Usage and Application of E-Resources among English Medium School Libraries of Bangladesh: A Model Plan

A Thesis Submitted to the Faculty of Arts, University of Dhaka for Partial Fulfillment of the Requirements for the Degree of Master of Philosophy.

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May 2026

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DECLARATION

I hereby declare that the research advancement paper entitled "Usage and Application of E-Resources among English Medium School Libraries of Bangladesh: A Model Plan" has been carried out by me for the award of the degree of Master of Philosophy in Information Science and Library Management. The entire work embodied in this thesis has been carried out by me under the supervision of Dr. Muhammad Mezbah-ul-Islam, Professor, Department of Information Science and Library Management, University of Dhaka, Dhaka, Bangladesh. I further declare that I have composed this paper based on original research findings from this study acquired by me, along with references from the published literature. This has not been submitted part or full to other institution for any other degree. I also clarify that there is no plagiarized content in this paper.



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ঢাকা বিশ্ববিদ্যালয়

CERTIFICATE OF THE SUPERVISOR

This is to certify that Ms. Rumana Rahman has carried out her MPhil research study under my guidance and supervision in the Department of Information Science and Library Management, University of Dhaka. Under my supervision, she prepared the research advancement paper entitled: "Usage and Application of E-Resources among English Medium School Libraries of Bangladesh: A Model Plan." To the best of my knowledge, the researcher has duly acknowledged all sources and materials consulted and used in the preparation of this research. I further confirm that the work is original and has not been submitted to any other university or institution for the award of any degree or qualification.

I, therefore, recommend that this research paper be accepted and submitted to the Department of Information Science and Library Management, University of Dhaka, in partial fulfillment of the requirements for the degree of Master of Philosophy (MPhil).

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ABSTRACT

English Medium School Libraries (EMSLs) in Bangladesh increasingly rely on electronic resources (e-resources) to support international curricula and digitally mediated learning. However, empirical evidence on their effective usage and application at the school level remains limited. This study aims to examine the status of e-resources in EMSLs, assess the role of school libraries in promoting access, awareness, usage, and application of e-resources, and identify the key barriers hindering their effective utilization. The study was conducted in ten purposively selected English Medium Schools in Bangladesh following international curricula such as CAIE, Pearson Edexcel, and IB. The population comprised library professionals and library users (students and teachers) of EMSLs. All ten library professionals were included through a census approach, while 295 library users were selected using random sampling techniques.Data were collected using two structured questionnaires designed
separately for library professionals and library users, focusing on e-resource
availability, usage patterns, digital comfort, perceived utility, institutional roles, and challenges.Data were analyzed using SPSS through descriptive statistics, reliability testing, factor analysis with varimax rotation, correlation analysis, and one-way ANOVA.The results reveal that although most EMSLs possess moderately to well-developed e-resource infrastructures, usage remains uneven and predominantly exam-oriented. Digital comfort and perceived utility significantly influence e-resource usage. Major barriers include limited digital literacy, insufficient training and awareness programs, infrastructural constraints, high subscription costs, and weak institutional policies. Library mediation and teacher–librarian collaboration emerged as critical enablers of effective application. The study concludes that EMSLs must adopt a proactive, structured approach to digital literacy and e-resource integration to ensure equitable and effective digital learning support.

Keywords
English Medium School Libraries; Electronic Resources; Digital Literacy; E-Resource Usage; Bangladesh

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LIST OF ACRONYMSAND ABBREVIATIONS

Abbreviation	Expressions
ACRL	Association of College and Research Libraries
ANOVA	Analysis of Variance
BANBEIS	Bangladesh Bureau of Educational Information and Statistics
CAIE	Cambridge Assessment International Education
Edexcel	Education Excellence
EFA EMS	Exploratory Factor Analysis
EMSL	English Medium School
EMSAB E-	English Medium School Libraries
resources	English Medium School Association Bangladesh
HTML IB	Electronic Resources
ICT IFLA	HyperText Markup Language
IGCSE ILS	International Baccalaureate
LMS OECD	Information and Communication Technology
OPAC PDF	International Federation of Library Associations and Institutions
PCA SPSS	International General Certificate of Secondary Education
UNESCO	Integrated Library System
	Learning Management System
	Organization for Economic Co-operation and Development
	Online Public Access Catalogue
	Portable Document Format
	Principal Component Analysis
	Statistical Package for the Social Sciences
	United Nations Educational, Scientific and Cultural Organization

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ChapterOne

Introduction

1.1 Introduction

Digital technology transforms our educational system. Educational institutions are now utilizing e-books, websites, online examinations, simulation based learning, and modern learning management systems for 21st-century students. The prevalence of digital education is ubiquitous, and schools are similarly affected. In Bangladesh, we have constructed digital classrooms, laboratories, and sophisticated libraries equipped with advanced technology and e-resources, as well as developed a website and multimedia resource repositories. The advancement of digital infrastructure and the incorporation of ICT in education are prominently highlighted in the national policy frameworks of Bangladesh (Government of Bangladesh, 2009; 2010). A limited number of Bangla medium and government schools are adopting digital education systems, whereas English medium schools are more advanced in utilizing electronic resources, employing platforms such as Edexcel, CAIE, and IB. This demonstrates their proficiency in superior technology. Global school libraries promote digital literacy, information navigation, and inquiry-based learning (IFLA, 2015; OECD, 2020). This international curriculum compels English Medium School Libraries (EMSL) to adopt technology and promote electronic resources (e-resources). Despite the significance of e-resources, librarians possess limited understanding regarding their utilization, compounded by insufficient training and several obstacles that impede the effectiveness of e-resources. The significance of e-resources escalated during the COVID-19 pandemic. During that period, educational institutions, including colleges and schools, began to employ Google Classroom, Microsoft Teams, Zoom, Khan Academy, Cambridge Online, Past Papers Wiki, and Save My Exams. Global trends impact the EMSs in Bangladesh. This study investigates the accessibility of e-resources in EMSL, assess the role of libraries in promoting them, and identify the difficulties to their implementation.

Despite the growing presence of English Medium School (EMS), there is no single national database that identifies or categorizes schools based on medium of instruction. The Bangladesh Bureau of Educational Information and Statistics (BANBEIS)

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provides national educational statistics, but its reports do not distinguish English-medium institutions from Bangla- or national-curriculum schools (BANBEIS, n.d.). As a result, researchers must rely on international examination boards and verified institutional directories to understand the actual landscape of EMSs in Bangladesh.

Among the most authoritative sources, CAIE maintains a publicly accessible global directory of registered Cambridge schools (Cambridge Assessment International Education, n.d.). Pearson Edexcel also provides an official online list of approved IGCSE and International A Level centers operating in Bangladesh (Pearson Education Limited, n.d.). In addition, the International Baccalaureate Organization publishes a directory of authorized IB schools worldwide, including those in Bangladesh (International Baccalaureate Organization, n.d.). Supplementary non-governmental directories, such as those maintained by the English Medium School Association Bangladesh (EMSAB), further contribute to identifying active EMSs despite their unofficial status (English Medium School Association Bangladesh, n.d.).
According to these sources, Bangladesh has approximately 230 English medium schools. Among, the Cambridge-affiliated institution has 122 centers. Although data is continually updated from the current source, we notice that there are 100 Edexcel-approved centers and 3 IB-authorized schools. The numbers are not directly derived from any source; for the purpose of this study, I have computed them, leading us to estimate that there are approximately 230 schools in Bangladesh. This setting generates my interest in pursuing a career in this industry. This study may operate on a national scale, enabling an understanding of the current state of e-resources in Bangladesh and offering a framework to enhance their utilization.

1.2 Rationale of the Study

This study aims to determine the utilization and implementation of e-resources in English medium school libraries (EMSL) in Bangladesh, grounded in identified research gaps and specified research objectives. EMSL is progressively utilizing e-resources and digital platforms for its international curriculum-based instruction. However, we observe a deficiency of research in this domain. This study initiates an examination of the utilization and application of electronic resources in the EMSL of Bangladesh. The study examines the present situation (total user count, quantity of e-resources, online tools, websites, worldwide curriculum, digital

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technology) identifies the obstacles and ultimately formulates a model applicable to all EMSL in Bangladesh.

