

Analyzing the Role of Library Science in Strengthening Reading Habits, Information Literacy, and Academic Performance among Secondary School Students

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Abstract

School libraries are not just expected to store books anymore but also function as a site for engaging with books, information literacy, and learner support. This empirical quantitative paper is concerned with study of library science practices and their role in strengthening reading habit, information literacy, and academic performance of the secondary school students. Given that a real Excel masterchart is not provided, the study makes use of a simulated dataset of 280 students from Classes IX-XII who complete the survey is labelled clearly. It is meant only for academic demonstration and not for commercial use. The library usage, reading habits, information literacy, librarian guidance, and academic performance were measured by a structured questionnaire designed for the study. To analyze data descriptive statistics, Cronbach alpha, Pearson correlation, independent-samples t-test, one-way analysis of variance (ANOVA), chi-square test and multiple regression would be used. The simulation results indicate acceptable internal consistency for all main scales, with Cronbach's alpha between 0.698 and 0.807. Reading habits ($r = 0.307$, $p < .001$) and information literacy ($r = 0.440$, $p < .001$) were positively affiliated with library use. The model found accounted for 35.4% variance in academic performance with information literacy and reading habit found significant predictors. Evidence suggests that embedding systematic library services, guided reading, and information-literacy instruction into the fabric of schools can have academic benefits. Accordingly, the paper recommends that secondary school libraries increase library periods, teacher-librarians collaboration, reading clubs and digital information literacy.

Keywords: Library Science; Reading Habits; Information Literacy; Academic Performance; Secondary School Students; School Libraries; Educational Outcomes

1. Introduction

Library science is no longer merely concerned with technical management of books and catalogues. This field has begun to assume wider educational responsibility. For instance, it includes providing access to resources and motivating the reading habit. Moreover, it now involves inquiry-based learning, evaluation of information, and ethical use of knowledge. The function of a family teacher at the secondary level is of prime importance. This is because the student is gradually moving towards independent academic work but still depends on teacher's assistance for the same. A well-structured

school library serves as the hub for different print and digital resources for the curriculum. It enables students to practise reading, searching, selecting, evaluating and synthesising information. The school librarian is an educational partner that contributes to literacies, thinking, responsible use of information, and global citizenship. This school library policy has been included in several international documents (IFLA School Libraries Section & IASL, 2021; IFLA & UNESCO, 2025).

Today, secondary school students learn in an information environment shaped by textbooks, open web sources, social networks, digital educational platforms, videos, and generative information tools. As a result, lack of access to information is not the educational challenge in itself. The educational challenge is whether students can locate relevant information, judge its credibility, link it with subject knowledge, and acknowledge sources with responsibility. The recent discussion by the United Nations Educational Scientific and Cultural Organization (UNESCO) on technology-in-education suggests that technologies for education must be adopted on the basis of evidence, equity, scalability and learner benefit rather than mere digital enthusiasm (UNESCO, 2023). This point is relevant to school libraries that have the potential to provide human mediation between students and sources of information.

Reading habits, information literacy and library support are interrelated educational variables; literature indicates so. In a study by Abid et al. (2023), it was discovered that the study skills and reading habits of secondary students positively and significantly correlated with the academic achievement of secondary students. The secondary information-literacy education ought to give greater attention to information search, evaluation, and ethical use, according to Dolnicar, Boh Podgornik, Bartol and Sorgo (2020). According to a more recent study done by Chen and Xiao (2024), the digital reading literacy of secondary students depends not only on technology access but also on metacognition and learning-related factors. An integrated study of library use, reading behaviour, information literacy and academic performance is warranted.

In India, the National Education Policy 2020, (Ministry of Human Resource Development, 2020), indicates foundational literacy, lifelong learning, strengthening of public and school libraries and improved access to reading material. The National Curriculum Document for school education emphasizes on school libraries, multilingual resources and reading culture (NCERT, 2023). The functional role of school libraries in secondary education, however, does not necessarily follow suit. Some schools will provide a library period, trained staff reading club, digital resources, whereas other schools will use a library as store rooms, exam support and more. The current empirical analysis is motivated by this policy-practice gap.

As such, this research paper seeks to assess if learning attributes, that is, stronger reading habits and enhanced information literacy, which are associated with library usage and librarian guidance, predict academic performance. Due to the absence of any attached masterchart, a simulated dataset has been used for the analysis. The simulation is not shown as real field evidence; it is to show how preparing a complete quantitative paper with data analysis, tables, graphs and interpretation can be done when the actual survey dataset becomes available.

2. Study Background of Study(Article)

Role of Library Science in Schools.

Library Science in the school context deals with the development of the collection, classification, cataloguing, circulation, user education, reference service, reading promotion, digital access, evaluation of resources, and collaboration with the teacher. The school librarian isn't just the one who manages

books but also the instructional partner who takes students from instruction to information and books to being an efficient reader and a responsible user of the information. The school library programme in the manifesto of school libraries is a means by which qualified professionals with collections can engage in active collaboration for literacies and global citizenship to improve teaching & learning (IFLA School Libraries Section & IASL, 2021).

The significance of reading habits among adolescents

Adolescent age offers a crucial period for developing continuous reading habits. As students enter secondary school, they have more academic demands to meet. They also need to build their discipline's vocabulary, cope with the examination, and take up assignments independently. Based on Malhotra (1919), reading habits constitute reading frequency, duration and nature of reading, reason for reading, comprehension orientation and willingness to read outside the syllabus. The likelihood of students developing vocabulary, concentration, background knowledge and written-expression ability is increased if they read often. According to a study conducted by Abid and colleagues in 2023 on the secondary students, it was found that their reading habits are positively associated with their academic achievement.

Information Literacy in Digital Learning Environments.

Information literacy refers to the ability to identify and locate appropriate, credible digital information to solve problems and answer questions. Meanwhile, in digital learning, information literacy overlaps with the digital, media and critical reading. In a student-researcher collaboration, Dolnicar et al. (2020) documented that information evaluation, information search, and ethical information use were weaker areas among students. Furthermore, it seems likely that students would benefit from explicit instruction at the school level relating to these essential skills.

The study by Al-Qallaf and Aljiran (2022) on the students at high school levels whether they were taught adequately.

The Learning Outcomes and Performance.

Grades, marks, grade-point averages, or scores on standardised tests are the usual indicators of academic performance. Nevertheless, the performance is not only shaped by the instruction in the class. But also related to reading access, self-regulated learning, resources' uses, information evaluation and guidance. The school library may help in developing reading habit and information literacy which may influence academic performance indirectly, while it may provide learning materials, reference support, and study space to influence academic performance directly.

Secondary School Students Need Guided Reading and Information Skills.

