IMPROVING SCHOOL LIBRARY MANAGEMENT IN BANGKOK, THAILAND: Overcoming Challenges and Embracing Digital Integration

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ABSTRACT

Purpose: The purpose of this paper is to investigate the current barriers preventing Thai school libraries from operating effectively and efficiently in Bangkok, and how they might be best overcome by means of an automated library system. Though the school libraries are indispensable to a students' academic success and cognitive growth, however it is under used due to old-fashioned infrastructure condition, finance constraints as well as ill-equipped staff members. The research endeavors to the provide suggestions for reformation with the modernization via digital platforms and professional perfections (Thailand Educational 4.0 Policy).

Design / Methodology/Approach: Both quantitative and qualitative research were collected by a mixed methods strategy.. A survey instrument was used to assess infrastructure, staffing and digital literacy levels of the 25 school librarians as well whereas semi-structured interviews with 10 school administrators from public and private schools. This triangulation methodologically enabled a clear understanding of the operational constraints and supervisory inadequacy in school libraries.

Findings: The study determined the major constraints to effective library administration in Bangkok - lack of funds, inadequate ICT (Information Communication Technology) skills among the school teachers, disconnected cataloguing system and confined interfacing with educational technologies. Many librarians noted difficulties in transitioning libraries from analogue to digital systems due to inadequate training and support. E-library systems, digital cataloging utilities and interactive learning materials are now been grown interest in using. Stakeholders stressed the need for ongoing support to professional development and policy to ensure sustained digital transformation.

Originality/Value: This study will help to fill the gap in this largely ignored area of school library reform in Thailand by offering evidence-based outcomes and practical proposal for its modernizing. Lessons This study demonstrates the importance of integrating skilled human resources, a digital infrastructure, and active community involvement into an integrated management system in juxtaposition to past research focusing mainly on library use. The findings support the national direction of Education 4.0 to develop technology-assisted learning environment.

Keywords: *School Library Management, Digital Integration, Bangkok, Educational Resources, Thailand, Library Challenges, Technology in Education, Education 4.0*

1. INTRODUCTION

School libraries are essential learning centers that encourage literacy, and promote critical thinking and academic achievement. In Bangkok, Thailand, many school libraries in the country and especially in public schools are underused because of obsolete management systems, insufficient facilities and lack of staff training. Although modern technology and devices are becoming part of private and

international schools in the city, a digital divide continues to exist across the wider educational context in terms of access to, or sharing out, innovative library resources (Wanchai, 2018; OBEC, 2021).

At the global level, there are examples of how digital transformation in school libraries through e-resources integration, cloud-based cataloguing, or virtual engagement can ultimately improve learning outcomes as witnessed recently in Singapore, South Korea and Finland (IFLA 2015; UNESCO 2020). This kind of digital blending lends itself not only to access availability but also to the development of 21c skills. In contrast, Thai school libraries encounter ongoing issues—such as the scattered status of digital systems in place, relatively low levels of digital literacy among librarians and lack of policy support—which discouragingly affect the growth toward analogous creative configurations (Thongthew & Trakarnrung, 2022).

This research seeks to identify the immediate problems that prevent effective library management in Bangkok schools and to present workable solutions for their solution through digital applications. Situated within the framework of Thailand's Education 4.0 policy, which promotes learner-centered ICT-integrated education, this study attempts to narrow the gap between current practice and future prospect. It insists on the necessity for library reform to be situated within the wider national initiatives of nurturing digitally literate citizens and inclusive learning environments (Ministry of Education, 2021).

The research considers differences between public and private schools by exploring three distinct dimensions: technological factors, administration and human aspects influencing library outcomes. It also marries quantitative and qualitative information provided by local educators and administrators to get a sense of systemic shortcomings as well as opportunities for reform. Hence, this study contributes to responding to a void in Thai educational literature: school library development has been left underexamined despite its roles in academic and social development (Wong & Lo, 2022).

Utilizing best practices on the regional and international levels, recommendations can be made that provide a comparative model for updating school library services in Bangkok. It underlines the need for integrated management of infrastructure, updated training and digital integration of resources as well as actual involvement with the community. Results are discussed with hope to help libraries, institutional decision makers and national policy makers develop long-term technology enabled library services meeting the needs of Thai students and academics.