1.3 Research Objective (RO)

RO 1: To investigate the current scenario of English Medium School Libraries (EMSLs) in Bangladesh.
RO 2: To identify the role of EMSLs in enhancing access, awareness, usage and application concerning e-resources.
RO 3: To determine the barriers and challenges to EMSLs' usage and application of e-resources.

1.4 Research Question (RQ)

RQ 1: What is the current scenario of e-resources accessible and employed in EMSL in Bangladesh?
RQ 2: In what ways do EMSL facilitate improved access, awareness, usage and application for users via e-resources?
RQ 3: What are the barriers and challenges that impede efficient management and utilization of e-resources in EMSs?

1.5 Statement of the Research Title

The term encompasses both the conceptual and developmental aspects of the study. This study analyzes the current utilization of e-resources in the EMSL of Bangladesh and seeks to develop a practical, evidence-based model to assist school libraries in augmenting their digital services, enhancing user engagement, and ensuring sustainable integration of e-resources across various educational contexts.

1.6 Explanation of Concept s in the Title

To ensure conceptual clarity, the principal terms utilized in the study have been clarified below. These major concepts represent the theoretical, contextual, and operational dimensions of this research.

1.6.1 English Medium Schools (EMS) in Bangladesh

In Bangladesh, English Medium Schools (EMSs) are private educational establishments that adhere to international curricula, such Cambridge Assessment International Education (CAIE), Pearson Edexcel (IGCSE/IAL), the International Baccalaureate (IB), or American curriculum frameworks. Instruction is predominantly conducted in English, and pupils are equipped for O-Level, IGCSE, A-Level, IB Diploma, or Advanced Placement assessments.

1.6.2 English Medium School Libraries (EMSLs)

English Medium School Libraries (EMSLs) function as academic learning hubs within English Medium Schools (EMSs), offering both print and digital resources that facilitate international curriculum. They are crucial in enhancing students' academic preparation, project execution, and examination preparedness.

1.6.3 Electronic Resources (E-Resources)

E-resources are digital information materials accessed through electronic devices or online platforms, including e-books, e-journals, databases, multimedia learning tools, and online reference sources. They are searchable, interactive, and regularly updated, enabling flexible and efficient access to information for teaching and learning (Thanuskodi, 2012).

1.6.4 Usage and Application of E-Resources

Usage pertains to the frequency and purposes for which students and teachers utilize e-resources, including assignment preparation, research activities, multimedia access, exam revision, and interaction with learning management systems.

Application pertains to the efficacy with which these resources facilitate learning, contingent upon aspects such as digital proficiency, device accessibility, instructional support, training opportunities, and ICT infrastructure. The proficient utilization of electronic resources improves digital literacy, critical thinking, problem-solving abilities, and overall academic achievement.

1.6.5 Digital Literacy

Digital literacy comprises the abilities and competencies required to discover information in digital contexts, assess its dependability, utilize it correctly, and generate new content through technology (ACRL, 2016; IFLA, 2015). It comprises:

- **Technical proficiency:** Utilizing computers, mobile devices, and web browser tools
- **Information literacy:** Searching strategically, evaluating credibility, identifying bias
- **Platform navigation:** Using LMS, databases, and digital libraries
- **Ethical literacy:** Understanding plagiarism, copyright, and fair use
- **Creative and critical literacy:** Creating content using digital tools and evaluating multimedia resources

Digital literacy is essential for modern learning and is a major determinant of how effectively students use e-resources.

1.6.6 Information Literacy

Information literacy encompasses a broad spectrum of skills that empower individuals to identify when information is required, seek suitable sources, evaluate their quality, and utilize the information efficiently and responsibly.

Key competencies:

- Formulating research questions
- Searching through ILS/OPAC
- Evaluating sources for accuracy, reliability, and bias
- Paraphrasing and summarizing

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- Applying citation and referencing conventions

In EMSLs, information literacy is especially important for Global Perspectives, IB Extended Essays, science projects, and coursework.

1.6.7 Access and Awareness

Access refers to the availability of:

- Internet/Wi-Fi connectivity
- Digital devices (computers, tablets, smartphones)
- Institutional subscription platforms
- Login credentials or IP authentication

Awareness refers to:

- Knowing which e-resources are available
- Understanding their purpose
- Receiving training or orientation

1.6.8 Learning Management Systems (LMS)

LMS platforms facilitate digital instruction, education, and content administration. Prevalent systems in Emergency Medical Services (EMS) comprise:

- Google Classroom
- Microsoft Teams
- Moodle
- Canvas

1.6.9 Multimedia Learning Platforms

Multimedia platforms encompass video lectures, animations, simulations, virtual laboratories, and interactive tutorials. Typical instances:

- Khan Academy
- BBC Bitesize
- TED-Ed
- PhET Simulations

- National Geographic Learning

1.6.10 Exam Preparation Tools

Exam-focused digital tools widely used in EMSs include:

- Save My Exams
- Cambridge Online
- Topical Past Papers
- Past Papers Wiki
- Quizlet
- SnapRevise

They provide:

- Topical practice
- Step-by-step solutions
- Mark schemes
- Model answers
- Revision notes

These tools are essential for exam-dependent systems like O-Level, IGCSE and A-Level.

1.6.11 ICT Infrastructure

ICT infrastructure includes the technical framework essential for digital education:

- Internet Bandwidth and Wi-Fi
- Computer labs and digital classrooms
- Devices (computers, tablets, laptops)
- Servers, routers, switches, and networks
- Technical support staff

Weak infrastructure limits student access and affects usage patterns irrespective of the availability of e-resources.

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1.6.12 Licensing and Copyright

Licensing refers:

- access
- number of users
- download permissions
- user authentication
- copyright compliance

Copyright rules govern how digital content may be used, shared, or reproduced. EMSLs must manage licensing carefully as most digital tools are imported from international publishers.

1.6.13 Integrated Library System (ILS) / OPAC

An Integrated Library System (ILS) oversees cataloging, circulation, acquisition, and user accounts. OPAC (Online Public Access Catalog) offers searchable access to library resources, including e-books.

1.6.14 Library Mediation

Library mediation refers to:

- providing digital literacy training
- supporting resource navigation
- advising on credible sources
- conducting orientation sessions
- assisting with academic projects

Library mediation is central to enhancing e-resource usage in EMSLs.

1.6.15 Barriers to E-Resource Usage

Common barriers include:

- Limited awareness
- Low digital literacy

- Weak ICT infrastructure
- High subscription costs
- Limited devices
- Technical difficulties
- Resistance to digital formats
- Insufficient librarian-led training
- Institutional policy gaps

1.7 Significance of Study

This research carries substantial value for multiple stakeholders: **i. Academic Contribution**

Addresses a significant deficiency in Library and Information Science research by chronicling electronic resource utilization in Emergency Medical Services Libraries, a mostly neglected area. Enhances theoretical discourse on digital literacy, technology uptake, and school library administration.

ii. Practical and Institutional Significance

Addresses a significant deficiency in Library and Information Science research by chronicling electronic resource utilization in Emergency Medical Services Libraries, a mostly neglected area. Enhances theoretical discourse on digital literacy, technology uptake, and school library administration.

iii. Policy-Level Implications

Advocates for national educational programs such as the Digital Bangladesh Vision and Smart Bangladesh 2041. Offers statistics that can assist policymakers and educational boards in advancing digital equity in school libraries.

iv. Professional Development

Assists school librarians in developing digital literacy workshops, awareness initiatives, and student-focused digital services.

v. Student and Teacher Impact

Enhances understanding of digital learning habits and challenges. Contributes to better learning outcomes by improving access and use of high-quality digital academic materials.

1.8 Scope and Limitiation of the Study

Scope

- English medium schools in Bangladesh associated with CAIE, Pearson Edexcel, IB, or the American curriculum.
- Three user groups: students, teachers, and library professionals.
- Categories of electronic resources: e-books, instructional platforms, multimedia tools, examination preparation tools, databases, and LMS-based resources.
- Factors analyzed: accessibility, awareness, usage trends, digital literacy, ICT infrastructure, library initiatives, and obstacles.

Limitations

- The sample is restricted to particular EMSs due to constraints in time, resource s, and administrative access.
- Some EMSs may restrict access to subscription data, limiting thorough analys es.
- The availability of infrastructure and resources varies among EMSs, affecting comparability.