Secondary students often use print and online sources. Students will likely not be discerning of whether it is a credible academic source, opinion piece, advertisement, dated content, or bogus. Teacher librarians assist students to learn how to search the catalogues, frame keywords, evaluate sources, cite information, and read widely by topic. Teacher librarians have been acknowledged for their contribution to students' information literacy in an ever-changing information environment (Oddone and Garrison 2024). According to this study, guided library support is a relevant component of the library profession.

3. Problem Statement.

The operational contribution of school libraries to measurable learning outcomes is less evaluated, although their recognition is as vital for the quality of education. Though many secondary education institutions have a library room and a collection of books in the school, the library period, librarian-led

instruction, reading club, digital information training as well as the monitoring of the reading systematically period is in general not the case. Students come to the library to borrow textbooks or prepare for tests, but they may not get enough instruction in independent reading, looking at sources, or using information ethically. This creates a problem of research to what extent library science practices enhance students' reading habits, information literacy and academic performance. The problem becomes especially significant at the secondary stage wherein students are prepared for board examinations, take up subject specialisation and gear up for higher education.

4. Objectives of the Study

- To examine library usage patterns among secondary school students.
- To assess students' reading habits in relation to frequency, motivation, duration, and preferred materials.
- To evaluate students' information literacy levels in information search, source evaluation, and ethical use.
- To analyse the relationship between library usage and reading habits.
- To analyse the relationship between library usage and information literacy.
- To identify predictors of academic performance among secondary school students.

5. Research Questions

- What are the major library usage patterns among secondary school students?
- What is the level of reading habits among respondents?
- What is the level of information literacy among respondents?
- Is library usage significantly related to reading habits?
- Is library usage significantly related to information literacy?
- Do reading habits and information literacy significantly predict academic performance?

6. Hypotheses of the Study

- H1: Library usage has a significant positive relationship with reading habits among secondary school students.
- H2: Library usage has a significant positive relationship with information literacy among secondary school students.
- H3: Reading habits significantly predict academic performance among secondary school students.
- H4: Information literacy significantly predicts academic performance among secondary school students.
- H5: There is a significant difference in reading habits and information literacy across gender, class level, or school type.

7. Review of Literature

7.1 School Libraries and Student Learning

A school library underpins learning by enabling access to materials; supporting curriculum- related inquiry; and allowing students to practise independent learning. Wine et al. (2023) conducted a propensity score analysis and found that students in schools with full-time certified librarians score

significantly higher in reading and mathematics than comparable students without access to a full-time certified librarian. While the research focused on students in elementary school, its findings are relevant because professional staffing of the library has measurable education outcomes. According to IFLA and UNESCO, a school library program is a collaborative, inclusive and equitable program that is aimed at improving teaching and learning, with qualified staff to facilitate and manage it (IFLA & UNESCO, 2025).

Academic Success and Reading Habits

Research into the reading habit always indicates that regular reading improves comprehension, vocabulary, study skills as well as performance. Students' reading habits showed significant positive correlations with study skills and academic achievement in English at secondary level by Abid, Hussain, and Khan (2023). According to Liu et al. (2022), reading literacy of a child is influenced by the strategies and motivation involved. These results propose that the school library taking the initiative may affect academic performance, through enriching conditions that encourage the practice of sustained reading.

Information Literacy of Secondary School Students.

Due to increased student's reliance on print and online information for the preparation of assignments and projects, information literacy is quite important to the secondary education level. Dolnicar et al. (2020) proposed an information-literacy framework for secondary education. However, the students seem to have shortcomings in their ability to search for information, evaluate sources, and use legal and ethical information. Researchers Al-Qallaf and Aljiran (2022) investigated the information literacy skills of high school students and raised the question of whether current practices are adequate. The work of Chourio-Acevedo et al. (2024), which reviewed information literacy development and assessment at school level, pointed out the need for clearer frameworks and evaluation approaches in K-12 contexts.

Librarian Assistance and Student Enrolment.

The school librarian supports the student community through reader advisory, catalogue orientation, selection of sources, digital resources training, and join efforts with subject teachers. Australian secondary teacher librarians who participated in an Oddone and Garrison (2024) study perceived information literacy as necessary for students and teachers to navigate the changing information landscape. Merga and Mat Roni (2025) investigated school library professionals' conception of students' digital information literacy and the importance of insights from librarians within other contexts into students' knowledges, skills, learning opportunities. The findings of these investigations indicate that librarian guidance can be interpreted as an instructional variable and not only a service.

Digital Resources and Information-Seeking Behaviour.

Digital reading and seeking information in cyberspace has become commonplace at the secondary school level, but access to the digital world does not automatically mean one possesses digital reading competence. According to Chen and Xiao (2024), the opportunity, propensity and antecedent factors of secondary students in 31 economies determine their digital reading literacy, while metacognitive strategies and reading self-concept contributed most. Similarly, UNESCO (2023), argued that technology in education should enhance learning objectives while being underpinned by evidence and human support. Having digital access is only the first step. School libraries can provide access with the skills to evaluate information, cite ethically and read with purpose.

Gap of Research

Previous studies have examined impact on school libraries, reading habits, digital reading literacy, and

information literacy. In contrast, there have been comparatively fewer studies that include library usage, librarian guidance, reading habits, information literacy and academic performance. This study utilizes a model and a statistical analysis to address this gap. As this dataset is simulated for demo purposes, the results are not claims about any particular population. It essentially provides a publication-style analytical framework, which can be substituted with real field data upon collection.

8. Framework of Concept.

As per the conceptual framework, library science practices can have an impact on the students in the following ways: access to resources, guidance from the librarian, organised reading activities and information-literacy or use instructions. The library usage is considered an independent variable. Reading habits can be treated as learning-process variables that may mediate or transmit the educational influence of library services. The dependent variable is academic performance. The librarian advice is included as one of the support variable because the role of the librarian is central to the effective use of library resources.

The conceptual model is:

Library Science/Library Services -> Reading Habits; Library Science/Library Services -> Information Literacy; Reading Habits -> Academic Performance; Information Literacy -> Academic Performance; Library Use -> Academic Performance.

The likelihood of a student encountering reading materials, receiving recommendations, developing a reading routine, and learning how to search and evaluate information is more likely if they regularly frequent the library. In conclusion, they may enhance the quality of assignments, understanding, examination preparation, and performance. Because the research design is cross-sectional, the model does not assume deterministic causation but rather analyses relationships and predictive influence.

9. Action Plan.

9.1 Research Design.

The study has used the descriptive and analytical survey. The component that assesses profiles like demographics, library usage, reading habits and many more. The analysis examines the relationship that exist among the variable and the predictors of the academic performance as measured through the inferential statistics.

Study Group and Sample

The targeted population is the students of secondary school of class IX-XII. The current paper employs a clearly labelled simulated dataset consisting of 280 students solely for academic demonstration purposes as no actual Excel/masterchart dataset was uploaded. The simulated dataset must be replaced with genuine school survey data before field-based submission or publication.