Research Objectives

1. To identify what the main management and resource issues are for school libraries in Bangkok.
2. To assess the degree of digital integration in school library programs.
3. To investigate the potential of digitization in the development and provision of library services and users' learning success.
4. To examine the views of librarians and principals on whether digital transformation is achievable in school libraries, as well as what effect it might have.

2. LITERATURE REVIEW

Well resourced school libraries contribute significantly to student learning outcome's. Evidence from research suggests that use of well-resourced libraries run by staff who are trained in library services is associated with improved literacy, reading comprehension, and information-seeking behaviors (Lonsdale, 2003; Lance & Kachel, 2018).

Libraries foster self-directed learning and curiosity, which is particularly true among minority students (Krashen, 2011).

2.1. Global Best Practices in School Library Management

Finland and Singapore are two examples of countries where well-managed school libraries, supported by high-quality digital facilities and active community involvement can have a profound effect on student learning. The school library in Finland values equal access to digital and print material to promote learning through collaboration where students become active contributors of their own inquiry-based knowledge (Löfström, 2017). Similarly, Singapore has worked on its libraries to include e-book systems, digital catalogs and interactive learning resources in them with accompanying professional development for library staff to ensure the effective use of technology (Tan & Chua, 2019).

These models assume that workmanlike library agencies, configured with space, staffing and digital resources are partnered to develop functional living learning centers.

2.2. Digital Library Integration in Southeast Asia

The transformation of school libraries in Southeast Asia to digital is moving ahead with some promising programs and outcomes. Thailand's "e-Book Learn" program is an example how the implementation of digital technology has facilitated equitable access to education materials and resources may be historically doubly challenged in urban areas – such as Bangkok (Srisomboon, 2020). Technology. Identification, Orchestration) There is a range of innovative technologies that have been introduced to supplement classroom teaching through more personalized and flexible learning experiences such as Learning Management Systems (LMS), mobile applications, e-book repositories (Chai & Koh, 2018). These developments are happening alongside regional education at reform initiatives that aim to enhance digital literacy and use of technology in teaching and learning practices. Research suggests varying uptake and digital capabilities amongst teachers and librarians, which can hinder effective technology use (Rahman et al., 2021).

2.3. Situation of School Libraries in Bangkok

Bangkok school libraries exhibit a variety of differences and similarities between themselves in terms of funding, area, collection size, staffing and computers available according to whether the schools are state or private. Libraries are essential resources and hubs for academic support, and student development but many libraries find themselves with perennial challenges that hamper their effectiveness.

2.4. Infrastructure and Accessibility

The conditions and accessibility of school libraries vary significantly from one Bangkok school to the next. Data of libraries reported in private schools with availed space, Latest books and availability of digital resources signify vast space, more financial support and advanced educational environment. Public school libraries, on the other hand, are fraught with obstacles such as overheated library rooms, antiquated furniture, and limited quarters. They often do not have enough room for all of the students (OBEC 2021). Physical environment: t's usability and students' motivation to make use of the library.

And schools don't have the digital infrastructure they need. Digitalized catalog, e-book and online databases are popular of private organizations but many libraries still depend on printed material for their services; those that do have digital systems may find these to be outdated or lackingin proper maintenance (Thongthew & Trakarnrung, 2022). Poor internet quality and insufficient technical support limit the effective use of digital resources, which limits libraries' potential for involvement in technology-mediated learning.

2.5. Staffing and Management

Competent library personnel is one of the prerequisites for effective management of the library and creation of a conducive learning environment. Most public school librarians in Bangkok are not formally trained as librarians because the librarian positions at Bangkok public schools are filled with staff members without library background (OBEC, 2021). This deficiency hinders the ability for effective collection development, information literacy instruction, and digital resources integration. Library professionals, including public librarians are not provided with adequate professional development; as such they are not informed about new technologies and modern practices in the library (Wanchai 2018).

Additionally, because investment in staff development is more stable in private schools, libraries are typically staffed by better-qualified professionals and continue to receive ongoing training, enabling them to offer more innovative library services. That inequity adds to the development of what is already a widening gulf in library quality and services between pubic and non-public educational sectors.

