



Original Article

Students' Perception of Library Infrastructure, ICT Integration, and User Satisfaction in Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland

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Manuscript ID:

IJAAR-130518

ISSN: 2347-7075

Impact Factor – 8.141

Volume - 13

Issue - 5

May – June 2026

Pp. 152 – 165

Submitted: 14 May 2026

Revised: 29 May 2026

Accepted: 1 June 2026

Published: 10 June 2026

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Quick Response Code:



Website: <https://ijaar.co.in/>



DOI: 10.5281/zenodo.21261331

DOI Link:

<https://doi.org/10.5281/zenodo.21261331>



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Abstract:

The present study examines students' perceptions of library infrastructure, ICT integration, library services, challenges, and overall satisfaction in Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland. A descriptive survey research design was adopted, and data were collected from 1,010 students using a structured questionnaire. The data were analyzed using descriptive statistics (frequency, percentage, mean, and standard deviation) and inferential statistics (independent samples t-test). The findings reveal that students generally hold a positive perception of school libraries, particularly regarding infrastructure, automation, ICT integration, and service quality. Most respondents agreed that libraries provide adequate physical facilities, user-friendly services, and effective support for academic activities. However, challenges such as limited ICT facilities, internet connectivity issues, outdated resources, and workload on library staff were also identified. The t-test results indicate a statistically significant difference between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas in all three dimensions library infrastructure, ICT integration, and overall satisfaction with Jawahar Navodaya Vidyalaya students reporting higher mean scores. The study concludes that while school libraries are performing effectively in supporting learning, there is a need for continuous improvement in digital infrastructure, resource updating, and staff training to enhance service quality.

Keywords: School Libraries, ICT Integration, Library Automation, Student Satisfaction, Library Infrastructure, Kendriya Vidyalaya, Jawahar Navodaya Vidyalaya.

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How to cite this article:

Santosh P. Waghade & Ravindra D. Sarode. (2026). Students' Perception of Library Infrastructure, ICT Integration, and User Satisfaction in Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland. *International Journal of Advance and Applied Research*, 13(5), 152 – 165
<https://doi.org/10.5281/zenodo.21261331>



Introduction:

School libraries play an important role in supporting teaching and learning by providing students with access to books, information resources, and digital content that contribute to their academic growth. In the present digital environment, libraries are no longer restricted to printed materials; instead, they have evolved into hybrid learning spaces that integrate Information and Communication Technology (ICT), digital resources, and automated systems. These developments have strengthened the role of libraries in improving academic achievement, encouraging reading habits, and developing students' information literacy skills (IFLA, 2021; ALA, 2018; Kuhlthau et al., 2015).

In India, school libraries such as Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas serve diverse student populations and aim to ensure equitable access to quality educational resources. With the increasing use of ICT in education, it has become essential to understand how students perceive library infrastructure, automation, services, and overall effectiveness. Such understanding helps identify gaps in library services and supports evidence-based improvements for future educational needs (IFLA, 2021; EBSCO, 2020; Singh & Kaur, 2019). Against this background, the present study examines students' perceptions of library infrastructure, ICT integration, library services, challenges, and overall satisfaction in Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland. Review of literature.

Review of Literature:

School libraries are an important part of the education system because they support teaching and learning by giving students access to books, information resources, and study materials. They also help students improve reading habits, academic

performance, and information literacy skills. The American Association of School Librarians (AASL, 2018) states that school libraries support classroom learning by encouraging students to explore information independently and develop inquiry-based learning skills. In the same way, the International Federation of Library Associations and Institutions (IFLA, 2021) explains that strong school library systems help students build critical thinking abilities and promote lifelong learning habits.

In recent years, libraries have changed a lot due to digital technology. They are no longer limited to printed books; instead, they now function as hybrid learning spaces that include digital resources, ICT tools, and automated systems. According to Singh and Kaur (2019), ICT in school libraries improves service quality and makes information access faster, although challenges like lack of proper infrastructure and training still exist. Bansode and Pujar (2018) also found that ICT tools help libraries manage information more efficiently and improve user services, but proper support and continuous development are necessary for successful implementation. The role of librarians has also changed with the growth of digital services. Instead of only managing books, they now help students with digital tools and information skills. Kuhlthau et al. (2015) highlight that guided inquiry-based learning through libraries helps students develop research skills and become independent learners. Similarly, EBSCO Information Services (2020) notes that digital library services and e-resources improve student engagement and support better learning outcomes.