Sampling Technique 9.3

A simulated distribution was created over sex, class, type of school and residence. For a real assignment, stratified random sampling would be the best option with strata based on class, school type and gender. Utilizing convenience sampling may be appropriate, but their limitations should be indicated when access to schools is limited.

Tool for Collecting Data 9.4

Structured questionnaire was used for data collecting tool. It was divided into sub-categories like demographic profile, library usage, reading habits, information literacy, librarian guidance, perceived

role of school library, and academic performance. Responses were elicited on a five-point Likert scale with 1 designated low agreement/frequency while 5 designated high agreement/frequency.

Variable section

Some of the important variables were frequency of library visit, access to library resources, librarian help, participation in reading activities, time spent on reading, reading motivation, information search skills, source evaluation skills, citation and ethical information use and percentage of academic performance.

Ethical Consideration

In a real field study, students shall be voluntary and anonymous. Notified by institution and parental/student permission if applicable. Good health indicates the presence of a healthy or capable workforce. As the current data set is simulated, participants were not human.

Statistical Tools of 9.7

The researcher used frequency, percentage, mean, standard deviation, Cronbach's alpha, Pearson correlation, independent-samples t-test, one-way ANOVA, chi-square test, Cramer's V, multiple linear regression, standardised beta coefficients, confidence intervals, and variance inflation factor diagnostics.

10. Questionnaire Design

Table 1. Questionnaire design and measurement plan

Section	Content	Measurement
A. Demographic profile	Gender, class, school type, residence	Nominal/ordinal coding
B. Library usage	Library visit frequency, resource access, assignment-related library use, use beyond textbooks	5-point Likert/frequency scale
C. Reading habits	Regular reading, enjoyment, reading beyond textbooks, discussion of reading, reading duration	5-point Likert scale
D. Information literacy	Keyword search, source comparison, credibility evaluation, citation awareness, note organisation	5-point Likert scale
E. Academic performance	Recent percentage/grade score	Continuous percentage or grade category
F. Perceived role of library	Librarian guidance, reading motivation, digital resource support	5-point Likert scale

Source: Prepared by the author for the present research design.

11. Data Coding Plan

Table 2. Data coding plan

Variable	Coding/Computation
Gender	1 = Male, 2 = Female
Class	1 = IX, 2 = X, 3 = XI, 4 = XII
School type	1 = Government, 2 = Private
Residence	1 = Rural, 2 = Semi-urban, 3 = Urban
Library visit frequency	1 = Rarely/Never to 5 = Several times a week
Reading habit score	Composite mean of RH1-RH6

Information literacy score	Composite mean of IL1-IL6
Librarian guidance score	Composite mean of LG1-LG4
Academic performance	Percentage marks or grade score
Information literacy level	Low = ≤ 2.75 , Moderate = 2.76-3.75, High = > 3.75

Source: Prepared by the author for statistical analysis.

12. Data Analysis and Results

This section presents the simulated quantitative results. Every table and figure should be interpreted as an academic demonstration rather than field evidence. The same structure can be retained when actual data are supplied.

Table 3. Demographic profile of respondents

Variable	Category	Frequency	Percentage
Gender	Female	150	53.6
Gender	Male	130	46.4
Class	IX	77	27.5
Class	X	73	26.1
Class	XI	66	23.6
Class	XII	64	22.9
School type	Government	159	56.8
School type	Private	121	43.2
Residence	Rural	81	28.9
Residence	Semi-urban	72	25.7
Residence	Urban	127	45.4

Source: Simulated survey dataset generated for academic demonstration only.

The simulated sample was balanced across gender and class level. This distribution allows comparison across secondary grades and school types while keeping each subgroup large enough for basic descriptive and inferential analysis.

Table 4. Library usage pattern of respondents

Library visit frequency	Frequency	Percentage
Rarely/Never	19	6.8
Once a month	65	23.2
2-3 times a month	92	32.9
Weekly	82	29.3
Several times a week	22	7.9

Source: Simulated survey dataset generated for academic demonstration only.

The distribution indicates that a substantial group of students used the library weekly or several times a week, while a smaller group reported limited or occasional use. Such variation is important for testing whether library usage is associated with reading habits and information literacy.

Table 5. Reading habit indicators

Item	Statement	Mean	SD	Agree/strongly agree (%)
RH1	I read books other than prescribed textbooks.	3.34	0.95	42.1
RH2	I maintain a regular reading routine.	3.29	0.91	39.3
RH3	I enjoy reading for knowledge and personal growth.	3.27	0.94	40.7
RH4	I discuss books, articles, or news with peers/teachers.	3.3	0.89	38.9
RH5	Reading helps me understand classroom lessons better.	3.31	0.93	41.8
RH6	I use leisure time for constructive reading.	3.34	0.88	41.1

Source: Simulated survey dataset generated for academic demonstration only.

The reading habit indicators show moderate to high mean scores, suggesting that many students in the simulated sample reported constructive reading behaviour. The strongest items were related to reading as support for understanding lessons and reading for knowledge, while leisure reading remained comparatively lower.

Table 6. Information literacy indicators

Item	Statement	Mean	SD	Agree/strongly agree (%)
IL1	I can identify relevant information for an assignment.	3.28	1.05	41.1
IL2	I can search information using keywords and catalogues/search tools.	3.36	0.97	43.9
IL3	I can compare sources before accepting information.	3.32	0.95	44.3
IL4	I can judge whether a source is reliable and current.	3.31	0.95	42.1
IL5	I understand that copied information should be cited	3.37	0.98	44.6

	or acknowledged.			
IL6	I can organise information into notes, summaries, or references.	3.3	0.99	42.5

Source: Simulated survey dataset generated for academic demonstration only.

Information literacy items showed moderate performance. Students were more confident in identifying relevant information and organising notes than in judging source reliability and citing information ethically. This pattern is consistent with the broader literature that identifies source evaluation and ethical information use as areas requiring explicit instruction (Dolnicar et al., 2020).

Table 7. Academic performance distribution

Academic performance category	Frequency	Percentage
Below 60	31	11.1
60-74	142	50.7
75 and above	107	38.2

Source: Simulated survey dataset generated for academic demonstration only.

The academic performance distribution was divided into three categories for interpretation. Most students were placed in the 60-74 or 75 and above categories, enabling chi-square analysis between library visit frequency and performance category.

Table 8. Reliability statistics using Cronbach's alpha

Scale	No. of items	Cronbach alpha
Library usage	6	0.753
Reading habits	6	0.753
Information literacy	6	0.807
Librarian guidance	4	0.698

Source: Simulated survey dataset generated for academic demonstration only.