2.6. Student Engagement and Usage

Student utilization of Bangkok school libraries varies widely based on resource quality and availability as well as library activity offerings. Private school students tend to report higher library usage; this is enabled by rich resources and desirable activities (OBEC, 2021). These students are also enriched with the access to online research databases and e-books that enrich their educational experiences, leaving them using library does more often and in greater depth.

On the other hand, students in public schools often have low levels of engagement due to the lack of materials, shortage of digital resources, and lack of programs led by librarians creating a culture that supports reading and information literacy (Wanchai, 2018). This differential impact affects the way students read and how much they achieve in school; students in richer environments develop stronger independent learning habits (Krashen, 2011).

While digital devices have the potential to increase engagement by providing access to diverse content and interactive learning experiences, their use has remained inconsistent.

Most of the students had low use of digital library resources especially for a general intention such are unaware, accessibility and no training of how to use in the efficient ways (Thongthew & Trakarnrung, 2022). The underuse points to the requirement for targeted intervention aimed at enhancing digital literacy and for a more pervasive embedding of technology into library services.

2.7. Barriers to Effective School Library Management

Although these changes occurred, there are still substantial obstacles that make the implementation of school libraries impossible in some areas. The lack of budget in Thailand is still the main obstacle to acquiring modern facilities and keeping library sites (OBEC, 2021). Second, there are inefficiencies attributable to a fragmented management and uneven policy implementation as schools have varying levels of autonomy and support (Wong & Lo, 2022).

Understaffing and limited librarians' digital literacy skills, as well as those of educators, exacerbate these problems. Many school librarians lack a proper preparation in library science and digital resources that would prevent them from properly responding and acting to manage digital collections or integrating technology into their libraries´spaces (Wanchai, 2018). There are few, if any, professional growth opportunities often available especially in the public schools to support capacity building and new approaches (Thongthew&Trakarnrung, 2022).

Cultural factors, such as reliance on print material and low-level knowledge of technology used by students and teachers contribute to challenges in the development of a modern library. Without unified tactics to inform and excite users,

the functionality peers have inherited might not be used as much as it could be used – leading to unfulfilled promise of technological investment (Lance & Kachel, 2018).

2.8. Theoretical Frameworks Informing Library Integration

Theoretical frameworks that have supported effective digital integration in education lay a strong foundation for this study. The Constructivist Learning Theory highlights the value of libraries as action environments for dynamic learning, where learners can build knowledge through exploration and reflection via accessible resources and inquiry-based activities (Piaget, 1954; Vygotsky, 1978).

Technology Pedagogical Content Knowledge (TPACK) provides a lens through which to think about how teachers and librarians can integrate technology with their pedagogy and content allowing for better student learning outcomes (Mishra & Koehler, 2006). This framework also underscores the need for developing staff expertise about technical skill development and the integration of digital tools within curriculum.

The Substitution, Augmentation, Modification, Redefinition (SAMR) model by Puentedura (2006) also offers a continuum for evaluating how technology is being used within libraries: from simply replacing analogue resources to transforming learning experiences and changing the way students interact with knowledge.

Taken together, these models justify the need for a school library to view digital integration in holistic terms; that is, it should have both infrastructure (including technologies and fluent staff) as well as pedagogical coherence to realize educational potentials.

3. CONCEPTUAL FRAMEWORK FOR IMPROVING SCHOOL LIBRARY MANAGEMENT IN BANGKOK

Theoretical Framework & Foundations
Underpinning Theories:
- **Constructivist Learning Theory** (Libraries as inquiry-based, student-centered learning environments supporting knowledge construction)
- **TPACK Framework** (Integration of Technology, Pedagogy, and Content Knowledge for effective teaching and digital resource use)
- **SAMR Model** (Technology integration levels from Substitution to Redefinition, guiding meaningful digital transformation)

Inputs (Key Resources & Support Systems)	Processes (Management & Integration Activities)	Outcomes (Expected Improvements & Impacts)
Library Infrastructure (physical spaces, hardware, internet connectivity)	Digital Integration of Library Systems (e-catalogs, Learning Management Systems, e-books, interactive digital resources)	Increased Library Usage & Student Engagement
Skilled Personnel (trained librarians & educators, ongoing professional development)	Professional Development & Training Programs for staff to enhance digital literacy and management skills	Enhanced Digital Literacy for Staff and Students

