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**Shining a Light on Accessibility: Promoting Awareness for
Divyagnjan of Sugamya Pustakalaya at C. N. Braille Library,
Vastrapur, Ahmedabad**

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ABSTRACT:

This paper presents the findings of a survey conducted at the C. N. Braille Library to assess awareness about Sugamya Pustakalaya. Launched in collaboration with the Daisy Forum of India and Tata Consultancy Services Pvt. Ltd., Sugamya Pustakalaya is India's first e-library exclusively designed for Divyangjan. It offers an extensive collection of accessible e-books across diverse subject categories. Additionally, the library has partnered with international organizations to provide broader access to e-books for Divyangjan. Recognizing the importance of this initiative, the authors explore the level of awareness among Divyangjan regarding this ambitious project. The paper also discusses users' feedback on various aspects of Sugamya Pustakalaya.

Keywords: Accessible Books; Online Library for Visually Impaired; Library for the Blind; Sugamya Pustakalaya

INTRODUCTION:

Dr. Jose Murickan remarked, "Education is a cumulative process leading to the total development and formation of a human being. Its purpose is not restricted to intellectual development alone but aims at integrating the physical, moral, and social dimensions as well" (Murickan & Kareparampil, 1995). In India, everyone has the right to education and to receive support tailored to their limitations, capacities, and varying abilities, whether high or low.

In society, individuals with special learning needs, including Divyangjan, represent a disadvantaged group. Since independence, the Government of India has made consistent efforts to uplift individuals with visual impairments through various programs and social services. Higher education is particularly recommended for Divyangjan, and the government has taken proactive steps through its educational bodies and committees to ensure that all higher education institutions under its jurisdiction establish disability-friendly environments on their campuses.

LIBRARY NEEDS OF DIVYANGJAN:

Census 2011 reveals 5.303 million visually impaired people in India. Visual impairment describes individuals with eyesight limitations across various levels.



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Libraries are crucial in higher education, offering extensive resources. However, traditional printed materials pose challenges for Divyangjan (persons with disabilities). They require Braille and accessible books compatible with assistive technologies.

Despite some academic libraries initiating accessibility efforts, significant gaps remain. E-book and e-journal availability in accessible formats is limited. To address this, the Government of India launched the "Sugamya Pustakalaya" project, aiming to improve information access for visually impaired individuals.

SUGAMYAPUSTAKALAYA: BREAKING BARRIERS FOR THE VISUALLY IMPAIRED

Launched on August 24, 2016, by the Ministry of Social Justice and Empowerment, in partnership with Daisy Forum of India and Tata Consultancy Services, Sugamya Pustakalaya is India's pioneering online library for individuals with visual impairments.

This innovative platform addresses the book accessibility challenge by collaborating with international agencies like Book share and Accessible Books Consortium. It provides over 2 million books in multiple languages and formats, ensuring comprehensive access to diverse reading materials for people with print disabilities.

The library represents a significant step towards inclusive information access, leveraging technology to empower Divyangjan through a wide range of literary resources.

NEED FOR THE STUDY:

The information needs of Divyangjan are comparable to those of individuals without visual impairments, as they too seek access to quality information from diverse sources. Unfortunately, many academic libraries in India lack the necessary facilities and materials to adequately support individuals with visual impairments in accessing information.

To address this gap, the Ministry of Social Justice and Empowerment, Government of India, in collaboration with the Daisy Forum of India and Tata Consultancy Services, launched *Sugamya Pustakalaya* India's first online library for Divyangjan on August 24, 2016. This library provides access to over 200,000 books in multiple languages, sourced from various libraries across the country. It offers e-books on a wide range of subjects in formats suitable for individuals with disabilities.



To evaluate the effectiveness and accessibility of this initiative, the researchers decided to conduct the present study (DAISY Forum of India, 2017).

OBJECTIVES OF THE STUDY:

1. Evaluate the Impact and Significance of Sugamya Pustakalaya at C. N. Braille Library, Ahmedabad
2. Explore Visually Impaired Users' Perceptions of the Sugamya Pustakalaya Platform at C. N. Braille Library

METHODOLOGY OF RESEARCH:

The study employed a quantitative survey approach. A carefully crafted questionnaire was developed in both Google form and Braille formats to capture data from participants. Due to accessibility constraints, the research focused on C. N. Braille Library in Vastrapur, Ahmedabad. A total of 40 library users with visual impairments were selected and participated in the study, providing insights into the Sugamya Pustakalaya platform.

DATA ANALYSIS AND INTERPRETATION:

The primary data collected from respondents for the research study were analyzed using MS Excel, with the results presented in both tables and charts to enhance clarity and ease of interpretation.