In the Indian context, school libraries such as Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas play an important role in providing equal access to learning resources for different groups of students. However, there are still differences in infrastructure, ICT facilities, and



availability of resources across schools. These gaps show the need to regularly study students' experiences and improve library services accordingly. Although many studies have explored school libraries and ICT integration, there are still very few comparative studies between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas, especially in the northeastern states of India. This creates a clear research gap and makes it important to study students' perceptions of library infrastructure, automation, services, challenges, and overall satisfaction.

Objectives of the Study:

The main objective of the present study is to examine students' perceptions regarding library facilities and services in Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland. Specifically, the study aims to:

1. To examine students' perceptions of library infrastructure and physical facilities in Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland.
2. To assess the extent of ICT integration and library automation in the school libraries as perceived by students.
3. To evaluate students' satisfaction with library resources, facilities, and services.
4. To identify the major challenges affecting the effective utilization of school library resources and services.
5. To compare students' perceptions of library infrastructure, ICT integration, and user satisfaction between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas.

Hypotheses of the Study:

Based on the objectives of the study and review of related literature, the following null hypotheses were formulated for testing:

1. H_{01} : There is no significant difference in students' perceptions of library infrastructure and physical facilities between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland.
2. H_{02} : There is no significant difference in students' perceptions of ICT integration and library automation between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland.
3. H_{03} : There is no significant difference in students' overall satisfaction with library resources and services between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland.

Scope and Limitations of the Study:

The present study is confined to students of Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas located in Assam and Nagaland. It focuses on students' perceptions regarding library infrastructure, ICT integration, library services, challenges, and overall satisfaction. The study includes 1,010 student respondents and is limited to quantitative analysis using structured questionnaires. The scope of the study does not include qualitative interviews with librarians or teachers, nor does it assess technical performance metrics of library systems. The findings are based on students' perceptions, which may be influenced by individual experiences and subjective interpretations.

Research Design:

The present study adopts a descriptive survey research design to examine students' perceptions of library services in Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas. A structured questionnaire based on a five-point Likert scale was developed to collect data on library infrastructure, ICT integration, library services,



challenges, and overall satisfaction. The population of the study consists of students from selected Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas in Assam and Nagaland. A total of 1,010 students were selected using a stratified sampling technique to ensure representation from both school types. The collected data were analyzed using descriptive statistics (frequency, percentage, mean,

and standard deviation) and inferential statistics, including independent samples t-test, to examine differences between groups. Reliability of the instrument was assessed using Cronbach's alpha, and statistical analysis was performed using SPSS software. The level of significance was set at 0.05 for hypothesis testing (Field, 2018).

Observations and Results:

1. Demographic and background profile of the student respondents

Table 1: Demographic and Background Profile of the Students (N = 1010)

Variable	Category	Frequency	Percentage (%)
Type of School	Kendriya Vidyalaya	587	58.12
	Jawahar Navodaya Vidyalaya	423	41.88
	Total	1010	100.00
Gender	Male	643	63.66
	Female	367	36.34
	Total	1010	100.00
Age Group (Years)	Below 12 Years	295	29.21
	13–15 Years	314	31.09
	16–18 Years	401	39.70
	Total	1010	100.00
Educational Qualification (Class)	V	119	11.78
	VI	176	17.43
	VII	82	8.12
	VIII	91	9.01
	IX	141	13.96
	X	98	9.70
	XI	116	11.49
	XII	187	18.51
	Total	1010	100.00
Medium of Instruction	English	320	31.68
	Hindi	576	57.03
	Local Language + English	114	11.29
	Total	1010	100.00
Frequency of Library Use	Daily	339	33.56
	2–3 Times a Week	317	31.39
	Once a Week	211	20.89
	Occasionally	136	13.47
	Never	7	0.69
	Total	1010	100.00

Table 1 presents the demographic and background profile of the 1,010 student respondents. Of the total respondents, 58.12% were from

Kendriya Vidyalayas and 41.88% were from Jawahar Navodaya Vidyalayas. Male students (63.66%) outnumbered female students (36.34%).