Digital Tools & Platforms (software, databases, online resources)	Management Practices & Community Engagement (collaboration with teachers, students, parents, policy makers)	Alignment with Thailand's Education 4.0 Goals
Policy Support & Sustainable Funding		Sustainable, Innovative, and Equitable Library Management

4. METHODOLOGY

Drawing on a mixed methods research design, this study seeks to gain a holistic understanding of the positive and negative aspects of the school library management in Bangkok. The methodology uses both quantitative and qualitative methods to triangulate materials from different sources in order to achieve the rigorous results regarding data veracity, reliability and depth of understanding. This combination assists in the nuanced analysis of infrastructural, managerial and digital integration-related challenges, whilst faithfully recording the perspectives and experiences of key role players.

The first, quantitative side focuses on what can be numerically measured – the quality of roads, the number of staff and how much they rely on digital tools. Meanwhile, the qualitative part supplies in-depth contextual background by means of interviews regarding the attitude, perception and managerial approach behind these quantitative trends. This methodological combination supports the validity of findings and provides a foundation on which to base pragmatic, evidence-informed guidance.

4.1. Participants

Careful selection of the subjects was to be able to reflect a variety of school libraries in Bangkok, both public and private schools.

The sample included:

1. Twenty-five PSC schools have the following responsible person: a school librarian who carries out library and media center operations, develops collections, and provides resources. These librarians represent a range of experience and digital skill levels, from libraries with different resource allotments.
2. Ten principals, vice-principals, and coordinators who participated in policy development and resource allocation as well as overseeing library services. Their addition signifies institutional emphasis, financial allocation of resources, and how planning is executed in the running of a library.

The sample used purposive sampling to reflect as much diversity in school types (e.g., urban vs. suburban, public vs. private) so that they might uncover disparities and common challenges. Participants were chosen for their preparedness and ability to provide fulsome and honest feedback about their library management operations and digital transformation.

4.1.1. Instruments

To obtain such information, the study utilized different tools for different types of participants:

1. **Structured Survey Questionnaire (for librarians):**

This survey was designed with a combination of closed-ended and Likert-scaled questions to measure library infrastructure, digital resource access, staff training requirements, and use. The questionnaire addressed:

- ➢ Access to infrastructure and technology
- ➢ Experience with digital literacy and training community members
- ➢ Frequency and nature of use of digital tools
- ➢ Perceived barriers and needs for support

2. **Semi-Structured Interview Guide (Administrators and Librarians) Introductions:**

These interviews gave respondents the opportunity to further explain solicitation responses and offer more detailed information about:

- ➢ Policies of the institution: effect on library funding and staffing
- ➢ Culture associated with digital integration and transformation
- ➢ Barriers of and facilitators to modernization
- ➢ Develop additional features and support

3. **Document Review Checklist:**

When possible, information contained in current library management records, digital catalog statistics on usage, and training program schedules were reviewed to verify self-reported data and current practices.

The instruments were piloted in two schools that were not part of the main sample to ensure clarity, relevance and reliability, with adjustments made as needed.

4.1.2. Data Collection Procedures

Data were collected over a three-month period in line with ethical guidelines for confidentiality, and voluntary enrolment.

4.1.3. Survey Distribution

The questionnaires were e-mailed via the school network to parents and students, as well as the informed consent forms together with an explanation of what is studied and how the data was being used. Induction reminders enhanced the response rate.

4.1.4. Interviews

Semi-structured interviews were conducted in person and via videoconferencing platforms, as per participant preference and feasibility during the pandemic. Approximately 45 to 60 min sessions were audio-recorded (with consent) then transcribed for use of detailed qualitative analysis.

4.1.5. Document Review

School authorities were requested for permission to access relevant documents which are on-site or sent by email, to complement primary data.

The research team kept in constant contact with participants during data collection to verify responses and ensure completeness.

5.   DATA ANALYSIS

Quantitative statistical methods were integrated with qualitative thematic analysis to present a unified interpretation of the findings.