1. Distribution of Respondents:

Table 1 and Graph 1 illustrate that male respondents constitute the majority (62.5%) compared to female respondents, who account for only 37.5%. The findings indicate a higher representation of male Divyangjan in higher education institutions compared to their female counterparts.

Table 1: Distribution of Respondents

Sr. No.	Gender	Gender (%)
1	Male	25 (62.5)
2	Female	15 (37.5)



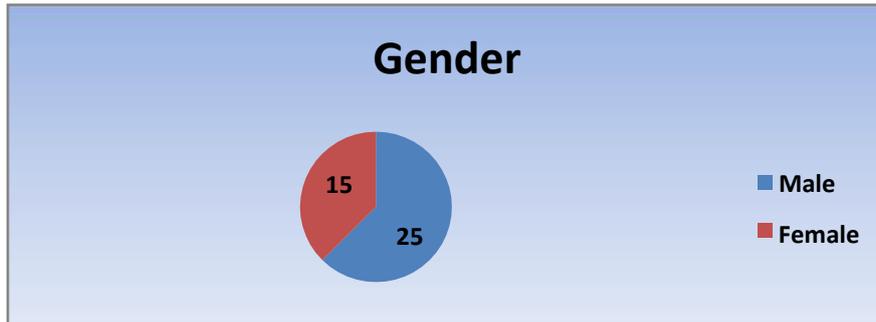
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	Total	40 (100)
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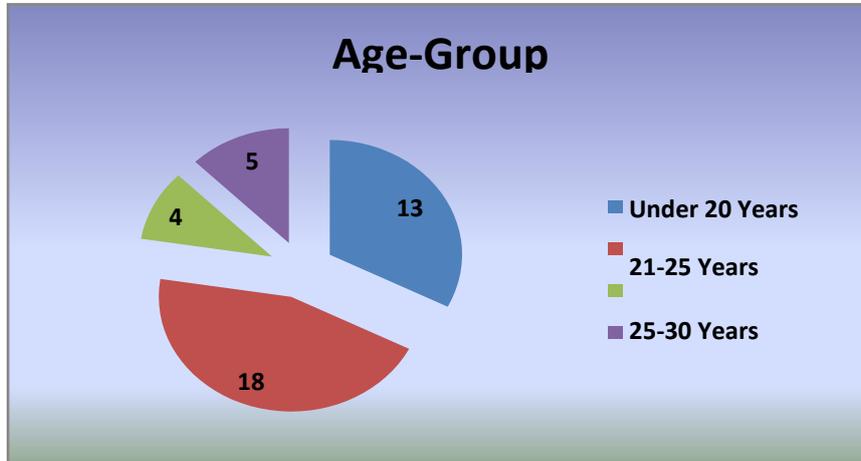


Graph 1: Distribution of Respondents

2. Age-Group of Respondents

Table 2: Age-Group of Respondents

Sr. No.	Age Group	Number of Respondents (%)
1	Under 20 Years	13 (32.5)
2	21-25 Years	18 (45)
3	25-30 Years	4 (10)
4	30 Years and above	5 (12.5)
Total		40 (100)



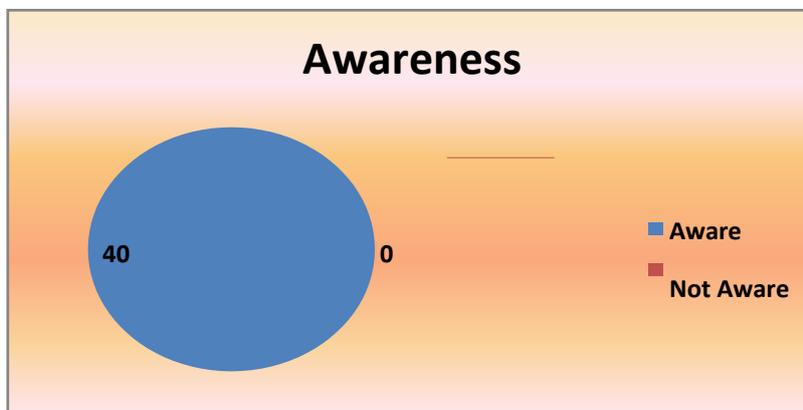
Graph 2: Age-Group of Respondents

Table 2 and Graph 2 reveal that the majority of respondents (45%) fall within the 21–25 age group, followed by 32.5% in the under-20 age group, 12.5% in the 30-and-above age group, and 10% in the 25–30 age group. These results suggest that younger respondents, particularly those aged 21–25 years, are more enthusiastic and responsive to surveys.