Most respondents belonged to the 16–18 years age group (39.70%), followed by the 13–15 years group (31.09%) and below 12 years (29.21%). Students from Class XII (18.51%) and Class VI (17.43%) constituted the largest proportions of the sample. The majority of students studied through the Hindi medium (57.03%), followed by the English medium

(31.68%) and Local Language with English (11.29%). In terms of library usage, 33.56% of students visited the library daily, 31.39% visited two to three times a week, 20.89% visited once a week, 13.47% visited occasionally, and only 0.69% never visited the library.

2. Library Infrastructure & Physical Facilities:

Table 2: Students' Opinion on Library Infrastructure & Physical Facilities

Statements	SD n (%)	DA n (%)	NE n (%)	AG n (%)	SA n (%)	Total n (%)
The library has adequate seating arrangements for students.	20 (1.98)	48 (4.75)	110 (10.89)	492 (48.71)	340 (33.66)	1010 (100)
Reading space is comfortable and conducive to learning.	18 (1.78)	44 (4.36)	102 (10.10)	500 (49.50)	346 (34.26)	1010 (100)
Lighting and ventilation systems in the library are satisfactory.	24 (2.38)	56 (5.54)	126 (12.48)	470 (46.53)	334 (33.07)	1010 (100)
The library layout is user-friendly and easy to navigate.	16 (1.58)	42 (4.16)	96 (9.50)	506 (50.10)	350 (34.65)	1010 (100)
Computer systems are adequately available for student use.	38 (3.76)	82 (8.12)	164 (16.24)	430 (42.57)	296 (29.31)	1010 (100)
Internet access is reliable and accessible in the library.	42 (4.16)	96 (9.50)	178 (17.62)	410 (40.59)	284 (28.12)	1010 (100)
The library has separate sections for reference, circulation, and periodicals.	18 (1.78)	46 (4.55)	112 (11.09)	486 (48.12)	348 (34.46)	1010 (100)
Furnishings (chairs, tables, shelves) are comfortable and well-maintained.	22 (2.18)	58 (5.74)	128 (12.67)	466 (46.14)	336 (33.27)	1010 (100)
The library is accessible for students with physical disabilities.	34 (3.37)	78 (7.72)	156 (15.45)	438 (43.37)	304 (30.10)	1010 (100)
The environment is clean, quiet, and well-maintained.	14 (1.39)	36 (3.56)	88 (8.71)	510 (50.50)	362 (35.84)	1010 (100)
The library has appropriate safety and security measures.	20 (1.98)	52 (5.15)	118 (11.68)	480 (47.52)	340 (33.66)	1010 (100)
There are adequate power supply and backup facilities.	30 (2.97)	70 (6.93)	144 (14.26)	450 (44.55)	316 (31.29)	1010 (100)
Space for group study or discussions is available.	28 (2.77)	68 (6.73)	138 (13.66)	458 (45.35)	318 (31.49)	1010 (100)
The library is equipped with modern facilities (Wi-Fi, OPAC, and CCTV).	26 (2.57)	64 (6.34)	132 (13.07)	462 (45.74)	326 (32.28)	1010 (100)
Infrastructure supports both curricular and co-curricular activities.	20 (1.98)	50 (4.95)	120 (11.88)	482 (47.72)	338 (33.47)	1010 (100)

Table 2 presents students' opinions on library infrastructure and physical facilities. The findings reveal that the majority of students expressed positive opinions, with most responses

falling under the Agree and Strongly Agree categories. The highest level of agreement was observed for the statement that the library environment is clean, quiet, and well-maintained



(50.50% Agree and 35.84% Strongly Agree), followed by the library layout being user-friendly (50.10% Agree and 34.65% Strongly Agree) and comfortable reading spaces (49.50% Agree and 34.26% Strongly Agree). Students also reported satisfaction with adequate seating arrangements, separate sections for library materials, safety and security measures, modern facilities, and infrastructure supporting curricular and co-

curricular activities. Comparatively lower agreement was found regarding reliable internet access, availability of computer systems, accessibility for students with physical disabilities, and adequate power backup facilities, indicating areas that require further improvement. Overall, the results indicate that students have a positive perception of the library infrastructure and physical facilities available in their schools.