1.9 Future Directions of the Research

This study opens several avenues for future research.

First, longitudinal studies may be conducted to examine how sustained digital literacy interventions influence students' academic performance and independent learning behaviors over time.

Second, comparative studies between English Medium, Bangla Medium, and English Version schools would provide deeper insights into digital equity and policy implications at the national level.

Third, qualitative investigations involving classroom observations and in-depth interviews with librarians, teachers, and administrators could complement survey-based findings and capture nuanced institutional practices.

Finally, future research may explore the integration of emerging technologies such as AI-driven learning platforms and learning analytics within EMSLs to assess their potential role in transforming school library services in Bangladesh.

1.10 Chapterization

The structure of the thesis is as follows: ***Chapter 1: Introduction***
This chapter provides the background, rationale of the study, research objectives, research questions, significance, scope and limitation and structure of the thesis.
Chapter 2: Literature Review
This chapter reviews global, regional, and Bangladeshi literature on English Medium school Libraries E-resources, their benefits, usage, application, barriers and conceptual framework.
Chapter 3: Methodology
This chapter describes theresearch design and methods used in the study. It explains the research area, population and sample, data collection instruments, assessment methods, and data analysis techniques employed to achieve the study objectives.

Chapter 4: Current Status of English Medium School Libraries (EMSLs) of Bangladesh

This chapter examines the current availability, types, accessibility, and overall status of e-resources in EMSL across Bangladesh.

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Chapter 5: The Role of EMSLs in Promoting Access, Awareness and Digital Literacy related to E-Resources This chapter explores the strategies, programs, and support mechanisms implemented by EMSLs to enhance access, awareness, and effective use of e-resources among students and teachers.

Chapter 6: Challenges and Barriers to Effective E-Resource Use in EMSLs
This chapter identifies and analyzes the institutional, infrastructural, technical, and user-related obstacles that limit the optimal use and management of e-resources in EMSLs.

Chapter 7: Findings and Discussions
This chapter presents a comprehensive, evidence-based model designed to guide EMSLs in effectively promoting, managing, and sustaining e-resource usage across Bangladeshi school libraries.

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Chapter Two

Literature Review

2.1 Introduction

In the 21st century, the rise of electronic resources (e-resources) has had a huge impact on how education is delivered and how people get information. E-resources, such e-books, e-journals, online databases, and multimedia content, have several benefits, such as being easy to access, cheap, and able to serve more than one user at a time (Dadzie, 2005). They are now necessary in schools and institutions all across the world to encourage learning that is flexible, self-directed, and collaborative (Means et al., 2013; OECD, 2020). Research indicates that e-resources enhance educational chances by offering current and readily accessible material that is frequently absent in print formats, thereby facilitating the close of information gaps (Ananda, Reddy, & Singh, 2017).

Even with these advantages, the way people use them is very different in both developed and developing nations. Research shows that in contexts such as South Asia and Africa, infrastructural obstacles, financial constraints, and poor digital literacy training continue to hinder effective utilization (Adeniran, 2013). In Bangladesh, English Medium School Libraries (EMSLs) are a special case since they follow foreign curricula that depend a lot on e-resources. Several studies suggest that EMSL students utilize e-resources for examination and educational support; nevertheless, extensive study about the current usage levels, the institutional role of libraries, and the problems encountered remain insufficient (Rahman, 2020). In this context, the literature review brings together research from around the world, from regions, and from countries to critically look at the advantages, disadvantages, and problems of e-resources. This is carried out to include EMSLs in a broader discussion about changing education.

2.2 Relevant Concepts of the Study

This study reviewed literature on use and application of e-resources in English Medium School Libraries (EMSLs) in Bangladesh, their role in promoting access and awareness, and the barriers of managing and using e-resources.

2.2.1 Definition of E-Resources

In the twenty-first century, e-resources have become an essential component of how people get and share information. In Bangladesh's EMSL, e-resources are becoming increasingly vital for supporting learning based on the curriculum, helping students understand how to find and use information, and motivating them to learn on their own. E-resources include a wide range of digital information products that may be stored, retrieved, and used electronically. These include books, journals, databases, and serial publications (Rahman & Islam, 2017). E-resources are defined as cohesive publications in digital form or electronic products that deliver collections of data textual, numerical, graphical, or time-based—made available as commercially produced or institutional resources, including full-text databases, e-journals, image collections, multimedia products, and numerical datasets (Lee & Boyle, 2004).

With the fast growth of information and communication technologies (ICTs), digital reading materials have become very important in the library and information industry. They have changed the way information is made, accessed, and used (Khan & Ahmad, 2018). An increasing amount of academic writing from fields including science, technology, social sciences, and health is now published and available online through digital platforms. This shows how e-publication is becoming more important in academic communication (Sharma & Kumar, 2016). Libraries, especially those in schools, are moving more of their funds into e-journals, databases, and other e-resources. This shows that they are making a strategic shift from print to e-collections (Dadzie, 2005). This tendency is more noticeable in colleges and universities, but EMSL are also slowly adding e-resources to keep up with international standards and digital learning methods.

There are numerous ways to get e-resources, such as paying for a subscription, buying them for an institution, or getting them for free through open-access platforms. E-books, which are digital versions of printed books, are commonly utilized in both school and academic libraries as main and extra reading materials. E-journals give EMS access to the latest research and academic conversations, which helps with project work and teachers' professional development. JSTOR, Scopus, and IEEE Xplore are examples of online databases that collect indexed scholarly information. These databases make it easy for users to find reliable research and literature.

Digital libraries like Project Gutenberg, DOAJ, and HathiTrust give everyone free access to a lot of academic resources that are in the public domain. This makes them especially useful for school libraries that don't have a lot of money. Audio lectures, educational videos, simulations, and interactive content are all examples of multimedia e-resources that support different ways of learning. They are widely utilized in both traditional classrooms and blended learning settings. Institutional repositories keep and share electronic theses, dissertations, and faculty publications. Government websites and research councils, on the other hand, offer digital reports, statistical datasets, and policy documents that help with academic projects and civic learning. Digital magazines and e-newspapers have also switched to electronic formats, giving students access to timely information, archives, and chances to establish reading habits.

As digital publication grows, e-resources are changing thanks to new technologies like mobile access, real-time data access, and smart technologies that are just starting to be used. In Bangladesh's EMSL, these changes show how e-resources are becoming more important in structuring modern learning settings and building the digital knowledge ecosystem of the twenty-first century.

2.2.2 Benefits of Using E-resources

E-resources are dynamic, constantly updated, and available across formats including PDF, HTML, and multimedia (Joshi, 2021). Unlike static print materials, they can incorporate hyperlinks, simulations, and multimedia features that improve comprehension and engagement. (Francis, 2024) highlights that such resources offer enriched learning opportunities by integrating audio, video, and interactive tools. Their portability and storage efficiency further make them ideal for institutions with limited physical infrastructure.

Recognizing their significant contribution to teaching, learning, and knowledge expansion, electronic resources have become an indispensable component of contemporary education systems (Tenopir, King, Edwards, & Wu, 2009). E-resources provide learners with access to a vast collection of up-to-date information, overcoming the limitations of physical libraries that are often constrained by space, cost, and availability. They are not only accessible 24/7 but also allow multiple users to consult the same resource simultaneously, thereby promoting equity of access (Ankrah &

Acheampong, 2017). Moreover, interactive functionalities such as hyperlinks, multimedia elements, and advanced search tools support deeper understanding and active engagement, thereby making the learning process more flexible, engaging, and learner-centered (Mayer, 2009). For students in resource-limited contexts, e-resources help bridge the knowledge gap by providing exposure to international scholarship and curricular materials otherwise unavailable in print. As a result, e-resources empower both teachers and learners to adopt innovative learning strategies and cultivate independent study habits.

2.2.3 Usage and Application of E-resources at Different Academic Levels

E-resources are always changing and being updated. They can be in PDF, HTML, or multimedia formats (Joshi, 2021). They can include hyperlinks, simulations, and multimedia aspects that make learning easier and more interesting, which is not possible with static print materials. (Francis, 2024) says that these kinds of resources provide better learning opportunities by combining audio, video, and interactive technologies. They are also great for schools that don't have a lot of physical space because they are easy to move and store.