3. Awareness about Sugamya Pustakalaya

Table: 3 Awareness about Sugamya Pustakalaya

Sr. No.	Response Type	Number of Respondents
1	Aware	40 (100)
2	Not Aware	0 (0)
Total		40 (100)



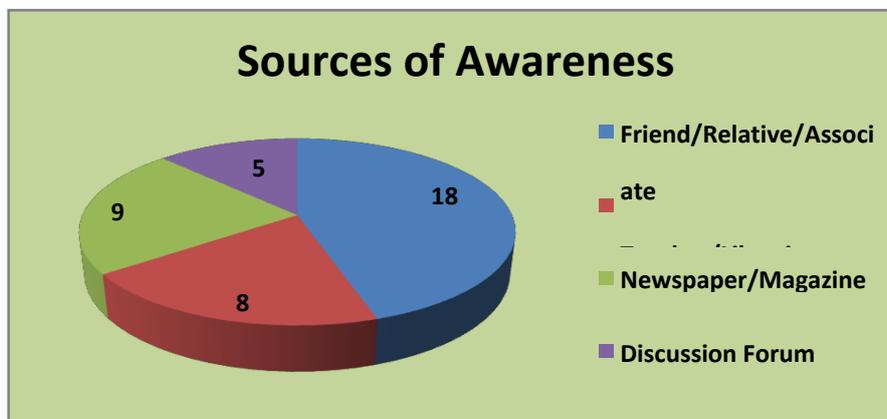
Graph: 3 Awareness about Sugamya Pustakalaya

Table 3 and Graph 3 indicate that all respondents (100%) in this survey were aware of Sugamya Pustakalaya. This high level of awareness can be attributed to widespread advertisements and awareness campaigns published in newspapers, news forums, and televised by the Government of India. The findings highlight that Divyangjan remain informed and actively keep track of the latest developments in their field.

4. Sources of Awareness about the Sugamya Pustakalaya

Table 4: Sources of awareness about the Sugamya Pustakalaya

Sr. No.	Sources of Awareness	Number of Respondents (%)
1	Friend/Relative/Associate	18 (45)
2	Teacher/Librarian	8 (20)
3	Newspaper/Magazine	9 (22.5)
4	Discussion Forum	5 (12.5)
Total		40 (100)



Graph 4: Sources of awareness about the Sugamya Pustakalaya

The Table-4 and Graph-4 shows Respondents learned about Sugamya Pustakalaya through diverse channels:

- Friends/Relatives/Associates: 45%
- Newspapers/Magazines: 22.5%
- Teachers/Librarians: 20%
- Discussion Forums: 12.5%

The data highlights the critical role of personal networks in disseminating information to Divyangjan. Friends and relatives emerge as primary information conduits. Additionally, the findings underscore the importance of teachers and librarians in proactively sharing and guiding individuals with visual impairments towards valuable resources.

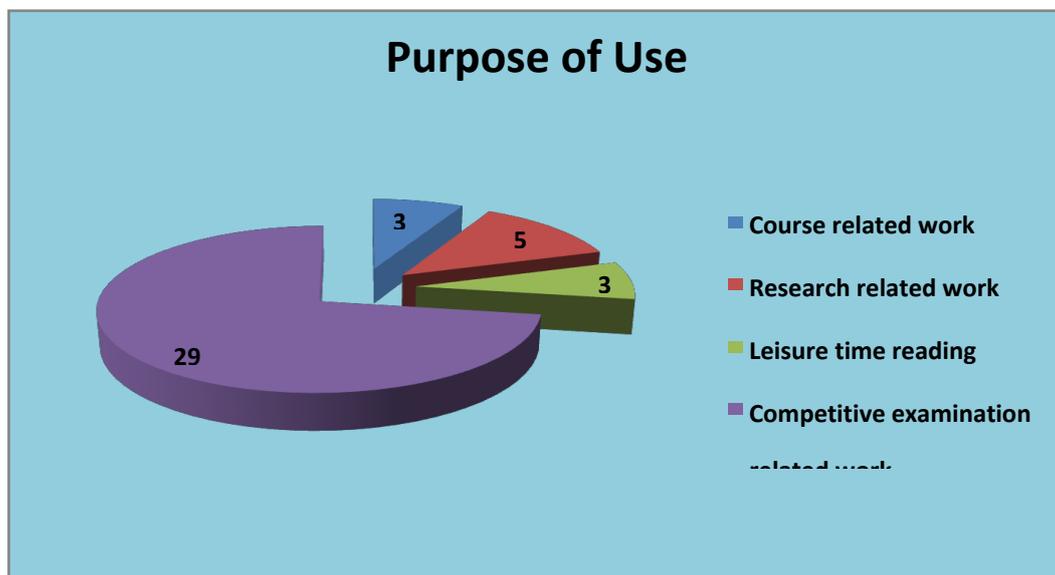
5. Purpose of Using the Sugamya Pustakalaya:

Table 5: Purpose of Using the Sugamya Pustakalaya

Sr. No.	Purpose of Use	Number of Respondents (%)
1	Course related work	3 (7.5)
2	Research related work	5 (12.5)



3	Leisure time reading	3 (7.5)
4	Competitive examination related work	29 (72.5)
Total		40 (100)



Graph 5: Purpose of Using the Sugamya Pustakalaya

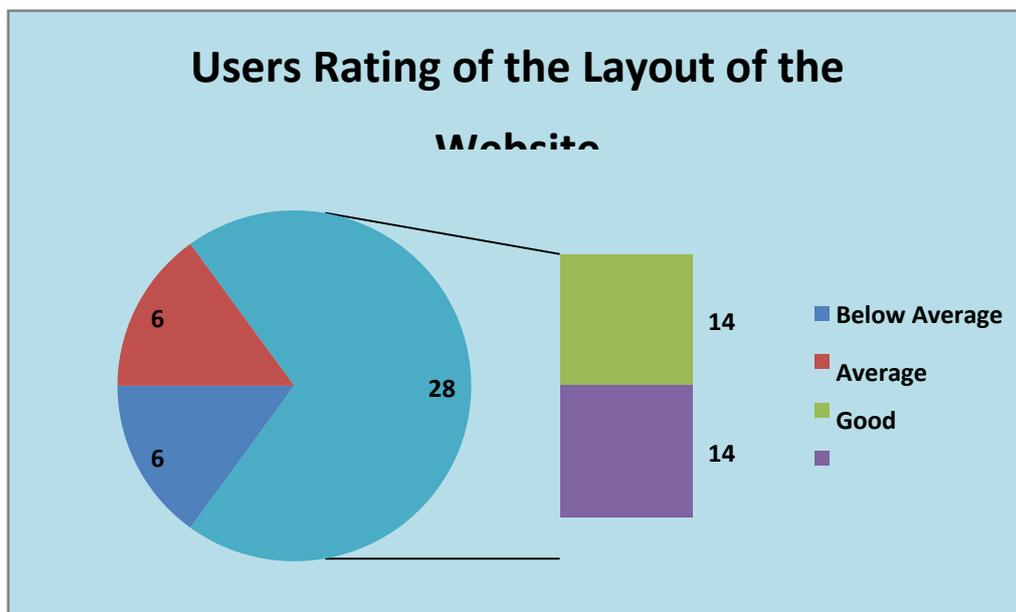
The Table-5 and Graph-5 shows that majority of respondents visit the Sugamya Pustakalaya for competitive examination related work (72.5%) and Research Related work (12.5%).

A minimum percentage of respondents visit the Sugamya Pustakalaya for Course related work (7.5%) and Leisure time reading (7.5%).

6. Users Rating of the Layout of the Website:

Table 6: Users Rating of the Layout of the Website

Sr. No.	Users' Rating	Users Rating of the Layout of the Website (%)
1	Below Average	6 (15)
2	Average	6 (15)
3	Good	14 (35)
4	Excellent	14 (35)
Total		40



Graph 6: Users Rating of the Layout of the Website

Website Layout Accessibility Assessment:

The study examined Sugamya Pustakalaya's website layout usability for visually impaired users:



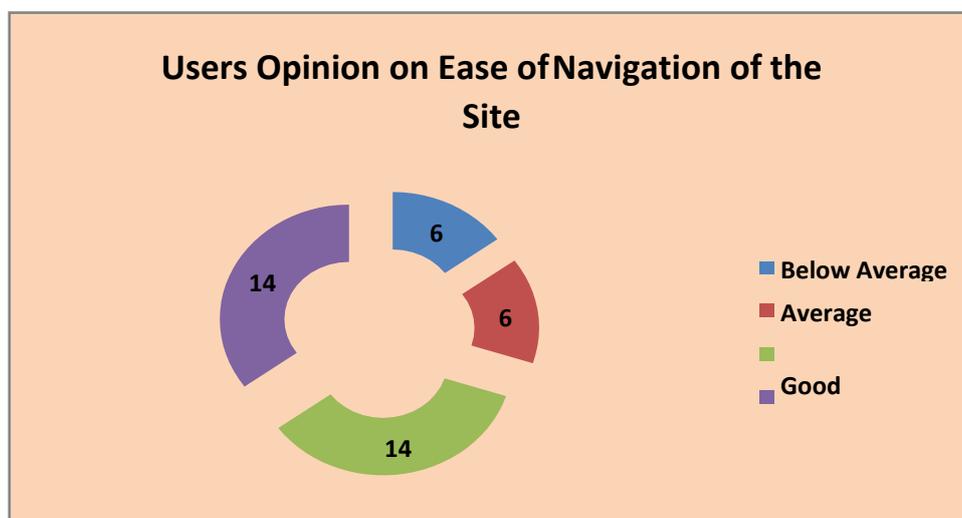
- 70% of respondents rated the layout as 'Good' or 'Excellent'
- 30% considered the layout 'Average' or 'Below Average'

While the majority found the design satisfactory, the findings suggest potential improvements in website accessibility. Recommendations include enhancing user-friendliness to ensure seamless navigation for all Divyangjan, particularly when using screen readers.