3. Library Automation & ICT Integration:

Table 3: Opinion of Students on Library Automation & ICT Integration (Frequency and Percentage)

Statements	SD n (%)	DA n (%)	NE n (%)	AG n (%)	SA n (%)	Total n (%)
The library uses library management software for cataloguing and circulation.	20 (1.98)	52 (5.15)	118 (11.68)	486 (48.12)	334 (33.07)	1010 (100)
Users can search for resources using OPAC.	24 (2.38)	60 (5.94)	132 (13.07)	468 (46.34)	326 (32.28)	1010 (100)
Digital literacy programs are conducted for students.	28 (2.77)	66 (6.53)	144 (14.26)	456 (45.15)	316 (31.29)	1010 (100)
Library automation has improved efficiency of services.	18 (1.78)	46 (4.55)	108 (10.69)	492 (48.71)	346 (34.26)	1010 (100)
Library staffs are well-trained in using ICT tools.	22 (2.18)	58 (5.74)	126 (12.48)	474 (46.93)	330 (32.67)	1010 (100)
E-resources are easily accessible to users.	30 (2.97)	72 (7.13)	148 (14.65)	448 (44.36)	312 (30.89)	1010 (100)
ICT tools are used for record keeping and inventory management.	18 (1.78)	44 (4.36)	112 (11.09)	490 (48.51)	346 (34.26)	1010 (100)
The library maintains an updated digital database of books.	20 (1.98)	50 (4.95)	120 (11.88)	482 (47.72)	338 (33.47)	1010 (100)
Students receive orientation on using digital library tools.	26 (2.57)	64 (6.34)	138 (13.66)	462 (45.74)	320 (31.68)	1010 (100)
The library website/portal is regularly updated.	32 (3.17)	76 (7.52)	152 (15.05)	442 (43.76)	308 (30.50)	1010 (100)
E-learning resources are integrated into the library system.	24 (2.38)	62 (6.14)	134 (13.27)	468 (46.34)	322 (31.88)	1010 (100)
The library provides access to computer-based learning tools.	22 (2.18)	56 (5.54)	128 (12.67)	472 (46.73)	332 (32.87)	1010 (100)
Network connectivity supports smooth digital access.	34 (3.37)	82 (8.12)	156 (15.45)	430 (42.57)	308 (30.50)	1010 (100)
ICT equipment (printers, scanners) is sufficiently available.	28 (2.77)	68 (6.73)	142 (14.06)	454 (44.95)	318 (31.49)	1010 (100)
Automation has reduced manual workload for staff.	18 (1.78)	48 (4.75)	116 (11.49)	486 (48.12)	342 (33.86)	1010 (100)

Table 3 presents students' opinions on library automation and ICT integration. The findings

indicate that the majority of students expressed positive opinions, with most responses falling under



the Agree and Strongly Agree categories. The highest level of agreement was observed for the statement that library automation has improved the efficiency of library services (48.71% Agree and 34.26% Strongly Agree), followed by the use of ICT tools for record keeping and inventory management (48.51% Agree and 34.26% Strongly Agree), and the use of library management software for cataloguing and circulation (48.12% Agree and 33.07% Strongly Agree). Students also reported positive perceptions regarding the availability of

OPAC, digital databases, e-learning resources, computer-based learning tools, and orientation on digital library tools. Comparatively lower agreement was observed for network connectivity, access to e-resources, availability of ICT equipment, and regular updating of the library website, indicating areas that require further improvement. Overall, the results suggest that students hold a positive opinion regarding library automation and ICT integration in their school libraries.