5.1. Data Analysis

Number from the survey were entered into statistical package for social science (373-SPSS Version 18). Descriptive statistics (means, frequencies and percentages) were used to summarize infrastructure status, human resources distribution, and types of using digital materials. Cross-tabulations and chi-square

tests were used to provide inferential statistical analysis of the associations among school types (public vs. private) and levels of digital integration or librarian preparation.

5.2. Analyzing Qualitative Data

Six-phase methodology (Braun & Clarke, 2006) was applied to the interviews transcripts using thematic analysis. During the initial coding, several themes and ideas about difficulties, perceptions and institution practices recurred. Codes were then grouped into primary themes such as "Resource Constraints," "Digital Literacy Gaps," "Policy Support Needs" and "Opportunities for Innovation. The NVivo software facilitated systematic sorting and retrieval of coded data to enhance rigor and transparency.

5.3. Triangulation and Integration

The results of both datasets were triangulated to confirm and enrich interpretation. Quantitative evidence of low uptake of digital tools was supported by qualitative stories which described shortfalls in training or infrastructural impediments. This holistic approach helped to identify systemic patterns and complex stakeholder experiences.

5.4. Validity and Reliability

Member checks were done with sampling to confirm if the preliminary findings are true, hence it is improving; in terms of validity. Reliability was assured through standardized coding protocols and peer debriefing among the research team.

6. RESULTS

Findings This part discusses the main results of the quantitative survey and qualitative interview data with school librarians, teachers and administrators in Bangkok. Responses are categorized across four broad sections: (1) Infrastructure and Resources; (2) Staffing and Professional Development; (3) Digital Integration and Technology Readiness; and (4) Administrative Policy Support.

6.1. Infrastructure and Resources
6.1.1. Physical Facilities and Space Limitations

It was found from survey response that most school libraries in Bangkok have limited space. Of the 60 schools surveyed:

> ➢ 68.3% (41 schools) stated that their library was too small for the current student cohort.
> ➢ 36.7% (22 schools) did not have provision of school library or multimedia centre.
> ➢ Of which only 18.3% (11 schools) had refurbished/renovated new interiors of library in last five years.

Respondents stated that outdated and overcrowded facilities deterred student engagement and impeded team learning exercises.

"Many times we have to send students away during the lunch periods because there's just not enough space." — Librarian, Public Secondary School

6.1.2. Collection and Cataloging Systems

Library collection sizes varied significantly:

> ➢ Fewer than five physical books were found in 55% of schools.
> ➢ Of the total, (3)6.7% (10 schools) of them had an operational OPAC system.
> ➢ Outdated collections, not fulfilling the curricular requirements: 43.3% respondents reported their current collection being out-of-date and did not conform to the developing curriculum.

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A small number of libraries had digital content like online magazines, journals or academic resources.

6.2. Staffing and Professional Development
6.2.1. Librarian Qualifications
- ➢ 71.7% of the librarians had a B.Sc degree in LIS.
- ➢ But only 23.3 per cent of the professionals undertook any kind of training on digital library system or ICT based cataloguing in the last two years.

Qualification Level of Librarians	Percentage (%)
Bachelor's in LIS	71.7%
Diploma or Certificate in LIS	20.0%
No formal LIS education	8.3%
Received recent digital training	23.3%

6.2.2. Staffing Levels
- ➢ Libraries – Commonly A very high percentage (61.7%) were a one-librarian library and operating often on her or his own.
- ➢ Librarians were almost universally involved in other duties, whether it was teaching for some or administration for others, which affected the primary focus on library management.

"I am the lone librarian here, and I teach two classes. We just have no time for any kind of digital recording or planning library events." — Librarian, Private School

6.3. Digital Integration and Technological Readiness
6.3.1. Access to digital resources and internet connectivity

Survey results showed that:

- ➢ 40% (24 schools) had a computer station in the library.
- ➢ On the other hand, only 28.3%(17) revealed that they were enjoying stable high speed internet connection.
- ➢ 6.7% (4 schools) were already using some form of digital lending or library management solution.