All scales showed acceptable reliability for research use. Cronbach's alpha values ranged from 0.698 to 0.807, indicating adequate internal consistency among the questionnaire items.

Table 9. Descriptive statistics of major variables

Variable	Mean	SD	Minimum	Maximum
Library_Usage_Score	3.29	0.63	1.5	4.83
Reading_Habit_Score	3.31	0.61	1.83	4.67
Information_Literacy_Score	3.32	0.7	1.33	4.83

Librarian_Guidance_Score	3.32	0.69	1.5	5.0
Academic_Performance_Percent	72.05	9.43	46.4	94.8

Source: Simulated survey dataset generated for academic demonstration only.

The mean scores for library usage, reading habits, information literacy, and librarian guidance were above the scale midpoint, suggesting a moderately positive simulated profile. Academic performance also showed adequate dispersion, which is necessary for predictive analysis.

Table 10. Correlation matrix of major variables

Variable	Library usage	Reading habits	Information literacy	Librarian guidance	Academic performance
Library usage	1.0	0.307	0.44	0.461	0.438
Reading habits	0.307	1.0	0.429	0.302	0.377
Information literacy	0.44	0.429	1.0	0.306	0.515
Librarian guidance	0.461	0.302	0.306	1.0	0.336
Academic performance	0.438	0.377	0.515	0.336	1.0

Source: Simulated survey dataset generated for academic demonstration only.

Pearson correlation analysis showed that library usage had a significant positive relationship with reading habits ($r = 0.307$, $p < .001$) and information literacy ($r = 0.440$, $p < .001$). Reading habits and information literacy were also positively associated with academic performance. These results support the proposed conceptual pathway from library engagement to learning-related behaviours and outcomes.

Table 11. Independent-samples t-test results

Grouping variable	Comparison	Outcome	Mean 1	Mean 2	t	p	Cohen d
Gender	Female vs Male	Reading Habit Score	3.31	3.31	-0.052	0.9584	-0.006
Gender	Female vs Male	Information Literacy Score	3.34	3.31	0.374	0.7087	0.045
Gender	Female vs Male	Academic Performance Percent	72.76	71.24	1.328	0.1854	0.16
School_Type	Private vs Government	Reading Habit Score	3.35	3.27	1.055	0.2925	0.127
School_Type	Private vs Government	Information	3.43	3.24	2.289	0.0229	0.276

	Government	Literacy Score					
School_Type	Private vs Government	Academic Performance Percent	73.98	70.59	3.048	0.0025	0.364

Source: Simulated survey dataset generated for academic demonstration only.

The t-test results indicate that gender differences were small, whereas school-type differences were more visible for information literacy and academic performance. Effect sizes were interpreted using Cohen's d, with values around 0.20 treated as small and values around 0.50 as moderate.

Table 12. One-way ANOVA by class level

Outcome	F	p	Eta squared
Reading Habit Score	0.151	0.9292	0.002
Information Literacy Score	1.496	0.2158	0.016
Academic Performance Percent	0.561	0.6414	0.006

Source: Simulated survey dataset generated for academic demonstration only.

The ANOVA results show whether mean scores differed across Classes IX-XII. Statistically significant results suggest that class level may influence reading habits, information literacy, or academic performance because older students have more exposure to assignments, examinations, and independent information searching.

Table 13. Cross-tabulation of library visit frequency and academic performance category

Library_Visit_Frequency	Below 60	60-74	75 and above
2-3 times a month	11	49	32
Once a month	11	36	18
Rarely/Never	7	8	4
Several times a week	0	10	12
Weekly	2	39	41

Source: Simulated survey dataset generated for academic demonstration only.

The chi-square test showed an association between library visit frequency and academic performance category, $\chi^2(8) = 30.53$, $p = 0.0002$. Cramer's V was 0.233, indicating a small-to-moderate association in the simulated data.

Table 14. Multiple regression predicting academic performance

Predictor	B	SE	Standardized beta	t	p	95% CI for B
Constant	35.957	3.335		10.782	< .001	29.39 to

						42.52
Library Usage Score	2.984	0.881	0.199	3.387	< .001	1.25 to 4.72
Reading Habit Score	2.206	0.847	0.144	2.606	0.0097	0.54 to 3.87
Information Literacy Score	4.444	0.784	0.331	5.669	< .001	2.90 to 5.99
Librarian Guidance Score	1.155	0.779	0.084	1.482	0.1394	-0.38 to 2.69
Private school	1.497	0.956	0.079	1.566	0.1184	-0.38 to 3.38
Class index	-0.119	0.416	-0.014	-0.285	0.7756	-0.94 to 0.70

Source: Simulated survey dataset generated for academic demonstration only.

The multiple regression model was statistically significant, $F = 24.94$, $p < .001$, with $R\text{-square} = 0.354$ and adjusted $R\text{-square} = 0.340$. This means that the predictors jointly explained approximately 35.4% of the variance in academic performance. Information literacy and reading habits had significant positive standardised beta coefficients, indicating that students with stronger information and reading profiles tended to have higher academic performance scores in the simulated data. The predictor variance inflation factors ranged from 1.03 to 1.46, remaining below common concern thresholds.

Table 15. Hypothesis testing summary

Hypothesis	Statement	Statistical evidence	Decision
H1	Library usage has a significant positive relationship with reading habits.	$r = 0.307$, $p < .001$	Supported
H2	Library usage has a significant positive relationship with information literacy.	$r = 0.440$, $p < .001$	Supported
H3	Reading habits significantly predict academic performance.	$\beta = 0.144$, $p = 0.0097$	Supported
H4	Information literacy significantly predicts academic performance.	$\beta = 0.331$, $p < .001$	Supported

H5	Reading habits and information literacy differ by gender, class level, or school type.	Class ANOVA p values: reading = 0.9292, IL = 0.2158; school-type t tests significant for IL and academic performance.	Partially supported
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Source: Simulated survey dataset generated for academic demonstration only.

The hypothesis summary indicates that H1-H4 were supported, whereas H5 was partially supported because differences were stronger across school type and class level than across gender. The interpretation remains associational because the study design is cross-sectional.