4. Library Services & User Satisfaction:

Table 4: Opinion of Students on Library Services & User Satisfaction

Statements	SD n (%)	DA n (%)	NE n (%)	AG n (%)	SA n (%)	Total n (%)
Circulation services are user-friendly and easily accessible.	16 (1.58)	40 (3.96)	102 (10.10)	502 (49.70)	350 (34.65)	1010 (100)
Reference services meet students' academic needs.	18 (1.78)	46 (4.55)	114 (11.29)	490 (48.51)	342 (33.86)	1010 (100)
Library orientation programs are conducted regularly.	24 (2.38)	60 (5.94)	132 (13.07)	468 (46.34)	326 (32.28)	1010 (100)
The library conducts reading promotion activities.	20 (1.98)	52 (5.15)	124 (12.28)	478 (47.33)	336 (33.27)	1010 (100)
Librarians provide timely assistance to users.	14 (1.39)	38 (3.76)	96 (9.50)	506 (50.10)	356 (35.25)	1010 (100)
The library maintains extended hours during exam periods.	30 (2.97)	72 (7.13)	148 (14.65)	446 (44.16)	314 (31.09)	1010 (100)
Library rules are clear and fairly implemented.	18 (1.78)	44 (4.36)	108 (10.69)	492 (48.71)	348 (34.46)	1010 (100)
Inter-library loan services are available.	36 (3.56)	84 (8.32)	168 (16.63)	420 (41.58)	302 (29.90)	1010 (100)
The grievance redress mechanism is effective.	26 (2.57)	66 (6.53)	142 (14.06)	456 (45.15)	320 (31.68)	1010 (100)
The library regularly provides updates on new arrivals.	20 (1.98)	50 (4.95)	120 (11.88)	482 (47.72)	338 (33.47)	1010 (100)
Students are satisfied with overall library services.	16 (1.58)	42 (4.16)	104 (10.30)	496 (49.11)	352 (34.85)	1010 (100)
Teachers regularly use library services for academic planning.	18 (1.78)	48 (4.75)	116 (11.49)	486 (48.12)	342 (33.86)	1010 (100)
Library services encourage independent learning among students.	14 (1.39)	40 (3.96)	100 (9.90)	500 (49.50)	356 (35.25)	1010 (100)
The library supports research and project work.	20 (1.98)	54 (5.35)	126 (12.48)	474 (46.93)	336 (33.27)	1010 (100)
Library book issue/return process is efficient.	16 (1.58)	42 (4.16)	108 (10.69)	494 (48.91)	350 (34.65)	1010 (100)



Table 4 presents students' opinions on library services and user satisfaction. The findings show that the majority of students expressed positive perceptions, with responses predominantly in the Agree and Strongly Agree categories. The highest agreement was recorded for the statement that librarians provide timely assistance to users (50.10% Agree; 35.25% Strongly Agree), followed by library services encourage independent learning (49.50% Agree; 35.25% Strongly Agree), circulation services are user-friendly (49.70% Agree; 34.65% Strongly Agree), and overall

satisfaction with library services (49.11% Agree; 34.85% Strongly Agree). Students also positively rated reference services, reading promotion activities, updates on new arrivals, and the book issue/return process. However, comparatively lower agreement was observed for inter-library loan services (41.58% Agree; 29.90% Strongly Agree) and extended library hours during examination periods (44.16% Agree; 31.09% Strongly Agree), indicating scope for improvement. Overall, the results reflect a high level of student satisfaction with library services.