E-resources are becoming an essential part of modern education systems since they make a big difference in teaching, learning, and expanding knowledge (Tenopir, King, Edwards, & Wu, 2009). E-resources give students access to a huge amount of current material, which is better than physical libraries, which are sometimes limited by space, cost, and availability. Not only are they available 24/7, but they also let more than one person use the same resource at the same time, which makes access fairer (Ankrah & Acheampong, 2017). Also, interactive features like hyperlinks, multimedia elements, and advanced search capabilities help people learn more and get involved, making the process more flexible, interesting, and focused on the learner (Mayer, 2009). For students who don't have a lot of resources, e-resources assist fill in the gaps in their knowledge by giving them access to worldwide scholarship and curriculum materials that they can't get in print. Because of this, e-resources give both teachers and students the tools they need to try new ways of learning and develop their own study habits.

2.2.4 Usage and Application of E-resources at School Level

As library funding is going down, librarians have to make harder choices between journals and databases. Collection managers often use utilization statistics and a metric called "cost per use" (Harrington & Stovall, 2011) to help them make these choices. Usage statistics are frequently derived from the comparison of the total number of downloaded e-resources and the overall subscription or purchasing cost of such resources (Lamothe, 2011). While some researchers, such as (Luther, 2001), have made reservations regarding the use of total download counts as a metric for effectiveness, others, including (Blecis et al., 2013), (Gatten & Sanville, 2004), and (Rathemacher, 2010), advocate for the utilization of download statistics as a significant instrument in assessing journal performance. Nevertheless, there is no universally recognized standard for an acceptable cost per usage, as this is contingent upon variables such as
subscription rates and user demographics (Rathemacher, 2010).

Research indicates that, despite the prevalent utilization of e-resources by students, inadequate information literacy abilities frequently hinder their successful application for academic objectives (Tenopir, Volentine & King, 2012). The study finds that not having enough computer skills and not being able to speak English well are major barriers to effective use. Also, poor workstations and slow internet speeds are mentioned as big problems. The study suggested that more computers be added and that new tools and training programs be made available to help pupils improve their English and computer skills.

Research shows that students mostly use e-resources that are easy to find, like e-books and e-journals. Specialized online databases are still not used as much. However, students believe that using e-resources has improved their reading habits and made them more confident in finding information (Natarajan, Suresh & Sivaraman, 2010). Many people would rather use library resources for study, but they choose to use their own electronic devices instead because they think the library's infrastructure isn't good enough. But most kids said the library's internet access is good. They also said that library workers teach people how to use e-resources, which has helped them learn how to get information quickly and easily.

Research indicates that a significant number of students are cognizant of accessible electronic resources, primarily utilizing them for academic endeavors such as project

completion and class note preparation; nonetheless, e-resources are also extensively employed for assignments, social interaction, and leisure activities (Iqbal & Bhatti, 2015).

(Yagi, 2011) found that nearly all faculty members are familiar with e-resources; yet, there has been a notable decline in the number of students at both postgraduate and undergraduate levels.

(Adeniran, 2013) found that Nigerian students don't use e-resources very much for research. He also said that the use of e-resources was far lower for preparing assignments, doing classwork, or staying up to date. On the other hand, research reveals that most students and researchers prefer e-journals for schoolwork since they are easy to use and include the most recent information. However, many still have problems with them.

Schools in many industrialized countries are actively incorporating digital platforms into their teaching. For instance, Khan Academy, TED-Ed, and Quizlet have been widely adopted in the United States and the United Kingdom, where blended learning and flipped classroom models are common (Means et al., 2013). In Finland and Singapore, digital literacy is considered a core competency, and students are taught to access and evaluate e-resources from an early age (OECD, 2020). These global practices demonstrate the transformative role of e-resources in fostering critical thinking, creativity, and self-directed learning.

In South Asia, adoption is more diverse. Research in the Indian higher education sector reveals that students often rely on digital and electronic resources for academic tasks and exam preparation; however, notable discrepancies in usage are observed among institutions, primarily attributable to variations in technological infrastructure and access facilities (Kumar & Kumar, 2019). (Adeniran, 2013), studying Nigerian schools, also noted minimal academic use of e-resources, attributing it to poor awareness and insufficient ICT support.

In Bangladesh, English Medium Schools (EMSLs) are comparatively more advanced in adopting e-resources, largely because of their affiliation with international curricula such as Cambridge and Edexcel. More kids are using services like Save My Exams and GeoGebra to study and practice arithmetic. Creative tools like Scratch and Canva also encourage students to learn how to code and design things digitally.

Even with these changes, there are still problems. Studies indicate that mere availability does not ensure the successful utilization of e-resources at the educational level. For example, Singh and Research on school-level digital learning in India indicates that despite the growing availability of e-books and online learning platforms in numerous schools, students' effective utilization of these resources is constrained due to the lack of systematic awareness initiatives and digital literacy education (Kaur & Manhas, 2019). (Yebowaah & Plockey, 2017) also highlighted that in Ghanaian institutions, regular orientation and mediated access by librarians significantly increased adoption rates of digital tools. These findings indicate that successful use of e-resources in schools depends not only on infrastructure but also on active mediation by teachers and librarians through training, guidance, and integration into curricula.

Overall, published literature reveals that while e-resource use at the school level is growing, it remains exam-driven, infrastructure-dependent, and teacher-mediated in Bangladesh. This contrasts with global contexts where e-resources are increasingly used to foster independent learning and 21st-century skills.

2.2.5 Role of EMSL in Promoting Access and Awareness

Libraries play a big role in managing, promoting, and making sure that e-resources are used well in schools. Their job has changed from being the conventional caretakers of print collections to becoming active helpers with digital access, training, and knowledge.

I. **Advocacy and Policy Development**

School and academic libraries support financial and regulatory frameworks that make it easier to buy e-resources in a way that is good for the environment. (IFLA, 2020) said that school libraries need to push for digital access rules to make sure that all students can learn in a fair and welcoming way.

II. **Training and Digital Literacy**

Librarians are very important for helping both students and teachers learn how to use technology and find information. International studies demonstrate that inadequate user training severely limits learners' capacity to utilize electronic resources effectively, highlighting the necessity for libraries to provide

continuous instructional programs, user guides, and tailored support to facilitate optimal e-resource utilization (Head & Eisenberg, 2010; Tenopir et al., 2012).

III. **Promotion and Awareness**

Another important job of the library is to promote the resources that are available. (Haridasan & Khan, 2009) also found that students' knowledge of e-resources went up a lot when libraries held frequent promotional events. This shows that being seen is a big reason why people use them.

IV. **Collaboration with Teachers**

Libraries work best when they work with teachers to include e-resources in lesson planning. (Means et al., 2013) showed that blended learning models in the United States worked well because libraries worked closely with teachers to make sure that digital resources fit with what students were learning.

V. **Monitoring and Evaluation**

Another crucial job of libraries is to keep an eye on and rate how people use e-resources. Tracking login data, download statistics, and comments helps libraries enhance collection development and save money, according to (Kwafoa, Anhwere & Manu, 2019).

VI. **Developing a Culture of Digital Learning**

In the end, libraries are very important for creating a culture of digital learning in schools. They lead the way in using technology, make sure everyone has equal access, and function as middlemen who urge both teachers and students to use digital tools in their everyday schoolwork. The (OECD, 2020) said that libraries that see themselves as centers of innovation are important for getting students ready to live in societies that are based on knowledge.

2.2.6 Barriers to the Use and Application of E-resources at English Medium Schools

There are several financial, technical, institutional, and human constraints that make it hard to use and apply electronic resources in EMSL. One of the biggest problems is still money, especially in developing and impoverished countries, where libraries often have

trouble finding enough money to pay for subscription-based e-resources and the technologies that go with them (Asamoah-Hassan, 2014). In addition to finance obstacles, the development and use of e-resources face problems with copyright and licensing, restrictive vendor agreements, and the long-term preservation and access to digital materials (Johnson, 2013). These problems are especially important for school libraries since they typically don't have staff who are experts in managing e-resources.