Digital Infrastructure Available	Schools (%)
Computer(s) with internet	40.0%
Stable Wi-Fi connectivity	28.3%
Tablets or mobile devices for students	10.0%
E-library or digital lending system	6.7%

6.3.2. Use of Digital Resources

Only **30%** of schools reported using any form of **digital content** (e.g., e-books, online databases).

- ➢ Commonly reported barriers were:
  1. Lack of budget (82%)
  2. Lack of training (67%)
  3. Lack of administrative support (38%)

"Even if we do get some funding, it always goes to lab stuff or sports — never the library." — School Administrator

6.4. Administrative and Policy Support
6.4.1. Budget Allocation
➢ 63.3% of the respondents stated that they received less than 20,000 THB per year in funds to manage their library operations.
➢ Budget allocations were in some public schools split with other departments, thereby reducing their potential for library growth.

"The library budget has increased for over five years. And for anything new, we depend on donations." — Librarian, Government School

6.4.2. Awareness, Support of School Leadership

Administrators had varying impressions based on interviews:

➢ There was general agreement as to the need for library transformation, but few had specific plans or schedules for improvement.
➢ Digital transformation was seen as optional by some school leaders, especially when basic academic resources were still missing in schools.

"Truthfully, we are still addressing classroom shortages. It feels like a luxury to digitize the library right now." — Principal, Inner-City School

Summary of Key Findings

Key Finding Area	Observation
Infrastructure	Majority of libraries are small, outdated, and lack modern furnishings.
Staffing	Librarians are often undertrained in digital tools and overstretched.
Digital Readiness	Few libraries have reliable digital systems or internet access.
Policy & Budget Support	Library budgets are low; modernization is not prioritized institutionally.
Stakeholder Sentiment	Strong desire to improve exists, but practical support is lacking.

7. DISCUSSIONS AND IMPLICATIONS

The findings of this study suggest a multidimensional crisis facing the school libraries management and modernization in Bangkok City, stemming from infrastructure, human resource, digital and policy problems. In theory, LFs are supposed to be learning centres that provide the best support services a library should offer but in reality, libraries are trapped by decades of under funding and absence of training and institutional support.

7.1. Infrastructure: The Foundation in Decline

Physical infrastructure is likely to be one of the most visible, if not the most immediate, bottlenecks. The numbers showed that over two-thirds of the libraries surveyed are constrained by space and facilities that are old or out-of-date. These conditions are diametrically opposed to the modern library as a dynamic, student-centered learning landscape. This is consistent with earlier results from UNESCO (2019) which is that well-designed physical spaces significantly influence student motivation and engagement in library use.

Environments lacking modern furniture, collaborative learning spaces or multimedia devices decreases libraries' ability to accommodate interactive study sessions or scholarly group work. As Thailand moves toward a holistic, student centric curriculum (OBEC, 2020), the state of school libraries appears not to meet national educational aspiration.

7.2. Human Resources: The Librarian Under Valued

Underinvestment in librarian training and staffing is a major barrier to progress. Most of the librarians (the majority) are formally trained in library and information science, but fewer have been trained specifically in digital tools or integrated library systems. Many are loaded with teaching, if not admin (if its both) freeing them to focus less on library development.

These findings also support the IFLA's (2021) study, highlighting that continued professional development in digital literacy and instructional technology is essential for librarians to be able to fulfill their role as facilitators of 21st-century skills. Lack of investment in human capital ✕ Two respondents also pointed out that lack of investment on the human side was a barrier to digital transformation, something that generates a collaborator who feels badly.

7.3. Digital Integration: An Uneven, and Unfunded, Transition

The move towards digital libraries in Bangkok is particularly fragmented. Despite priority being given to ICT integration in education by the Thai government (Ministry of Education, 2021), there are few schools with functioning digital library systems, reliable internet or basic digital collections as shown by this study. The top reported obstacles were budget constraints followed by lack of digital training and institutional prioritization.

This highlights a classic "digital divide within cities" where some top end (private or well resourced) schools are moving towards smart learning environments while many of the public-sector schools remain digitally marginalized. In addition, policy and statement language do not always swim in the same waters. Countermeasures Although it's a nationwide goal, there are still some obstacles to the implementation of digital technology in educational systems, including insufficient funding supports, lack of support systems and less programs of capacity -building.