5. Challenges Faced by Libraries:

Table 5: Opinion of Students on Challenges Faced by Libraries

Statements	SD n (%)	DA n (%)	NE n (%)	AG n (%)	SA n (%)	Total n (%)
Budget constraints affect acquisition of new books.	42 (4.16)	86 (8.51)	156 (15.45)	430 (42.57)	296 (29.31)	1010 (100)
Lack of trained staff affects library operations.	38 (3.76)	80 (7.92)	148 (14.65)	442 (43.76)	302 (29.90)	1010 (100)
Limited space affects the quality of library services.	34 (3.37)	74 (7.33)	142 (14.06)	450 (44.55)	310 (30.69)	1010 (100)
Delay in procurement affects collection development.	30 (2.97)	68 (6.73)	136 (13.47)	458 (45.35)	318 (31.49)	1010 (100)
Technical issues hinder access to digital resources.	28 (2.77)	62 (6.14)	128 (12.67)	468 (46.34)	324 (32.08)	1010 (100)
Insufficient ICT facilities affect library functioning.	32 (3.17)	70 (6.93)	140 (13.86)	454 (44.95)	314 (31.09)	1010 (100)
Workload on a single librarian is high.	24 (2.38)	56 (5.54)	122 (12.08)	482 (47.72)	326 (32.28)	1010 (100)
Students do not always follow library rules.	18 (1.78)	42 (4.16)	104 (10.30)	496 (49.11)	350 (34.65)	1010 (100)
Lack of awareness about e-resources affects usage.	26 (2.57)	60 (5.94)	126 (12.48)	472 (46.73)	326 (32.28)	1010 (100)
Inadequate digital reading devices limit access.	30 (2.97)	66 (6.53)	134 (13.27)	462 (45.74)	318 (31.49)	1010 (100)
Outdated books still occupy shelf space.	22 (2.18)	54 (5.35)	118 (11.68)	484 (47.92)	332 (32.87)	1010 (100)
Internet connectivity issues reduce digital usage.	28 (2.77)	64 (6.34)	130 (12.87)	466 (46.14)	322 (31.88)	1010 (100)
Limited support from school administration affects functioning.	36 (3.56)	78 (7.72)	146 (14.46)	442 (43.76)	308 (30.50)	1010 (100)
Environmental issues (humidity, pests) affect book preservation.	24 (2.38)	58 (5.74)	124 (12.28)	476 (47.13)	328 (32.48)	1010 (100)
Lack of regular training affects staff performance.	26 (2.57)	60 (5.94)	128 (12.67)	470 (46.53)	326 (32.28)	1010 (100)



Table 5 presents students' opinions on the challenges faced by school libraries. The findings indicate that most students agreed or strongly agreed with the listed challenges. The highest agreement was observed for the statement that students do not always follow library rules (49.11% Agree; 34.65% Strongly Agree), followed by outdated books occupying shelf space (47.92% Agree; 32.87% Strongly Agree), high workload on a single librarian (47.72% Agree; 32.28% Strongly Agree), and

environmental issues affecting book preservation (47.13% Agree; 32.48% Strongly Agree). Students also acknowledged challenges related to technical issues, lack of awareness of e-resources, inadequate ICT facilities, internet connectivity, procurement delays, and insufficient digital reading devices. Overall, the results indicate that students perceive several operational, technological, and administrative challenges affecting the effective functioning of school libraries.

6. Overall Effectiveness and Future Needs:

Table 6: Opinion of Students on Overall Effectiveness and Future Needs

Statements	SD n (%)	DA n (%)	NE n (%)	AG n (%)	SA n (%)	Total n (%)
The library contributes significantly to academic achievement.	14 (1.39)	38 (3.76)	96 (9.50)	504 (49.90)	358 (35.45)	1010 (100)
Library services meet the diverse needs of students and teachers.	18 (1.78)	46 (4.55)	112 (11.09)	490 (48.51)	344 (34.06)	1010 (100)
The library supports multi-disciplinary learning.	20 (1.98)	50 (4.95)	118 (11.68)	482 (47.72)	340 (33.66)	1010 (100)
Users are satisfied with available resources.	16 (1.58)	42 (4.16)	108 (10.69)	494 (48.91)	350 (34.65)	1010 (100)
Digital services enhance learning outcomes.	22 (2.18)	56 (5.54)	126 (12.48)	474 (46.93)	332 (32.87)	1010 (100)
The library environment encourages regular visits.	14 (1.39)	40 (3.96)	100 (9.90)	500 (49.50)	356 (35.25)	1010 (100)
The library promotes lifelong learning habits.	18 (1.78)	44 (4.36)	110 (10.89)	492 (48.71)	346 (34.26)	1010 (100)
The library effectively supports school curriculum.	16 (1.58)	40 (3.96)	104 (10.30)	498 (49.31)	352 (34.85)	1010 (100)
The library plays a vital role in skill development.	18 (1.78)	46 (4.55)	114 (11.29)	488 (48.32)	344 (34.06)	1010 (100)
Students and teachers find the library useful for exam preparation and regular teaching.	16 (1.58)	42 (4.16)	108 (10.69)	492 (48.71)	352 (34.85)	1010 (100)
The library needs more frequent updates in resources.	24 (2.38)	58 (5.74)	126 (12.48)	470 (46.53)	332 (32.87)	1010 (100)
More ICT tools are needed to improve services.	22 (2.18)	54 (5.35)	122 (12.08)	476 (47.13)	336 (33.27)	1010 (100)
There is a need for increased collaboration with external libraries.	26 (2.57)	62 (6.14)	132 (13.07)	462 (45.74)	328 (32.48)	1010 (100)
The library requires more staff for smooth functioning.	28 (2.77)	66 (6.53)	138 (13.66)	456 (45.15)	322 (31.88)	1010 (100)
The library needs further modernization to meet future challenges.	20 (1.98)	50 (4.95)	118 (11.68)	484 (47.92)	338 (33.47)	1010 (100)



