

**Table 4: Relative Perception levels of library infrastructural facilities**

| Statements | Total Weightage | Mean Weightage | Rank |
|---|---|---|---|
| Adequacy of the availability of photocopying facilities | 3962 | 3.51 | 1 |
| Adequacy of the availability of printing facilities | 3663 | 3.24 | 2 |
| Adequacy of the satisfaction towards the proper functioning of computers | 3346 | 2.96 | 3 |
| Adequacy of the availability of furniture and space for reading | 2912 | 2.58 | 4 |
| Adequacy of the availability of computer workstations | 2888 | 2.56 | 5 |

Engineering students have more demonstrated more favourable perceptions towards the statement of 'Adequacy of the availability of photocopying facilities' as compared to other infrastructural facilities and services. It is followed by other statements like 'adequacy of the availability of printing facilities', 'adequacy of the satisfaction towards the proper functioning of computers' and 'adequacy of the availability of furniture' and 'space for reading'; and 'adequacy of the availability of computer workstations' (Table 4).

## 6. Gap between users' expectations and perceptions on library infrastructural facilities and services

Table 5 shows gap between users expectation and perception on library infrastructural facilities and services as per perceptions levels of engineering students.

**Table 5: The gap between users' expectations and perceptions**

| Statements | Expectations | Perceptions | Gap |
|---|---|---|---|
| Adequacy of the availability of computer workstations | 4.42 | 2.56 | 0.86 |
| Adequacy of the satisfaction towards the proper functioning of computers | 3.58 | 2.96 | 0.62 |
| Adequacy of the availability of photocopying facilities | 3.82 | 3.51 | 0.31 |
| Adequacy of the availability of printing facilities | 3.68 | 3.24 | 0.44 |
| Adequacy of the availability of furniture and space for reading | 3.22 | 2.58 | 0.64 |

On an overall evaluation of the study, it is observed that, among all the statements on infrastructural facilities, no statement has fully fulfilled the user expectations and revealed that there is a considerable discontentment in their satisfaction levels. Hence, it is suggested to the authorities of the NAAC accredited engineering colleges in Guntur District of Andhra Pradesh to enormously improve the infrastructural facilities to desired levels (Table-5).

## 7. Conclusions and Recommendations

It may be clearly observed from the analysis presented above that engineering students' expectations and perceptions of the infrastructure and services provided by libraries differ significantly. According to the survey, the majority of respondents have greater expectations for the facilities and services offered by the NAAC-accredited engineering colleges in the Guntur District of Andhra Pradesh's libraries.

The results also show that the respondents' perceptions of library infrastructure features and services are varied. Moreover, a majority of respondents have major disagreements with regard to the perceptions of "adequacy of the availability of furniture and space for reading," "adequacy of the satisfaction toward the proper functioning of computers," and "adequacy of the availability of computer workstations," respectively, while 55.02 percent and 46.90 percent respondents were in agreement on the perceptions of "adequacy of the availability of photocopying facilities." Finally, the administrators of the selected engineering institutions with NAAC accreditation in Guntur District of Andhra Pradesh are suggested to significantly improve the infrastructure facilities on a large scale.

## References

Doraswamy, M. & Appalaswami Naidu, V. (2020). **User Perception on Digital Resources and Services: A Survey on Degree College Libraries in Visakhapatnam District.** *International Journal of Research and Analytical Reviews (IJRAR),* 7(1), 609-616.

Kekana, M.D. & Kheswa, S.E. (2020). **The gap between user perceptions and expectatons of students at the main library of the University of KwaZulu-Natal: Pietermaritzburg Campus**. *South African Journal of Information Management*, 22(1), 1-9.

Naveen Kumar, H.D. & Doraswamy, M. (2020). **Perception and Preference of the user towards Print and e-Resources: A study.** *International Journal of Information Dissemination and Technology*, 10(2), 100-102.

Kusuma Kumari, K. & Doraswamy, M. (2019). **Users Perception on Library Printed Resources: A Survey on NAAC Accredited Degree Colleges in Vijayawada City.** *International Journal of Research and Analytical Reviews (IJRAR),* 6(2), 592-599. (ISSN: 2349-5138).

Aslam, S. & Sonker, S.K. (2018). **Perceptions and Expectations of Public Library Users in Lucknow (India): A Study.** *Library Philosophy and Practice (e-journal).* 2034. htp://digitalcommons.unl.edu/libphilprac/2034.