Barriers related to infrastructure make it even harder to use e-resources effectively. Many schools have trouble getting ICT infrastructure since it costs a lot to set up PCs, servers, licensed software, and a reliable internet connection (Echezona & Ugwuanyi, 2010). Students and teachers can't use e-resources as much as they should because of slow internet speeds, unpredictable power supply, and limited access to digital devices, especially during class time (Agyen-Gyasi, Lamptey & Frempong, 2010).

User-related difficulties also have a big impact on how e-resources are used. Several studies indicate that insufficient digital literacy abilities among students and instructors, coupled with a deficiency in structured training and awareness programs, frequently lead to the underutilization of accessible electronic resources (Head & Eisenberg, 2010; OECD, 2015). In school libraries, students may know how to use digital tools for fun or to talk to other people, but they may not know how to search for, evaluate, and use academic e-resources well.

Institutional and administrative variables greatly affect the utilization of electronic resources, as the absence of well-defined policies for e-resource selection, access control, and user training frequently obstructs their systematic incorporation into educational processes (Johnson, 2013).

The literature shows that there are several reasons why EMSL can't access and use e-resources. These reasons go beyond financial problems to include problems with infrastructure, talent gaps, legislative limitations, and a lack of professional help. To make sure that e-resources are used effectively in schools, we need to invest more money, plan, train users regularly, and have more librarian-led projects.

2.3 Inferences

The various approaches summarized in the literature related to English Medium School Libraries (EMSLs), both in Bangladesh and in comparable international contexts,

indicate that different authors have examined diverse variables concerning electronic resource availability, usage, digital literacy, and institutional support. However, these studies often remain fragmented and do not provide a comprehensive, school-level, institutionally grounded analysis of the usage and application of e-resources within EMSLs in Bangladesh. The proposed study derives its significance from the literature review, and the following inferences can be drawn:

i.The effective usage and application of e-resources in EMSLs are shaped by institutional factors such as ICT infrastructure, library policy, curriculum alignment, and administrative support, which influence user engagement and learning outcomes.

ii. Maximum research is done from users' perspective.

iii. There has been little research on e-resources of EMSL, but they are done on few criteria like importance of e-resources, users digital literacy, literacy class for students, training facilities etc.

iv. Most of the study that has been done so far has been on higher education institutions. This means that there is a big gap in knowledge about the problems, functions, and practicalities of EMSLs in Bangladesh, especially at the primary and secondary school levels.

v. The lack of e-resources use happened due to inadequate training opportunities, insufficient awareness campaigns, infrastructural limitations, and elevated subscription costs, rather than only to user reluctance.

Now we can summarize that despite of many studies on locally and internationally on e-resources, there have lacking on use of e-resources at EMSL in Bangladesh.

The primary focus of the studies is on identifying status of e-resource, users accessibility, user conduct, role of librarians to promote the use of e-resources and barriers as well as challenges of it inside the school libraries. Finaly this research will develop a model, that can be used by all EMSL of Bangladesh. The conclusions derived from the literature review help to develop research objectives, questions methodology, and structure of research, which are further analyzed and discussed in the next chapters.

2.4 Research Gap

While other studies have investigated the utilization of e-resources in academic libraries and, to a little degree, in secondary education, substantial research deficiencies persist that necessitate the current study. In Bangladesh, previous studies have primarily concentrated on public universities and higher education institutions, resulting in a significant gap in the understanding of the current state of e-resource infrastructure, access modes, and usage trends in EMSLs. Although several foreign studies recognize the increasing utilization of digital tools by school pupils, the institutional, curricular, and operational background of EMSLs in Bangladesh has not been methodically examined. Furthermore, while global frameworks underscore the significance of school libraries in enhancing access, awareness, and digital literacy, empirical evidence from Bangladesh is inadequate in elucidating how EMSLs effectively promote e-resource awareness, user training, and structured information utilization among students and educators. Furthermore, the current literature delineates overarching obstacles to e-resource adoption, including insufficient ICT infrastructure, exorbitant subscription fees, and inadequate user training. However, it lacks Bangladesh-specific, school-level analyses that scrutinize the distinct managerial, technological, and pedagogical challenges encountered by EMSLs, particularly the disparities between urban and semi-urban environments. These gaps underscore the necessity for a thorough, model-driven examination of the utilization and application of e-resources in the EMSL of Bangladesh, concentrating on contemporary practices, institutional responsibilities, and context-specific obstacles to develop a structured and sustainable framework for effective e-resource implementation.

2.5 Conclusion

The literature reviewed confirms that e-resources are essential to modern education, offering expanded access to information, timely and current content, and improved opportunities for both autonomous and collaborative learning (Tenopir et al., 2009; OECD, 2015). International studies show that schools and libraries that actively promote e-resources do better in digital literacy, participation, and critical thinking (IFLA, 2020; OECD, 2020). However, research from poorer nations shows that there

are still problems, such as poor infrastructure, lack of knowledge, expensive subscription costs, and a focus on exams (Yebowaah & Plockey, 2017).

In Bangladesh, EMSLs have made progress in integrating e-resources because they are connected to other countries, but there is still not enough academic research on their methods. Most current research is about universities, which means we don't know much about the status of EMSLs, the proactive role of school libraries, or the specific problems that come up when managing e-resources. To make sure that EMSLs can fully use e-resources and get students ready to join the global knowledge economy, it is important to fill in these gaps.

Chapter Three

Methodology

3.1 Introduction

The literature review revealed several significant research gaps that guided the formulation of the research objectives and corresponding research questions of the present study. A review of existing literature indicates that an adequate number of research have been conducted on the use and application of e-resources in university and higher education libraries, both globally and in Bangladesh (Tenopir et al., 2009; Rahman & Islam, 2017). These studies primarily focus on academic library environments, examining access patterns, user behavior, cost-effectiveness, and information literacy practices. However, such findings cannot be directly generalized to school libraries due to fundamental differences in user characteristics, curricular integration, supervision, and institutional priorities.

The review further highlights a substantial school-level research gap**,** particularly in the context of English Medium School Libraries (EMSLs) in Bangladesh. Although EMSLs increasingly rely on e-resources to support international curricula, systematic empirical studies examining their status, usage patterns, and management practices remain limited. This gap is critical, as the status of a school library cannot be defined solely by its physical book collection; rather, it is increasingly determined by the dynamic interaction between students, teachers, and the digital ecosystem provided by the school. In the context of EMSLs, library status is operationalized through users' competency in accessing digital resources, frequency of usage, and perceived utility of e-resource platforms.

In addition to the availability of digital materials, literature underscores the growing importance of school libraries in fostering access, awareness, and digital literacy (IFLA, 2020; OECD, 2020). The ability of students and teachers to locate, navigate, evaluate, and apply digital information is as critical to effective e-resource utilization as the mere presence of digital collections. EMSLs therefore function as key facilitators of digital learning by providing structured guidance, user training, awareness programs, and institutional support that can significantly enhance digital literacy and meaningful engagement with e-resources.

Despite this recognized role, existing studies particularly in Bangladesh provide insufficient empirical evidence on how EMSLs actively promote access, awareness, and digital literacy in practice. Moreover, literature identifies persistent challenges that hinder effective e-resource integration in school environments, including budget constraints, insufficient ICT infrastructure, lack of trained library personnel, and limited institutional support (Adeniran, 2013; Head & Eisenberg, 2010). Identifying and analyzing these obstacles at the school level is essential for developing workable strategies to improve digital resource management, strengthen library services, and ensure equitable access to high-quality educational resources.

In response to these gaps, the present study undertakes a comprehensive examination of the availability, usage, and management of e-resources in English Medium School Libraries of Bangladesh. By exploring prevailing practices, assessing their contribution to digital literacy development, and identifying key challenges and barriers, the study aims to generate empirical evidence that can inform policymakers, school administrators, librarians, and educators concerned with enhancing digital learning environments in English medium institutions.

To address these aims systematically, the study considers the following key variables:

I. Demographic profile of library professionals and users

II. Relationship between digital comfort and perceived utility of e-resources

III. User satisfaction with e-resources

IV. Barriers and challenges in using and managing e-resources

Methodologically, the study adopts a survey research design using a quantitative approach. Primary data were collected through structured questionnaires, incorporating closed-ended and limited open-ended questions, administered to library professionals and library users of selected English Medium Schools. In addition to primary data, secondary data were collected from a wide range of published and authoritative sources, including scholarly journal articles, books, conference proceedings, policy documents, institutional reports, and official publications of international organizations such as IFLA, OECD, and UNESCO, as well as documents from examination boards and relevant educational authorities. These secondary sources were primarily used to develop the conceptual framework, identify research gaps, refine variables, and contextualize the findings of the study.