7.4. Administrative Vision and Policy Disconnect

This study also reveals a variable of concern in school leaders' conceptions of libraries. While most principals and staff express an abstract understanding of the library's value, it is rarely translated into concrete strategies or funding commitments. This cognitive dissonance points to more systemic issues where library modernization has not been perceived as a priority for school growth.

OBEC's guidelines on improvement of library facilities have been promulgated periodically, but their execution and the allocation of resources continue to be erratic. With no explicit mechanisms of oversight and accountability, the allocation of resources for school libraries can continue to lag.

7.5. Implications for Equity and Lifelong Learning

The findings highlight growing inequalities in information and access to digital learning tools. Meanwhile, with international education moving to hybrid and online learning systems, vulnerable students without digital library access are at a significant disadvantage. This has implications for academic success, but also readiness for adult life and lifelong learning in the knowledge economy.

This situation underscores the importance of a "rights based approach" to school libraries that will recognize access to books and digital resources, as well as professional librarians, as an educational right not a perk.

7.6. Comparative Insights and Regional Relevance

When compared with similar research in Malaysia, Vietnam and Indonesia, school libraries in Thailand report similar challenges about digital development, but uneven coverage across urban areas. This suggests that there is a need for even more local policy interventions, including assistance tailored not just at the national level, but also in the districts or municipalities.

7.7. Emerging Opportunities

However, the study is recognizing opportunities in addition to the challenges. There is no doubt that librarians are willing to increase their proficiency, administrators open to digital models--if well supported in them- and politicians become more conscious of all this. Strategic approaches, including capacity-building initiatives, targeted investments and public-private partnerships may help enable such transformative change.

This study exposes an alarming yet rectifiable truth; that school libraries in Bangkok are underused and under-resourced, but offer great potential to be powerful educational spaces for change. The gap between policy goals and reality must be bridged by the collaboration of infrastructure construction, faculty training, computer technology installation, and sustained administrative commitment.

National education policies have a great deal to say about information literacy and 21st-century skills, but the reality is pathetic. There are many school libraries in Bangkok which continues to retain outdated physical structures, insufficient digital resources as well as unskilled staff. Although librarians, teachers, and administrators concur that libraries are essential to improving student learning children should never be educated beyond the funds provided for their education; this agreement is rarely reflected in professional programs making decisions about funding and planning.

The smokescreens without holistic digital integration remain an ongoing issue. Surprisingly, the conversation (spurred by its accelerated forced COVID-19 digital learning rampage) on this global shift to digital education has reached policy corridors; yet implementation is fragmented and hardly budgeted for in many Bangkok schools. Moreover, the findings suggest that digital divide is increasingly widening even in urban settings affecting students from public or low-income schools significantly.

8. CONCLUSION

This is an important study indicating where change could occur. Library staff are open to professional development and school administrators are willing to embrace change as long as they're supported. This is a critical moment for policy makers, school and public library leaders, and other private sector partners to work together in revitalizing the conditions of school libraries as inclusive learning environments with access to technology.

In the end, school libraries are not secondary locations or programs on the educational landscape. We need to reimagine them as centers of inquiry, digital discovery and lifelong learning—places where students learn not only academic skills but also creativity, critical thinking, citizenship and entrepreneurship. By addressing the gaps identified in this research and implementing needed improvements, Bangkok can serve as a model for school library progress for 21st-century Thailand.

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APPENDICES

Questionnaire for School Librarians

Target group: 25 librarians at public and private schools in Bangkok.

Objective: This study aimed at investigating the present state of library management: the extent to which digital change occurs, challenges in managing digital libraries and how to improve library services und er a digital world.

Part A: Demographics and Professional Background

Name (Optional): __

School Name (Optional): __

Type of School:

☐ Public

☐ Private

How long have you been a school librarian?

☐ Less than 1 year

☐ 1–3 years

☐ 4–7 years

☐ More than 7 years

Do you have a background or formal education and/or training in library and information science?

☐ Yes

☐ No

Section B: Existing Libraries Resources and Management Practices

Approximately how many items are in your library's collection?