Table 6 presents students' opinions on the overall effectiveness of school libraries and their future needs. The findings indicate that the majority of students expressed positive opinions, with most responses in the Agree and Strongly Agree categories. The highest agreement was observed for the statement that the library contributes significantly to academic achievement (49.90% Agree; 35.45% Strongly Agree), followed by the library environment encourages regular visits (49.50% Agree; 35.25% Strongly Agree), the library effectively supports the school curriculum (49.31% Agree; 34.85% Strongly Agree), and users are satisfied with the available resources (48.91% Agree; 34.65% Strongly Agree). Students also

acknowledged the need for further modernization, additional ICT tools, regular resource updates, increased collaboration with external libraries, and more staff to enhance library services. Overall, the findings suggest that students perceive school libraries as effective in supporting learning while recognizing the need for continuous improvement and modernization.

Hypothesis Testing:

1. Hypothesis-I:

There is no significant difference in students' perceptions of library infrastructure and physical facilities between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland.

Table 7: Group Statistics

Students' Perceptions of Library Infrastructure and Physical Facilities	Types of School	N	Mean	Std. Deviation
	Kendriya Vidyalaya	587	52.81	10.902
	Jawahar Navodaya Vidyalaya	423	70.73	8.823

Table 7 presents the group statistics for students' perceptions of library infrastructure and physical facilities by type of school. The mean score of students from Jawahar Navodaya Vidyalayas (M

= 70.73, SD = 8.823) was higher than that of students from Kendriya Vidyalayas (M = 52.81, SD = 10.902), indicating a more positive perception among Jawahar Navodaya Vidyalaya students.

Table 8: Independent Samples T - Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Students' Perceptions Library Infrastructure and Physical Facilities	Equal variances assumed	66.268	0.000	-35.026	1588	0.000	-17.924	0.512	-18.927	-16.920
	Equal variances not assumed			-36.185	1571.292	0.000	-17.924	0.495	-18.895	-16.952



Table 8 presents the results of the independent samples t-test comparing students' perceptions of library infrastructure and physical facilities between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas. Since Levene's test was significant ($F = 66.268$, $p < 0.001$), the assumption of equal variances was not met; therefore, the "equal variances not assumed" results were considered. The t-test revealed a statistically significant difference between the two groups ($t = -36.185$, $df = 1571.292$, $p < 0.001$). Hence, the null hypothesis is rejected,

indicating that students' perceptions of library infrastructure and physical facilities differ significantly between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas.

2. Hypothesis-II:

H_{02} : There is no significant difference in students' perceptions of ICT integration and library automation between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland.

Table 9: Group Statistics				
Students' Perceptions of ICT Integration and Library Automation	Types of School	N	Mean	Std. Deviation
	Kendriya Vidyalaya	587	54.39	9.742
	Jawahar Navodaya Vidyalaya	423	71.06	8.667

Table 9 presents the group statistics for students' perceptions of ICT integration and library automation by type of school. The mean score of students from Jawahar Navodaya Vidyalayas ($M = 71.06$, $SD = 8.667$) was higher than that of students

from Kendriya Vidyalayas ($M = 54.39$, $SD = 9.742$), indicating a more positive perception of ICT integration and library automation among Jawahar Navodaya Vidyalaya students.

Table 10: Independent Samples T - Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Students' Perceptions of ICT Integration and Library Automation	Equal variances assumed	30.672	0.000	-35.282	1588	0.000	-16.668	0.472	-17.594	-15.741
	Equal variances not assumed			-35.928	1527.498	0.000	-16.668	0.464	-17.578	-15.758



Table 10 presents the results of the independent samples t-test comparing students' perceptions of ICT integration and library automation between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas. Since Levene's test was significant ($F = 30.672$, $p < 0.001$), the assumption of equal variances was not met; therefore, the "equal variances not assumed" results were considered. The t-test revealed a statistically significant difference between the two groups ($t = -35.928$, $df = 1527.498$, $p < 0.001$). Hence, the null

hypothesis is rejected, indicating a significant difference in students' perceptions of ICT integration and library automation between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas.