7. User's Opinion on Ease of Navigation of the Site:

Table 7: User's Opinion on Ease of Navigation of the Site

Sr. No.	Users' Opinion	Number of Respondents (%)
1	Below Average	6 (15)
2	Average	6 (15)
3	Good	14 (35)
4	Excellent	14 (35)
Total		40 (100)



Graph 7: User's Opinion on Ease of Navigation of the Site

Visitors to any website typically expect intuitive navigation, such as horizontal menus at the top or vertical menus on the left side of the webpage. They also prefer descriptive labels, drop-down menus, and a limited number of links per page, making the site easier to navigate, especially for Divyangjan.

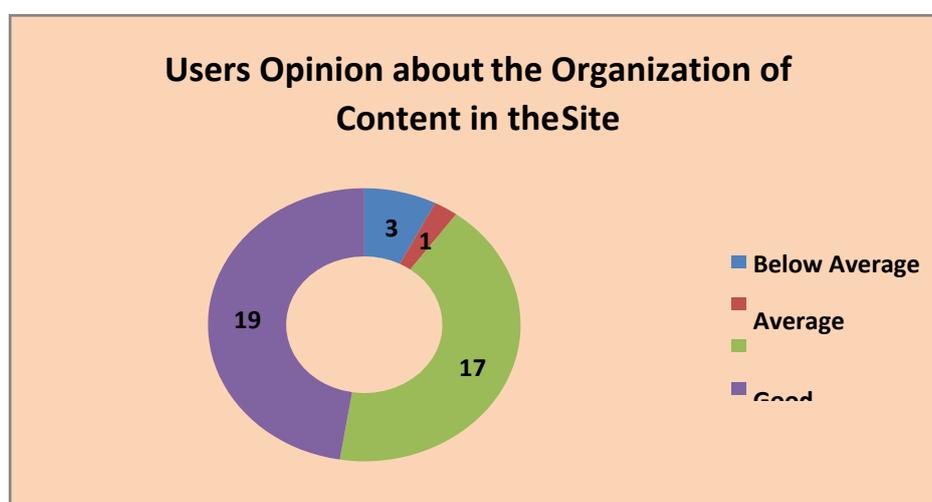
As shown in Table 7 and Graph 7, a majority of respondents (70%) rated the ease of navigation on *Sugamya Pustakalaya* as "Good" or "Excellent." However, 30% rated it as "Below Average" or "Average."

These findings highlight the need for further improvements in the website's navigation features to enhance its user-friendliness.

8. Users' opinion about the Organization of Content in the Site:

Table 8: Users' opinion about the Organization of Content in the Site:

Sr. No.	Users' Opinion	Number of Respondents (%)
1	Below Average	3 (7.5)
2	Average	1 (2.5)
3	Good	17 (42.5)
4	Excellent	19 (47.5)
Total		40



Graph 8: Users' opinion about the Organization of Content in the Site:



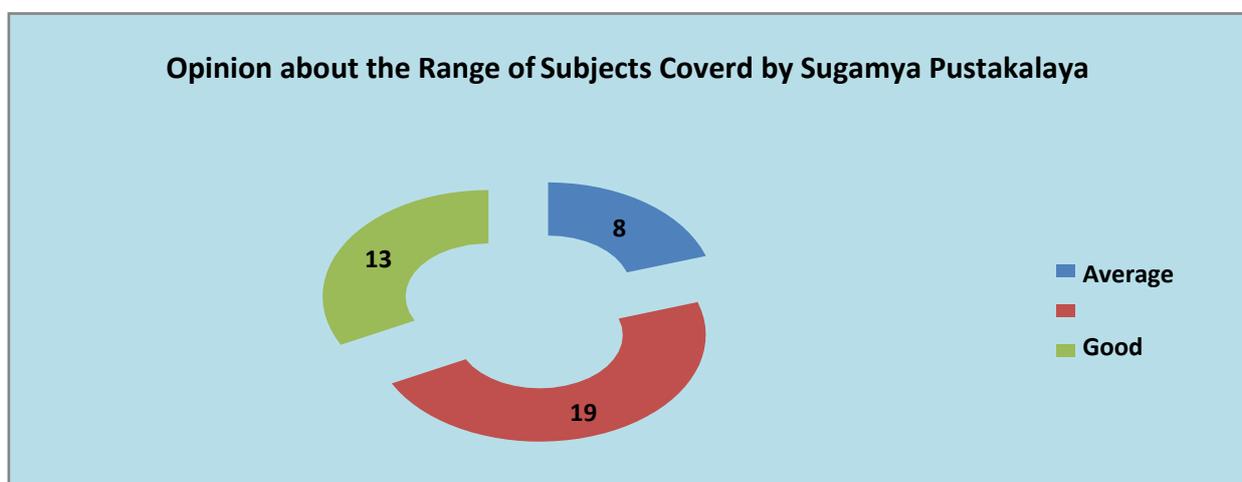
The systematic organization of subject content is crucial for the success of any website, as users expect to find all relevant information consolidated in one place. Website designers should prioritize this aspect, particularly when creating platforms for Divyangjan. To gather insights on this, respondents were asked to share their opinions.