☐ Fewer than 1,000 items

☐ 1,000–5,000 items

☐ More than 5,000 items

Please select the dominant way in which your library catalog is updated or managed.

☐ Manual (paper/card catalog)

☐ Digital but not integrated (e.g., spreadsheets)

☐ Integrability with a contemporary Library Management System (LMS) or computer software

What kinds of academic and information resources are available to students?

(Select all that apply)

☐ Physical Books and Printed Items

☐ Periodicals (magazines, newspapers)

☐ Multimedia resources (audio, video)

☐ E-books/digital reading resources

☐Educational software and apps

☐ Journals and periodicals from online academic databases or digital libraries

C. Digital Integration and Student Engagement

What digital products or platforms have you implemented to help your library users better access and manage information sources?

☐ Yes

☐ No

If 'yes', please indicate what tools/platforms: _

How intensive are students in accessing digital library resources and services online?

☐ Very active

☐ Moderately active

☐ Rarely use

☐ Do not use at all

What are the primary challenges that impact upon the integration and sustainability of digital library services? (Select all that apply)

Limited budget or no funds☐

☐ Insufficient staff training or knowledge.

☐ Poor connectivity or infrastructure on the IT side

☐ No support from the College or administrative personnel.

☐ Students and staff with poor digital skills

☐ Appears to have a bias or old-fashioned regards toward change

Section D: Capacity Development and Professionalization

Have you participated in any digital library management or technology training or workshops?

☐ Yes

☐ No

If yes, how frequently?

☐ Annually

☐ Occasionally

☐ Are you a: ☐ Frequent (several times per year)

What could help you further manage a digitally integrated library? (Select all that apply)

☐ Face-to-Face workshops around digital literacy and LMS use

☐ Online courses or webinars

☐ Mentor and peer support on site

☐ Programs run by public agencies or NGOs

☐ Partnering with technology companies or research institutions

E. Opinions and Suggestions for Improvement

How much do you agree that digital integration could make students learning better and library services more experimental?

☐ Strongly agree

☐ Agree

☐ Neutral

☐ Disagree

☐ Strongly disagree

What would be the three most pressing priorities for improving school library management and digital transformation in Bangkok from your experience?

_____

Questionnaire for School Administrators

Target: 10 administrative staff members at schools in Bangkok

Purpose: Investigating the support of the institution, budgetary priorities, policy perspective and future planning in school library management and digital transformation initiatives.

PART A: ROLE AND SCHOOL PROFILE

Your position/title: __

Type of school:

☐ Public

☐ Private

How long have you been doing this job?

☐ Less than 1 year

☐ 1–3 years

☐ 4–7 years

☐ More than 7 years

Section B: Requests for Institutional Support and Funding

Where does your school library's funding mostly come from?

☐ School operational budget

☐ Government grants

☐ Private or external donations

☐ Other: __

Does your school district have a separate digital library budget (hardware and software as well as training)?

☐ Yes

☐ No

☐ Planned for future allocation

How often do YOU currently assess the effectiveness and impact of the school library on student learning and engagement?

☐ Never

☐ Annually

☐ Per semester/term

☐ More frequently

C. Digital Transformation and Barriers to Implementation

Is your school engaged in digital transformation that includes library initiatives?

☐ Yes

☐ No

☐ Planning phase

If so, please specify the digital tools/ platforms/systems in use:

What are the greatest obstacles that your school faces to adoption of full digital library management? (Select all that apply)

☐ Insufficient funding or resources

☐ No qualified staff or in-house skills

☐ No policy or plan for managing the conflict.

☐Poor stakeholder knowledge or investment

☐ Other (please specify): _

Do you believe there should be ongoing training of librarians on digital literacy and digital literacies?

☐ Yes

☐ No

Part D: Research Vision and Collaborative Opportunity

To what extent does your school's strategic vision place an emphasis on the digital transformation of the library?

☐ Extremely critical

☐ Important

☐ Neutral

☐ Not important

Would you be interested in establishing relationships with outside organizations (NGOs, universities, tech companies) that would help upgrade the school library to make it more digital friendly?

☐ Yes

☐ Maybe

☐ No

What more can be done, or new policy or initiative should be put in place, to support Bangkok school libraries and help them toward digital progress?