13. Graphs and Charts

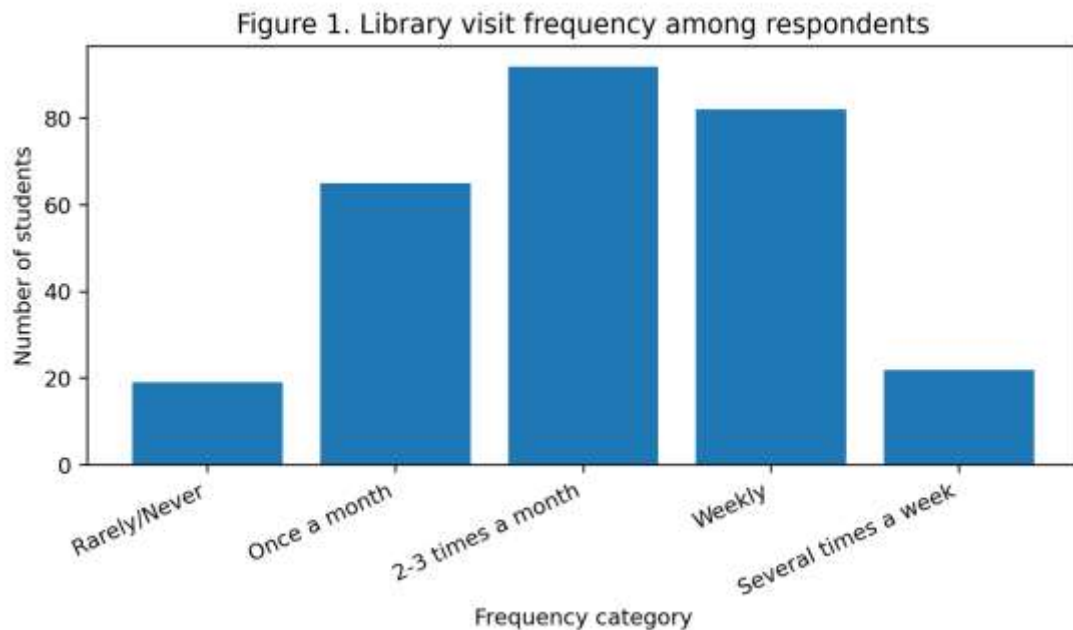


Figure 1. Library visit frequency among respondents

Source: Simulated survey dataset generated for academic demonstration only.

The bar chart shows that library participation is distributed across all categories, with a visible concentration around monthly-to-weekly use.

Figure 2. Gender distribution of respondents

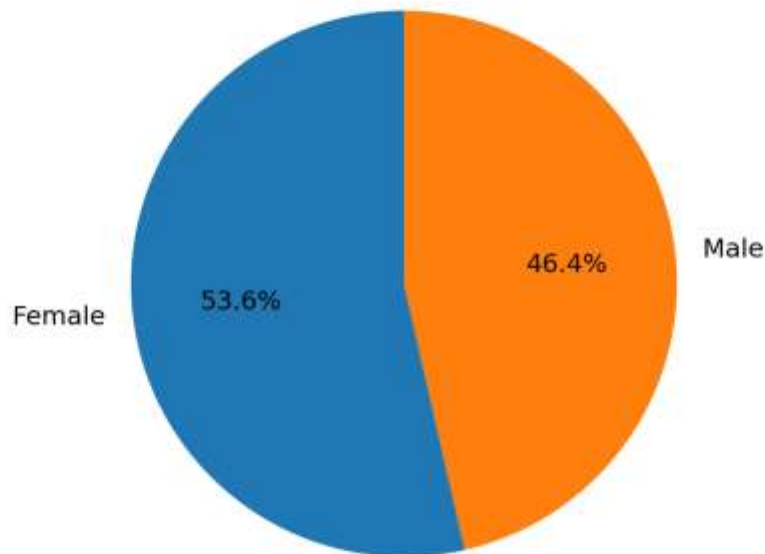


Figure 2. Gender distribution of respondents

Source: Simulated survey dataset generated for academic demonstration only.

The pie chart confirms that the simulated dataset has a near-balanced gender distribution.

Figure 3. Preferred reading material

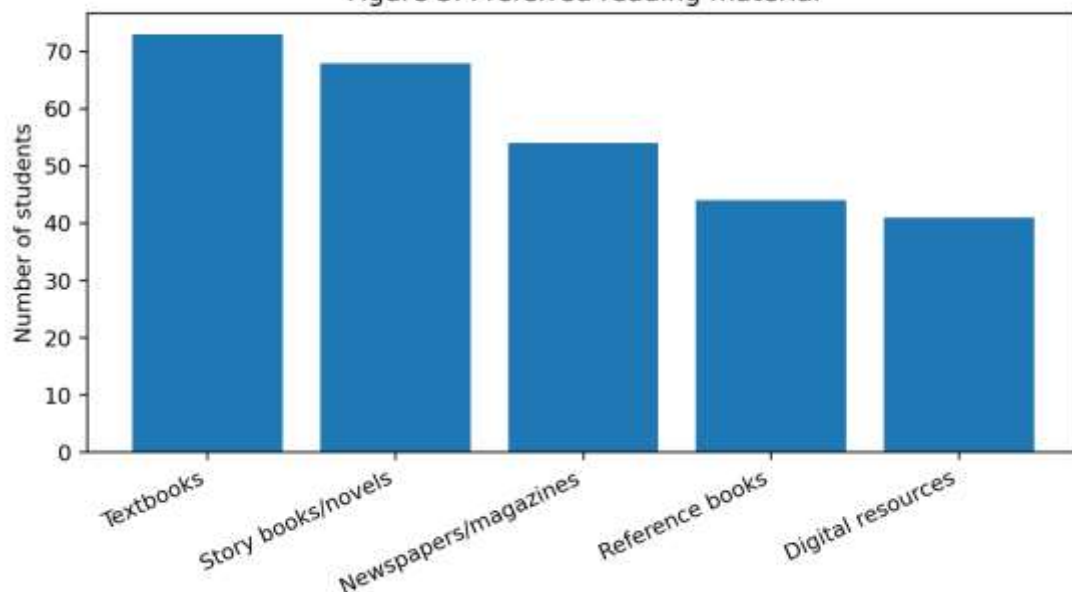


Figure 3. Preferred reading material among respondents

Source: Simulated survey dataset generated for academic demonstration only.

The material-preference chart indicates that textbooks remain the most common reading material, but story books, reference books, newspapers, and digital resources also appear meaningfully.