As shown in Table 8 and Graph 8, the majority of respondents (47.5%) rated the content organization on the website as "Excellent," while 42.5% rated it as "Good." However, 7.5% of respondents found it "Below Average," and 2.5% rated it as "Average," highlighting the need for further improvements in content organization to enhance user satisfaction.

9. Users' Opinion about the Range of Subjects Covered by Sugamya Pustakalaya:

Table 9: Users' Opinion about the Range of Subjects Covered by Sugamya Pustakalaya:

Sr. No.	Users' Opinion	Number of Respondents (%)
1	Average	8 (20)
2	Good	19 (47.5)
3	Excellent	13 (32.5)
	Total	40 (100)



Graph 9: Users' Opinion about the Range of Subjects Covered by Sugamya Pustakalaya:

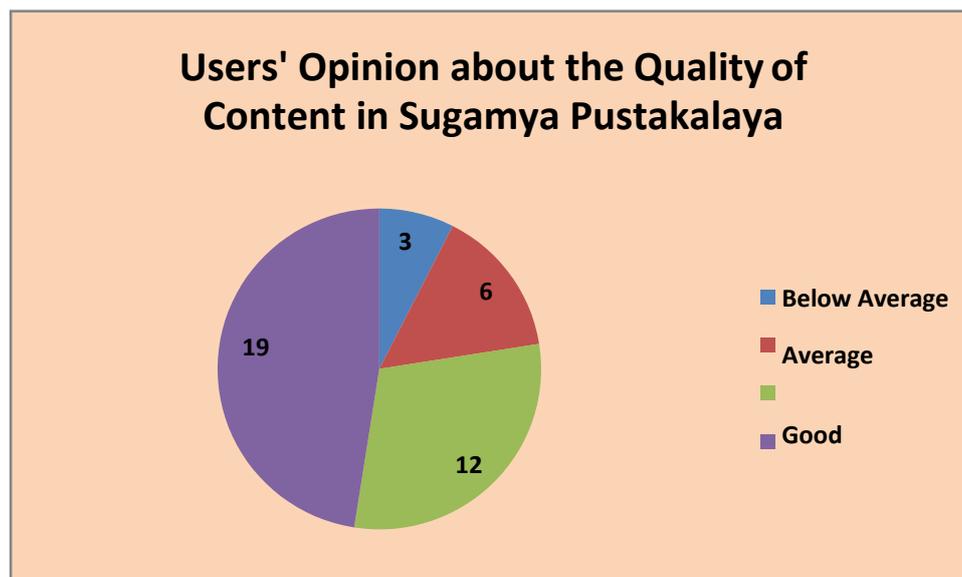


The survey results indicate strong user satisfaction with the range of subject categories available on the Sugamya Pustakalaya. A significant majority (70%) rated the book availability as "Good" or "Excellent," highlighting the library's success in providing diverse reading materials.

10. Users' Opinion about the Quality of Content in Sugamya Pustakalaya:

Table 10: Users' Opinion about the Quality of Content in Sugamya Pustakalaya:

Sr. No.	Users' Opinion	Number of Respondents (%)
1	Below Average	3 (7.5)
2	Average	6 (15)
3	Good	12 (30)
4	Excellent	19 (47.5)
Total		40 (100)



Graph 10: Users' Opinion about the Quality of Content in Sugamya Pustakalaya:

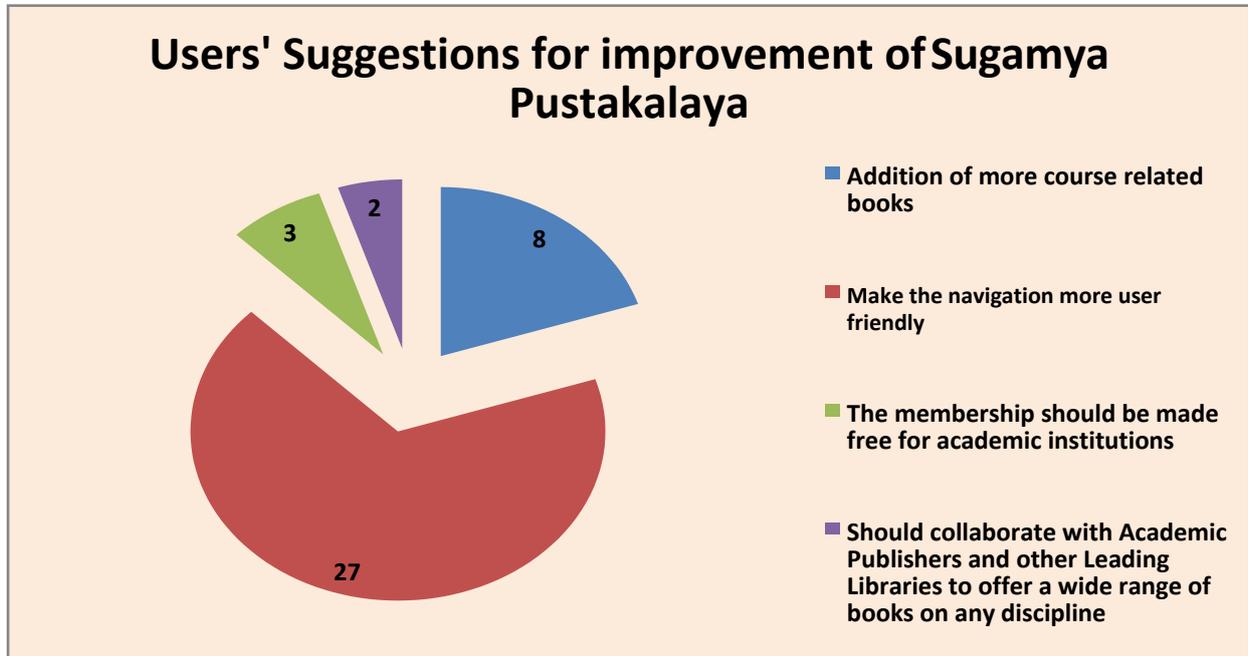


The success of an online library significantly depends on the quality of its books. To assess this, respondents were asked to evaluate the quality of the subject content available on the website. As depicted in Table-10 and Graph-10, a substantial proportion of respondents (47.5%) rated the content quality as "excellent," while 30% rated it as "good," reflecting a high level of satisfaction among Divyangjan users with the website's offerings. Additionally, 15% of respondents rated the quality as "average," and only a small segment (7.5%) described it as "below average." In conclusion, the users of Sugamya Pustakalaya expressed overall satisfaction with the quality of books and other reading materials available on the platform.

11. Users' Suggestions for improvement of Sugamya Pustakalaya:

Table 11: Users' Suggestions for improvement of Sugamya Pustakalaya:

Sr. No.	Type of Suggestion	Number of Respondents (%)
1	Addition of more course related books	8 (20)
2	Make the navigation more user friendly	27 (67.5)
3	The membership should be made free for academic institutions	3 (7.5)
4	Should collaborate with Academic Publishers and other Leading Libraries to offer a wide range of books on any discipline	2 (5)
Total		40



Graph: 11 Users' Suggestions for improvement of Sugamya Pustakalaya:

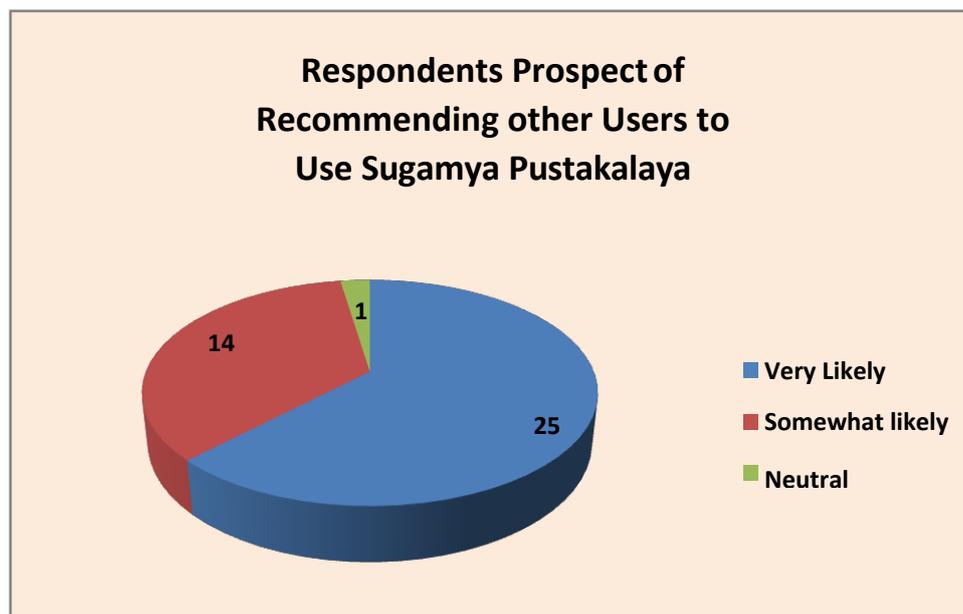
Websites must be continuously improved to meet the evolving needs and preferences of their users. For this reason, website designers and hosting organizations regularly gather feedback from online users. Sugamya Pustakalaya, being a newly launched platform, requires enhancements based on user feedback. Respondents were asked about additional features they would like to see in Sugamya Pustakalaya in the near future.