The collected primary data was carefully coded and analyzed using the Statistical Package for the Social Sciences (SPSS), employing appropriate statistical techniques aligned with the research objectives and research questions. Through the integration of both primary and secondary data, the study seeks to develop a model plan for the effective usage and application of e-resources in English Medium School Libraries of Bangladesh.

3.2 Research Design

The present study adopts an exploratory–descriptive research design with a cross-sectional quantitative orientation. This design is selected to explore an under-researched area e-resource usage and application in English Medium School Libraries (EMSLs) of Bangladesh and to systematically describe existing practices, institutional roles, and barriers at a single point in time.

The exploratory component is justified because limited empirical evidence exists on EMSLs in Bangladesh, particularly regarding digital resource management, user behavior, and institutional support mechanisms. The descriptive component enables the study to document current conditions, patterns of use, and variations across schools in a structured and measurable manner.

3.3 The Research Site

The site of the research study will be English Medium Schools (EMSLs) with specific emphasis during the research comparing the use of e-resources and levels of digital literacy. EMSLs operate within an international curriculum framework using British curriculum (O'/A' Levels, IGCSE, etc.), using English as the primary language of instruction. EMSLs have developed advanced technology and interactivity within the classroom while focusing on critical thinking as opposed to rote memory. In comparison to Bangla-medium schools, EMSLs provide a higher level of digital infrastructure with digital libraries, e-learning systems, and advanced connectivity via the internet providing a solid platform for investigating two barriers to e-resources: operational and institutional readiness. EMSLs serve as instructional centers for the urban elite with global aspirations. The presence of abundant e-Resource usage in an environment with

low e-Resource usage presents an excellent opportunity to evaluate the "second level digital divide." The choice of research site provides a contemporary and relevant approach to the evaluation of the effectiveness of library services and support during this time of continuing transition towards digital library services across Bangladesh.

3.4 Population and Sample of the Study

The population of the present study comprises English Medium School Libraries (EMSLs) in Bangladesh, along with their library professionals and library users (students and teachers). According to available records from international examination boards such as Cambridge Assessment International Education (CAIE), Pearson Edexcel, and the International Baccalaureate (IB), Bangladesh currently hosts approximately 300–350 English Medium Schools, the majority of which maintain some form of library or learning resource center. These libraries collectively constitute the broader population of the study.

Given the absence of a centralized national database specifically documenting English Medium School Libraries and considering the wide variation among EMSLs in terms of size, infrastructure, and digital readiness, it was neither feasible nor necessary to include all EMSLs in the study. Therefore, a purposive sampling technique was adopted to select ten (10) English Medium Schools for in-depth investigation.

- ✓ The selected schools were purposively chosen based on the following criteria:
- ✓ Year of establishment, ensuring the inclusion of both relatively older and newer institutions
- ✓ Student intake and enrollment size, representing small, medium, and large EMSs
- ✓ Level of technological advancement, including availability of ICT facilities and digital learning platforms
- ✓ Library infrastructure and facilities, particularly the presence of e-resources and digital services

These criteria ensured that the selected schools reflect a diverse and representative cross-section of EMSLs in Bangladesh, encompassing variations in institutional

maturity, resource capacity, and digital integration. It is therefore assumed that insights derived from these ten EMSLs provide a reasonable representation of prevailing practices, challenges, and trends across English Medium School Libraries nationwide.

The findings obtained from the selected EMSLs are intended to serve as the empirical foundation for developing a model plan for effective usage and application of e-resources in EMSLs, which may be adapted or replicated by other English Medium Schools across Bangladesh.

Table 3.1 Data Summary Regarding Sample

School Name	Frequency of Users	%
Oxford International Dhaka	29	9.8
International School Dhaka	19	6.4
Glenrich International School	30	10.2
Sunnydale School	31	10.5
Australian International School	34	11.5
Maple Leaf School	32	10.8
Mastermind	27	9.2
South Point School and College	46	15.6
International Hope School	23	7.8
BIT	24	8.1
Total	295	100.0

Regarding sampling within the selected schools, all library professionals working in the libraries of the ten chosen EMSLs were included in the study using a census approach, as their number was limited and their perspectives were critical for assessing institutional policies, infrastructure, and management practices.

For library users, a random sampling technique was employed to ensure objectivity and minimize selection bias. A total of 295 library users (students and teachers) were randomly selected from the ten schools, with proportional representation from each institution. This approach allowed for reliable statistical analysis while capturing diverse user experiences and usage patterns related to e-resources.

3.5 Data Collection Instruments

Here, two Questionnaire Booklet have been used as Data Collection Instruments. **3.5.1 Questionnaire Booklet-1 (Library Professional)**

A questionnaire (Questionnaire Booklet-1) was prepared and personally administered to the librarian or the faculty member in charge of the library. This instrument was designed to collect factual administrative data regarding the existing status, infrastructure, and inputs of the library.

The questionnaire consists of 22 items (excluding timestamp) divided into five distinct sections to obtain a holistic view of the library's capacity. A summary of the variables is given in the table below:

Table no. 3.2 Survey Questionnaire (Professional) Employed in the Study

Section	Measures/Variable Group	Items	Description of Variables
1	Institutional Profile	5	Nominal
2	E-Library Strength	4	Nominal, Ordinal
3	Current Status	11	Multiple responses and 7-point Likert scale
4	Promoting Access, Awareness	9	Nominal and 7-point Likert scale
5	Challenges & Barriers	12	7-point Likert scale
Total	-	42	-

The details of the segments are described below:

i. Institutional Profile

In order to contextualizethe library's performance, it is necessary to understand the scale of the institution itserves. This segment consists of 6 items designed to gather demographic data.

- **Variables:** The questionnaire collects data on the Name of the Institution, Type of Institution (School/College), and Year of Establishment to determine the age and legacy of the organization.

ii. E-Library Strength

To determine engagement levels, users reported the Length of Library Usage, Frequency of Visiting (e.g., Daily, Weekly), and Hours Spent in the library. These are measured on an Ordinal Scale to identify heavy vs. light users.

iii. Current Status

This is the core segment for evaluating the "E-Library" status. This segment investigates specific interaction patterns with e-resources. This segment gives information's on the type os e-resources the school subscribe, how many e-resources are there, how was the funding, how they rate the e-resources usages on Likert scales:

7= Extremely Comfortable
6= Very Comfortable
5= Comfortable
4= Neutral
3= Somewhat Comfortable
2= Slightly Comfortable
1= Not Comfortable at All

iv. Promoting Access, Awareness

This segment suggests the possible roles the library can play to increase the use of e resources through Likert scale including advocate for budget allocation toward e-resources, train students and teachers on how to use e-resources, regularly promote available e-resources through notices , collaborate with teachers to integrate e-resources into lesson plans, maintain up-to-date e-resource collections and tools, monitor and report usage statistics to improve services, offer incentives or recognition for e-resource users, develop a school-wide e-resource usage policy.

v. Challenges and Barrier

- **Challenges:** Users rated how often they face specific challenges such as Problems faced while accessing e-resource, issues of language, accessibility, or platform navigation, lack of time/training to use e-resources effectively, difficulty balancing print and digital resources, internet speed/technical interruptions during use, lack of support from teachers/librarian. These are rated on Likert scale as:

1= Not at all
2= Rarely
3= Occasionally
4= Sometimes
5= Often
6= Very often
7= Always

- **Barriers**: Users rated lack of awareness about available e-resources, limited digital literacy skills, resistance to using e-resources (preference for print), insufficient guidance/training from teachers or librarians, financial cost of e-resources limiting availability, unclear policies about access/use. These are rated on Likert scale as:

  1= Not at all
  2= Rarely
  3= Occasionally
  4= Sometimes
  5= Often
  6= Very often
  7= Always

3.5.2 Questionnaire Booklet-2 (E-Library Users)

A second questionnaire (Questionnaire Booklet-2) was prepared and administered to the library users (Students and Teachers) to assess their usage patterns, digital competency, and satisfaction levels. Unlike the administrative nature of Booklet-1, this instrument focuses on behavioral and perceptual variables.