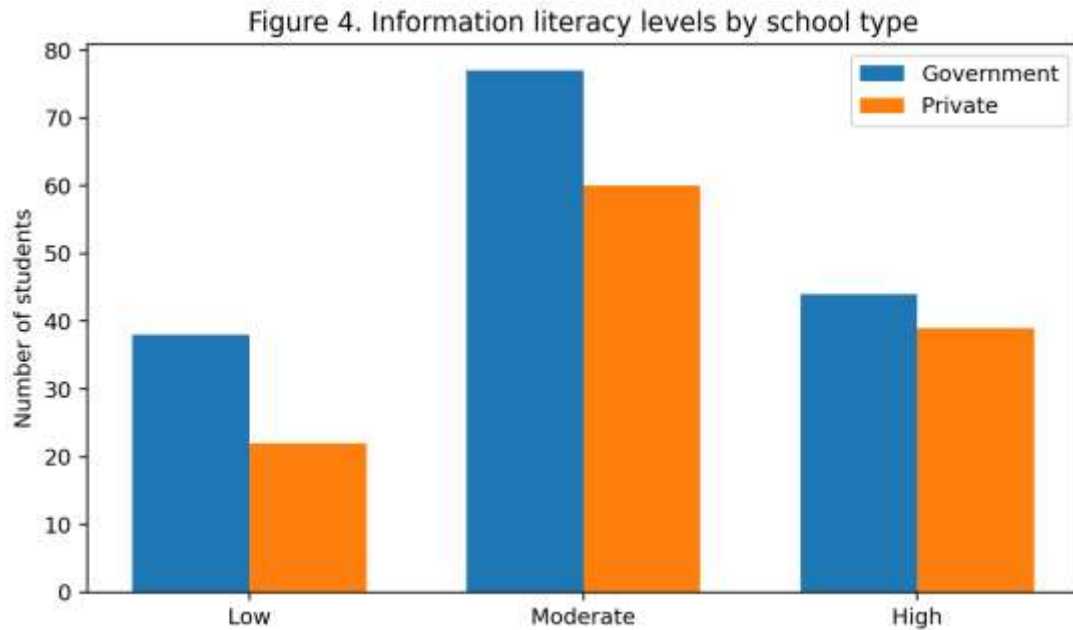


Figure 4. Information literacy levels by school type

Source: Simulated survey dataset generated for academic demonstration only.

The clustered bar chart suggests that private-school students have a slightly stronger high-information-literacy profile in the simulated data.

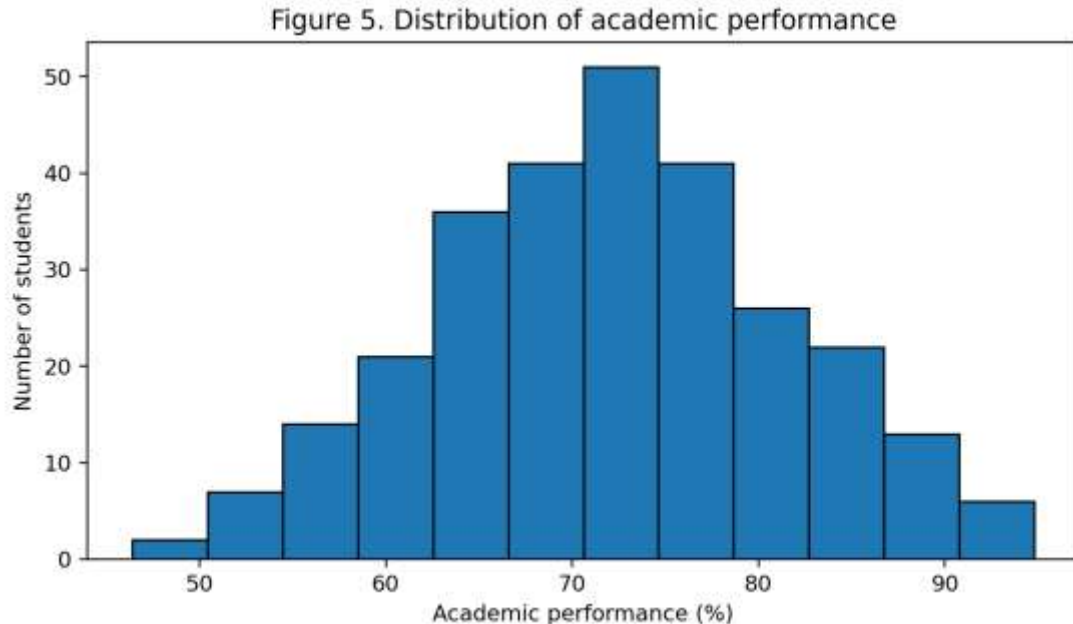


Figure 5. Histogram of academic performance

Source: Simulated survey dataset generated for academic demonstration only.

The histogram shows a broad distribution of academic performance scores, supporting interpretation across low, moderate, and higher achievement categories.

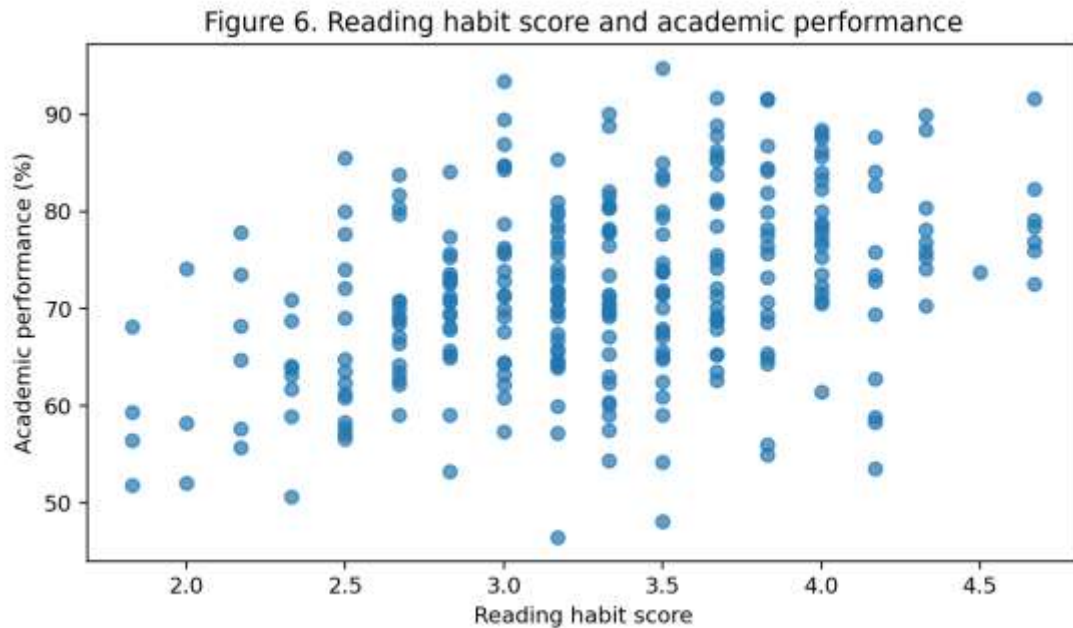


Figure 6. Scatter plot of reading habit score and academic performance

Source: Simulated survey dataset generated for academic demonstration only.

The scatter plot indicates a positive association between reading habit score and academic performance.