As shown in Table-11 and Graph-11, the majority of respondents (67.5%) suggested that navigation should be made more user-friendly. Another 20% recommended adding more books related to academic courses. A smaller segment (7.5%) proposed making the membership fee-free for academic institutions to encourage greater subscriptions for the benefit of Divyangjan. Lastly, 5% of respondents suggested that Sugamya Pustakalaya should collaborate with academic publishers and prominent libraries to pool resources and offer a wider range of books to its users.

12. Respondents Prospects of recommending other users to use Sugamya Pustakalaya:

Table 12: Respondents Prospects of recommending other users to use Sugamya Pustakalaya:

Sr. No.	Prospect of Recommendation	Number of Respondents (%)
1	Very Likely	25 (62.5)
2	Somewhat likely	14 (35)
3	Neutral	1 (2.5)
Total		40 (100)



Graph 12: Respondents Prospects of recommending other users to use Sugamya Pustakalaya:

Satisfied users are more inclined to recommend a product or service to others. To assess this, respondents were asked about their likelihood of recommending Sugamya Pustakalaya to people in their network.

As shown in Table-12 and Graph-12, a significant majority (62.5%) stated they are "very likely" to recommend the online library, while 35% indicated they are "somewhat likely" to do so. A small fraction



(2.5%) remained "neutral" on the matter. This data highlights that most users of Sugamya Pustakalaya were pleased with their experience and are likely to suggest it to other students in need.

FINDINGS, SUGGESTIONS AND CONCLUSION:

FINDINGS:

1. The study revealed that all Divyangjan (100%) were cognizant of the Sugamya Pustakalaya, an Online Library specifically designed for the Visually Challenged, initiated by the Government of India.
2. Social networks played a crucial role in library awareness, with friends and relatives being the primary source of information for 45% of the respondents.
3. Competitive examination preparation emerged as the primary use of Sugamya Pustakalaya, with 72.5% of respondents utilizing the platform for this purpose.
4. The library's layout received overwhelmingly positive feedback, with 70% of users rating it as 'good' or 'excellent'.
5. Website navigation was similarly well-received, with 70% of users rating the interface as 'good' or 'excellent'.
6. Content range satisfaction was notably high, with 47.5% expressing happiness and an additional 42.5% describing it as 'good'.
7. Subject coverage was equally appreciated, with 47.5% of respondents expressing satisfaction and 32.5% rating it as 'excellent'.
8. Learning resource quality met the expectations of 47.5% of the respondents.
9. Despite positive feedback, 67.5% suggested improvements in site navigation to enhance user-friendliness for Divyangjan.
10. The platform's potential was evident, with 62.5% of users willing to recommend Sugamya Pustakalaya to their friends and relatives.



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SUGGESTIONS:

- Librarians should actively encourage Divyangjan students to subscribe to Sugamya Pustakalaya to maximize its benefits.
- The platform should expand its digital collection by incorporating more academic books to attract a broader user base.
- Establishing partnerships with leading publishers and university libraries would help diversify and enrich the academic collection.
- Academic libraries should consider subscribing to Sugamya Pustakalaya to support Divyangjan students.
- Implementing free subscriptions for academic libraries and NGOs working towards Divyangjan welfare could significantly enhance accessibility.

CONCLUSION:

Sugamya Pustakalaya represents a strategic initiative by the Government of India to support Divyangjan in their academic and research endeavors. This research study, though limited in scope, has provided valuable insights into the awareness and utilization of the online library. The findings offer a comprehensive understanding of the platform's strengths and potential areas for improvement, which can guide future developments and enhancements to better serve the Divyangjan community.



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