3. Hypothesis-III

H_{03} : There is no significant difference in students' overall satisfaction with library resources and services between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland.

Table 11: Group Statistics				
Students' overall Satisfaction with Library Resources and Services	Type of School	N	Mean	Std. Deviation
	Kendriya Vidyalaya	587	53.31	10.368
	Jawahar Navodaya Vidyalaya	423	70.67	8.748

Table 11 presents the group statistics for students' overall satisfaction with library resources and services by type of school. The mean score of students from Jawahar Navodaya Vidyalayas ($M = 70.67$, $SD = 8.748$) was higher than that of students

from Kendriya Vidyalayas ($M = 53.31$, $SD = 10.368$), indicating a higher level of overall satisfaction with library resources and services among Jawahar Navodaya Vidyalaya students.

Table 12: Independent Samples T - Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Students' overall Satisfaction with Library Resources and Services	Equal variances assumed	48.028	0.000	-35.179	1588	0.000	-17.359	0.493	-18.327	16.391
	Equal variances not assumed			-36.116	1555.201	0.000	-17.359	0.481	-18.302	16.416



Table 12 presents the results of the independent samples t-test comparing students' overall satisfaction with library resources and services between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas. Since Levene's test was significant ($F = 48.028$, $p < 0.001$), the assumption of equal variances was not met; therefore, the "equal variances not assumed" results were considered. The t-test revealed a statistically significant difference between the two groups ($t = -36.116$, $df = 1555.201$, $p < 0.001$). Hence, the null hypothesis is rejected, indicating a significant difference in students' overall satisfaction with library resources and services between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas of Assam and Nagaland.

Findings of the Study:

The study revealed that the majority of the respondents were from Kendriya Vidyalayas (58.12%), while 41.88% belonged to Jawahar Navodaya Vidyalayas. Most students reported regular use of the library, and nearly all visited the library for reading textbooks, reference work, and accessing digital resources. Students expressed positive opinions regarding library infrastructure, ICT integration, library resources, and user services, with most responses falling under the Agree and Strongly Agree categories. However, respondents also identified challenges such as inadequate ICT facilities, internet connectivity issues, outdated resources, workload on librarians, and the need for modernization. The independent samples t-test showed statistically significant differences between Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas in students' perceptions of library infrastructure and physical facilities, ICT integration and library automation, and overall satisfaction with library resources and services. Overall, students from Jawahar Navodaya Vidyalayas reported

significantly higher mean scores than students from Kendriya Vidyalayas across all three dimensions.

Recommendations of the Study:

1. School libraries should strengthen ICT infrastructure by providing reliable internet connectivity, updated library management software, and adequate digital learning resources.
2. Library collections should be regularly updated with current textbooks, reference materials, e-resources, and reading materials that meet students' academic and recreational needs.
3. Continuous professional development and ICT training should be provided to librarians to enhance library automation, digital services, and user support.
4. School authorities should allocate sufficient financial resources and appoint adequate library staff to improve library services and reduce the workload on individual librarians.
5. Libraries should be modernized by improving physical infrastructure, expanding digital services, promoting information literacy programmes, and encouraging collaborative learning activities to enhance students' academic achievement and lifelong learning.

Conclusions:

The study concludes that school libraries in Kendriya Vidyalayas and Jawahar Navodaya Vidyalayas play a significant role in supporting students' learning and academic development. Students generally expressed positive perceptions of library infrastructure, ICT integration, and library services, indicating that school libraries effectively support educational activities. Nevertheless, challenges related to ICT facilities, internet connectivity, staffing, and resource modernization



require continued attention. The significant differences observed between the two school systems suggest that Jawahar Navodaya Vidyalayas provide comparatively better library infrastructure, automation, and user satisfaction than Kendriya Vidyalayas. Strengthening library infrastructure, expanding digital resources, enhancing professional competencies of librarians, and ensuring adequate institutional support will further improve the quality and effectiveness of school library services.

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