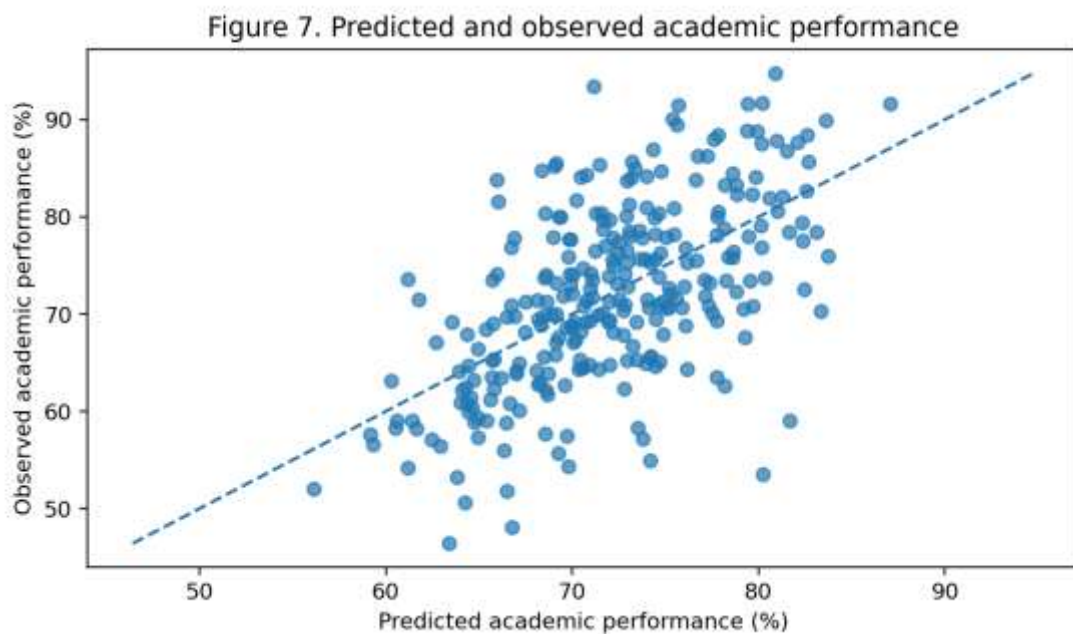


Figure 7. Predicted and observed academic performance from regression model

Source: Simulated survey dataset generated for academic demonstration only.

The predicted-versus-observed plot shows that regression predictions broadly follow the observed performance pattern, although individual variation remains.

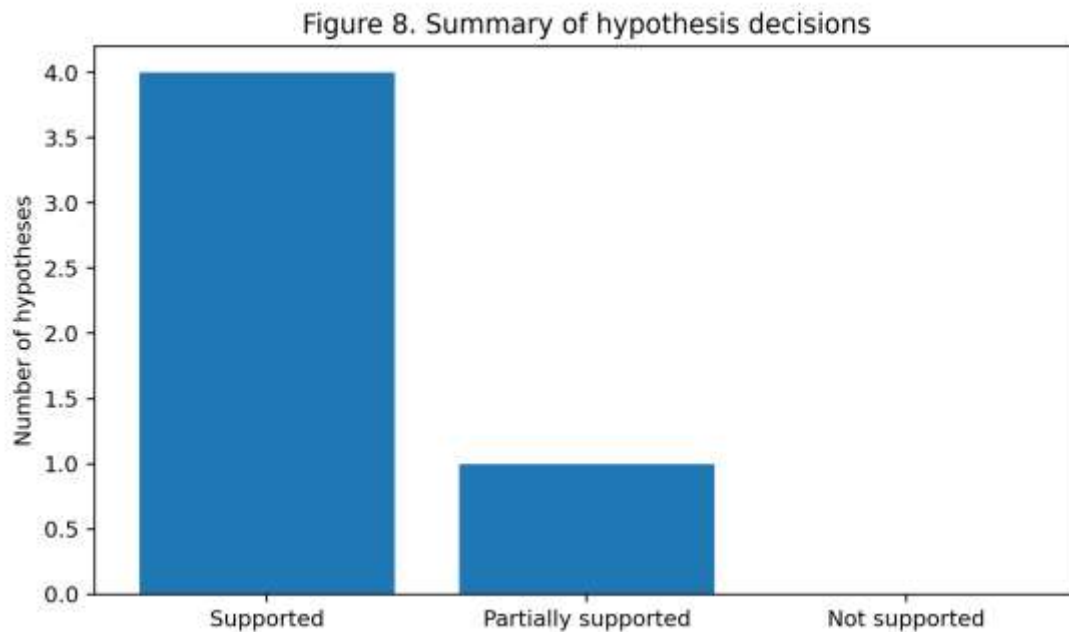


Figure 8. Summary chart of accepted and partially accepted hypotheses

Source: Simulated survey dataset generated for academic demonstration only.

The hypothesis summary chart indicates that most proposed relationships were statistically supported in the simulated analysis.

14. Statistical Interpretation

The results of the reliability analysis found that the questionnaire scales were internally consistent, which had an alpha value that exceeded the minimum standards accepted of 0.70 for research purposes and 0.60 for exploratory studies. Based on the correlation analysis, it can be understood that library usage is believed to have a positive relationship with reading behaviour and also information literacy. The result obtained for the correlation between library usage and reading habit was $r = 0.307$, while the result obtained for the correlation between library usage and information literacy was $r = 0.440$, both significant at $p < .001$. Consequently, this meant students who reported higher library use also tended to report stronger reading and information skills.

The regression model showed that the combined predictors explained 354% of the variance in academic performance. According to the model, even after controlling for participants' library use, librarian advice, type of school, and school class, reading habits and information literacy were still significant predictors. This points to the interpretation that engagement with library might influence academic outcomes through learning behaviours and information skills, with no causal inference claimed.

The chi-square analysis comparing library visit frequency and performance category was significant, $\chi^2(8) = 30.53$, $p = 0.0002$. The finding shows that categories of academic performance were not evenly distributed in categories of use of library. The value of Cramer's V was 0.233 indicating that the association was not large but was educationally important for a school-based behavioural variable.

The findings of t-test and ANOVA reveal intricate details. In their response to the library intervention, gender differences were quite small. Hence, the library interventions should be aimed at all the students. There should not be any assumption about differences based on gender. Differences of class and type of

school were more relevant, suggesting that institutional resources and academic stage might shape students' equality of opportunity for the reading and information-literacy development.

15. Discussion

The simulation results align with the overall argument that school libraries can facilitate student learning when they are treated as active pedagogical spaces. The link between library usage and reading habits encourages the view that students can develop a regular reading habit through repeated exposure to books, recommendations from readings, and library-based activities. This is aligned with Abid, et.al. (2023) who discovered reading habits have a significant relationship with the academic achievement of secondary students. In the current model, reading habits were also found to be predictive of academic performance suggesting reading behaviour is not merely recreational but academic.

The correlation of library use with information literacy is also relevant. Frequent library users, more experienced than others, tend not to rely on Google or the first result they get. Dolnicar et al. (2020) suggested that the information search, evaluation and legal and ethical use of the information needs more attention in secondary education. The present analysis reflects this concern as source reliability and citation awareness were among the relatively weaker information-literacy indicators. Hence, not only should school libraries provide students with materials, but libraries should also guide students in using the information correctly.