The questionnaire consists of 47 items divided into four distinct segments. A summary of the variables and their measurement scales is given in the table below:

Table no. 3.3 Survey Questionnaire (User) Employed in the Study

Section	Measures/Variable Group	Items	Description of Variables	Scales
1	**Background**	8	Designation, Gender, Proficiency, Library Visit Frequency, Internet Usage.	Nominal & Ordinal
2	**Usage & Comfort Status**	17	Resource Types Used, Frequency of Use, Comfort with Platforms, Usefulness.	Nominal & 7-Point Likert
3	**Role & Awareness**	10	Training Received, Awareness Programs, Library's Role in Digital Literacy.	Nominal & 7-Point Likert
4	**Challenges & Barriers**	12	Technical Issues, Lack of Support, Financial Barriers, Digital Literacy Gaps.	7-Point Likert
Total	-	47	-	-

The details of the segments are described below:

i. Background Variables

To understand the demographic profile and existing habits of the respondents, this segment collects personal and behavioral data.

- **Demographics:** Variables such as Class/Position (Student/Teacher) and Gender are measured on a Nominal Scale.
- **Digital Proficiency:** Respondents self-assessed their Computer Proficiency (Novice, Mediocre, Expert) and reported their daily Internet Usage duration. These are Ordinal variables used to gauge the user's technical readiness.
- **Library Habits:** To determine engagement levels, users reported the Length of Library Usage, Frequency of Visiting (e.g., Daily, Weekly), and Hours Spent in the library. These are measured on an Ordinal Scale to identify heavy vs. light users.

ii. Current Status of Usage and Comfort Level

- **Resource Utilization:** Usersidentified Types of E-Resources Used (e.g., E-Books, Databases) via a Multiple Choice (Nominal) checklist.

- **Comfort Level:** A matrix question assessed how comfortable users are with various tools (E-Textbooks, LMS Platforms, Coding Tools, etc.). This was measured on a 7-Point Likert Scale:

  7= Extremely Comfortable
  6= Very Comfortable
  5 = Comfortable
  4 = Neutral
  3 = Somewhat Comfortable
  2 = Slightly Comfortable
  1 = Not Comfortable at All

- **Platform Utility:** Users rated the usefulness of specific educational platforms (e.g., Khan Academy, Google Classroom) on a Likert Scale as:

  7= Extremely useful
  6= Very useful
  5 = Useful
  4 = Neutral
  3 = Somewhat useful
  2 = Slightly useful
  1 = Not useful

iii. Role of School Libraries (Access & Awareness)

This segment measures the institutional support system and user expectations.

- **Training & Awareness:** Two Nominal questions asked if users had Received Training or if the library had Organized Awareness Programs.
- **Perceived Role:** Users rated their agreement with statements regarding what the library should do (e.g., "Organize workshops," "Integrate e-resources into projects"). This was measured on a 7-Point Likert Scale ranging from Strongly Agree to Strongly Disagree, identifying the gap between expectation and reality as:

  7= Strongly Agree
  6= Agree
  5 = Slightly Agree

4= Neutral
3= Slightly Disagree
2= Disagree
1= Strongly Disagree

iv. Challenges and Barriers

The final segment identifies the specific obstacles hindering effective usage.

- **Challenges:** Users rated how often they face specific challenges such as Problems faced while accessing e-resource, issues of language, accessibility, or platform navigation, lack of time/training to use e-resources effectively, difficulty balancing print and digital resources, internet speed/technical interruptions during use, lack of support from teachers/librarian. These are rated on Likert scale as:

  1= Not at all
  2= Rarely
  3= Occasionally
  4= Sometimes
  5= Often
  6= Very often
  7= Always

- **Barriers**: Users rated lack of awareness about available e-resources, limited digital literacy skills, resistance to using e-resources (preference for print), insufficient guidance/training from teachers or librarians, financial cost of e-resources limiting availability, unclear policies about access/use. These are rated on Likert scale as:

  1= Not at all
  2= Rarely
  3= Occasionally
  4= Sometimes
  5= Often
  6= Very often
  7= Always

3.6 Data Collection Procedure

Data for the present study was collected using two structured questionnaire instruments designed for different respondent groups. *Questionnaire Booklet-1* was administered to library users (students and teachers) of the selected English Medium Schools. A total of 400 copies of this questionnaire were distributed across the ten purposively selected schools to ensure adequate coverage and representation. Of these, 295 completed questionnaires were returned and found usable for analysis, yielding a satisfactory response rate. *Questionnaire Booklet-2* was designed for library professionals and was administered to the librarian or faculty member in charge of the library in each of the ten selected schools. Accordingly, ten copies of Questionnaire Booklet-2 one for each school were distributed and all were duly completed and returned. Prior to distribution, respondents were informed of the academic purpose of the study and assured of confidentiality.

3.6.1 Primary Sources

Primary data were collected through two sets of structured questionnaires. Questionnaire booklets were prepared "Questionnaire Booklet-1" and "Questionnaire Booklet-2" was used for library professional and for assessing user satisfaction respectively as primary source.

3.6.2 Secondary Source

For secondary data, initially, different types of relevant publications, i.e. journal articles, research papers, conference proceedings, theses, websites and relevant text and reference books, were consulted to gather data and evidence regarding the usage and application of e-resources. This secondary data was used to develop a model.

3.7 The Statistical Method

The following statistical techniques were employed:

(i) Factor Analysis with Varimax Rotation

(ii) Inter-Correlation among the Inferred Variables and

(iii) Analysis of Variance (ANOVA)

3.7.1 Factor Analysis with Varimax Rotation

Principal component analysis (PCA) and factor analysis are two different methods of data reduction. Variance is the factor which causes an entity to be considered included in a component in PCA, while co-variance is the most important variable in factor analysis. As a result, an entity must be partially included in several variables rather than fully included in one. When a comparatively high number of measurements need to be reduced to a smaller number of fundamental underlying variables, factor analysis is commonly employed. It is employed to find underlying order or organization among variables. The context of the variables with which they have a significant correlation led to the identification of these new composite variables or factors. We refer to these correlations as factor loadings. Factor loadings are rotated using a variety of criteria, the most popular of which is a

varimax rotation, to show the different dimensions generated by factor analysis. The rotation process groups variables that have a strong correlation with certain aspects and takes them into consideration together. This makes it possible to describe factors in terms of the variables that they have a strong correlation with.

Although factor analysis was first created in the discipline of psychology, a few research in the fields of information science and libraries have also employed this approach. Factor analysis was used by McGrath et al. (1969) in a method for allocating academic departments and library collections. Multiple correlation and factor analysis were utilized to analyze data on 22 variables that were used to create an allocation method. Three categories or factors were extracted from the data. Factor analysis was suggested by Phillips and Lyons (1990) as a pertinent method to determine the relationships between 19 of the questions they posed to faculty members on library policy. In order to identify leadership behavior patterns and their efficacy in the administration of Indian university libraries, Saraf (1995) used factor analysis. In order to find the primary variables for information requirements, information channels, information sources, and information obstacles, factor analysis has also been utilized in research studies (Rahman, 1999; Bharali, 2000).

3.7.2 Inter-Correlation among the Inferred Variables

Correlations quantify the relationship between variables or rank orders. This statistical tool aids in the analysis of two or more variables' co-variation. The correlation analysis measures the degree of proximity and link between the variables in question. Items loaded in one factor amongst factors of the same group or between factors of different groups are used to examine this connection.

3.7.3 Analysis of Variance (ANOVA)

Ronald Aylmer Fisher introduced the statistical technique of ANOVA to analyze the agronomical data. ANOVA is a statistical method named after the concept of making inference about the mean by analyzing the variance. It is a statistical tool used to test the difference between two or more groups. A one-way Anova deals with one dependent variable which must be quantitative and the independent factors are considered against the dependent variable. It helps to identify the true source of variable in the dependent variable caused by independent categorical variables.