The information literacy shows a strong impact on the regression of academic performance. This is educationally plausible as a student who is able to identify the relevant information, evaluate the quality of the source, organises the notes and avoids unethical copying will be better prepared to do their assignments, project work and exam preparation. Information literacy is a skill enabling academic success. As argued by UNESCO (2023), technology should support learning outcomes not replace them; school libraries have the human capacity to support digital and print information environments.

The results show that school-type differences were greater than gender differences. This suggests that institutional relevance and library culture may matter more than student identity. According to the simulated data, private-school students exhibit slightly superior profiles in information literacy and academic performance. This may result from enhanced access to digital resources or better-integrated library services. A lack of data should not be generalised. In practice, the type of school may be confounded with socio-economic status, parental education, teacher support, infrastructure, etc. They should therefore collect additional background variables.

One must pay particular attention to the librarian. Librarian guidance was positively correlated with the major learning variables, although it was not the strongest regression predictor when the other variables were entered. In other words, it is possible that librarian support may heighten library use, reading selection, and source evaluation quality indirectly. The school library professionals provide important insight into the changing information needs of students, according to Oddone and Garrison (2024) and Merga and Mat Roni (2025). Librarians should be consulted as part of the academic planning and not just for circulation and record keeping.

The findings of this research suggest that there is an integrated model of library science which can be introduced in the second stage of education. Most importantly, a school library contributes when it combines a library of resources, promotes reading, information-literacy instruction, teacher collaboration and student guidance. The library should not merely be assessed by the number of books issued but evaluated on its impact on reading, source evaluation, quality of assignment and academic confidence.

This approach aligns with the IFLA School Library Manifesto and the vision of quality and inclusive education (IFLA School Libraries Section & IASL, 2021; IFLA & UNESCO, 2025).

16. Major Discoveries.

- Library usage was positively and significantly associated with reading habits of the students.
- Library usage has a positive and significant association with information literacy.
- In the regression model, reading habits and information literacy were important predictors of academic performance.
- The dataset is simulated and regression model explains a lot of variance of academic performance.
- Among the information-literacy areas, source evaluation and ethical use of information emerged to be relatively weak.
- Differences in school-type and class-level were more visible than gender-difference.
- Library Visit Frequency and Academic Performance Category Have a Statistical Association
- Assistance by the librarian seems educationally relevant here as a support variable in connection with reading and information use.

17. Educational Consequences

For Librarians from Schools

School librarians ought to plan and conduct structured orientation sessions on the use of the catalogue, key word searching, reference materials, digital databases, evaluation of sources, avoiding plagiarism and basics of citation. They ought to recommend books to students with different ages and keep a record of their reading so as to help teachers identify the students who need help.

Teachers can use this.

It is essential for teachers to work with librarians to design assignments that require more than just a cut and paste from the internet. Reading lists and assignment-specific inquiry tasks can give library use an academic purpose.

For School Administrators. 17.3

It is suggested to the Administrators to allocate regular library periods, employ trained library staff, maintain collections continuously, facilitate digital access, and include library indicators in school improvement planning.

For Learners 17.4

According to good library practice, students must be motivated to view the library as a learning laboratory where reading, searching, evaluating, and synthesising information are practised on regular basis.

17.5 For Those Who Plan the Curriculum.

Designers of the curriculum at the secondary school level should incorporate information literacy learning outcomes into learning standards. These standards could apply to project work and research work, as well as digital citizenship.

Digital literacy programs intended for

Digital literacy programmes should not merely emphasise on device operation; they should also include evaluating information, awareness of misinformation, ethical reuse and citation with reflective reading.

For Reading Promotion Initiatives.

Schools can create a reading culture that goes beyond examination-centric reading using reading clubs, book talks, recommendations from peers, meeting the author, reading challenges, and multilingual book

corner.

18. Suggestions.

- Each week, Classes IX-XII must compulsorily attend one structured library period.
- It is suggested that librarians conduct an information literacy session at least once a month.
- Make reading lists for each class and subject using textbooks, fiction, reference books, newspapers, magazines, and even online resources.
- Enable students to create reading clubs, book-review activities, and student-led library displays.
- Offer instruction on assessing sources, citing materials, rephrasing content, and using information responsibly.
- Urge collaboration of classroom teachers and librarians for assignments and projects.
- Reliant on data from library use, student reading logs and feedback, library monitor impact.
- Make sure that collections, including multilingual books, assistive material, and digital are inclusive.
- Upgrade school libraries with catalogues, internet, curated digital links and age-appropriate e-resources.
- Carry out annual information literacy assessments to identify learning gaps.

19. Limitations of the Design.

The primary limitation is that the dataset is simulated since no real-world Excel/masterchart data were provided. Consequently, the numerical findings should not be regarded as genuine evidence from a school population. Another limitation is that the research design is cross-sectional, meaning it cannot show causality. Thirdly, the percentage marks used to measure students' academic performance may not capture their creativity, critical thinking, reading, or project quality. Fourth, respondents may overstate library usage and reading habit. Fifth, essential background factors like parental education, socio-economic status, teacher quality, school infrastructure and availability of digital devices were not adequately modelled.

20. Future Research Opportunities and Issues

Future researchers should use real field data that should be collected from multiple secondary schools in rural, semi-urban and urban settings. A longitudinal design can examine whether improved library services consistently improve reading habits and academic performance. Mixed-methods research can bring together student surveys and interviews of librarians, teachers, and parents. We can evaluate the impact of information-literacy workshops, reading clubs, and digital library orientation led by librarians through intervention studies. Comparative studies of government and private schools can help identify library provision structural inequalities. Future research could employ data on actual test performance, assignment rubrics, library circulation records, and digital resource logs to mitigate self-report bias.

21. Summary or Consistent Gatherings

The simulated quantitative dataset outlined in the present study reflected a systematic evaluation of the role of library science in the enhancement of reading habits, information literacy and academic performance of secondary school students. As a general rule, the relationship between the use of the library and the reading habits and information literacy, says the learning ability usage, predicting the performance. The article remarks that a school library is not merely an infrastructure facility, it is a

pedagogical system which is help support reading culture and academic inquiry, critical source use, and learner autonomy. The research finding suggest that librarian assistance, scheduled library periods, reading activities and digital information training can enhance the relevance of library to secondary education. Nonetheless, the data are simulated; thus, the results are demonstrative, not field based. To publish for real, run the same analysis design on actual student survey data and checked university records. The message for schools is simple: if you want to improve student learning, improve the not just the classroom and textbooks but also the professionally-managed library that instructs students how to read, search, evaluate and make responsible use of information.

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