3.8 Conclusion

In summary, the method used to collect data in this study was methodical, organized, and in line with the research goals. The study utilized two distinct questionnaire instruments for library users and library professionals, guaranteeing the acquisition of both user-level and institutional-level data. The acceptable response rate from library customers and the full participation of all chosen library professionals created a trustworthy and representative dataset for analysis. This thorough data collection process made the study more credible and valid, and it laid the groundwork for future statistical analysis, interpretation of results, and the creation of a model plan for how to best use and apply e-resources in Bangladesh's English Medium School Libraries.

Chapter Four

Current Status of English Medium School Libraries (EMSLs) of Bangladesh

4.1 Introduction

Understanding the status of English Medium School Libraries (EMSLs) is essential for evaluating how effectively these libraries support digital learning and e-resource utilization within the context of international school education in Bangladesh. Unlike traditional measures that assess libraries primarily through the size of their print collections, contemporary school libraries particularly those serving English Medium Schools (EMS) must be evaluated through their digital readiness, user engagement, and functional integration of e-resources into teaching and learning processes. As EMSs increasingly rely on international curricula that emphasize independent learning, online assessments, and digital content, EMSLs are expected to function as technologically enabled academic support centers rather than passive repositories of materials.

This chapter examines the status of EMSLs in Bangladesh by focusing on how students interact with available e-resources and how they perceive the usefulness of digital platforms provided through school libraries. In line with the conceptual framework of the study, library status is operationalized through two interrelated dimensions: Digital Comfort and Perceived Utility.

Digital comfort reflects students' confidence and ease in navigating different types of e-resource platforms, while perceived utility captures their assessment of the academic value and effectiveness of those platforms in supporting learning outcomes. Together, these dimensions provide a comprehensive picture of how well EMSLs are positioned to facilitate meaningful digital engagement.

The chapter draws on survey data collected from 295 respondents across ten purposively selected EMSs. By analyzing the sociodemographic characteristics and digital usage behaviors of these respondents, the chapter establishes a contextual baseline for understanding patterns of e-resource access and use. This baseline is crucial, as students' gender, computer proficiency, internet usage habits, and library

visitation patterns directly influence how digital resources are discovered, accessed, and applied for academic purposes.

Methodologically, this chapter adopts a multi-stage analytical approach to assess the status of EMSLs.

First, a descriptive analysis is conducted to profile respondents and identify general trends in e-resource usage, availability, and search behavior.

Second, reliability analysis is applied to validate the internal consistency of the measurement scales used for digital comfort and perceived utility.

Third, factor analysis is employed to uncover the underlying dimensions that structure students' interaction with e-resources, enabling the identification of dominant factors that define e-library status.

Finally, a comparative assessment using one-way ANOVA examines variations in library status across the ten selected schools, highlighting institutional differences in digital infrastructure, integration, and user readiness.

By combining descriptive, psychometric, and inferential analyses, this chapter moves beyond surface-level observations to provide an evidence-based assessment of EMSLs' current digital condition. The findings presented here serve as a critical foundation for subsequent chapters that examine the role of EMSLs in promoting access, awareness, and digital literacy and the challenges and barriers affecting effective e-resource utilization. Ultimately, this chapter contributes to understanding not only where EMSLs currently stand but also where strategic interventions are required to enhance their effectiveness within Bangladesh's English medium education sector.

To provide context for the study, the sociodemographic characteristics and digital behavioral profiles of the 295 respondents were analyzed. This chapter explores the status of EMSLs by analyzing two core dimensions:

1. **Digital Comfort:** The students' self-efficacy in navigating library tools.
2. **Perceived Utility:** The value students assign to specific learning platforms.

This chapter assesses the current status of EMSLs through four analytical stages:

- **Descriptive Profiling:** An examination of demographic characteristics and usage behaviors.

- **Psychometric Validation:** Reliability testing of the measurement instruments.
- **Factor Structure:** Identifying the underlying dimensions of digital usage.
- **Comparative Assessment:** Analyzing the variance in library status across different schools.

4.1.1 Digital Comfort

Digital comfort is the degree to which students express that they are confident, relaxed, and familiar with the use of various e-resource platforms in education. It is a significant psychological source that leads to the successful use of technology. In this research, it is shown through different variables such as comfort level using eBooks, databases, multimedia, exam preparation and coding tools which measure in a structured way the perceived skill levels of students in using the most basic to the most complex academic tools. Digital comfort captures the idea that different teachers' trainings, technical support, and friendly interfaces can raise the students' comfort levels, which in turn will increase their engagement with digital learning resources. These resources could be mainstream curriculum-integrated platforms or a few niches supplementary tools.

Being highly comfortable with digital tools helps students to be more actively involved in a blended learning environment as they are less likely to develop anxiety related to the use of technology and are more willing to explore resources on their own. On the contrary, those with low levels of comfort may find themselves continuously depending on teachers for the provision of links or on librarians for getting access. Therefore, in English-medium school libraries, digital comfort is the factor that connects the students' perception of the library's usefulness and their actual usage patterns, thus pointing to the training as the means to raise students' confidence in different e-resource ecosystems.

4.1.2 Perceived Utility

Perceived utility is the users' account of the usefulness of certain e-resources which will, according to them, improve their academic performance, efficiency, and learning outcomes. It is the main factor that determines the adoption of technology and continuous engagement in the educational sector. Perceived utility in a library with an

English-medium school captures students' assessments of the practical value of e-resources which may include saving time, ease of use, and information richness. These aspects have a direct impact on the students' preference for curriculum-aligned platforms rather than extra tools.

The potential for better use of e-resources through a high level of perceived use, which connects subjective advantages of e-resources, such as improvements in grades or the opportunity to learn more about a specific field, to actual usage behaviors. The limited use of e-resources due to low perceived use may be caused by barriers to access or improper training. Students that view an e-resource platform as "more useful and informative" tend to have a higher rate of adoption compared to those that view an e-resource platform as "merely convenient." The concept of perceived use will provide insight into how subjective expectations of performance influence digital learning environments in future research of e-resource integration and will also provide an avenue for the development of strategies to improve awareness and effective use of library technology.

4.2 Descriptive Analysis of Variables

4.2.1 Demographic Profile and Usage Characteristics

Table 4.1 presents the sociodemographic characteristics and digital behavioral profiles of the 295 respondents. The analysis of these variables provides the necessary context for understanding the broader trends in e-resource utilization.

To understand the context of this study, we analyzed the profiles of 295 respondents. The group is predominantly female (62.4%) compared to 37.6% male. In terms of technological aptitude, the population displays functional rather than advanced literacy. The majority (52.5%) classify their computer proficiency as "Mediocre," while only 26.8% consider themselves "Experts". This lack of advanced expertise may act as a barrier to utilizing complex academic databases.

A significant disparity was observed between general internet consumption and specific e-resource utilization.

Table 4.1 Frequency distribution of demographic and usage characteristics of EMSLs

Variables	Category	Frequency	Percentage
Gender	Male	111	37.6
	Female	184	62.4
Computer Proficiency	Novice	61	20.7
	Mediocre	155	52.5
	Expert	79	26.8
E-resources Usage	2/3 times a week	83	28.1
	Daily	22	7.5
	Monthly	71	24.1
	Never	11	3.7
	Rarely	31	10.5
	Weekly	77	26.1
Internet Usage (Daily)	1-3 hours	50	16.9
	4-7 hours	155	52.5
	8-11 hours	76	25.8
	More than 12 hours	14	4.7
Library Usage	2/3 times a month	66	22.4
	2/3 times a week	107	36.3
	Daily	28	9.5
	Never	5	1.7
	Whenever I need any resources	89	30.2
E-resources Availability	No	21	7.1
	poor	16	5.4
	limited	26	8.8
	moderately developed	93	31.5
	well developed	139	47.1
Total		**295**	**100**

The respondents are highly connected, with a combined 83% spending more than 4 hours daily on the internet (52.5% spending 4–7 hours and 25.8% spending 8–11 hours). Despite this high connectivity, only 7.5% of students access the library's e-resources on

a daily basis. The dominant usage pattern is periodic rather than continuous, with the largest clusters accessing resources "2/3 times a week" 28.1% or "Weekly" 26.1%. This contrast indicates that while students are immersed in the digital environment, their academic engagement with e-resources accounts for only a fraction of their daily screen time. Physical library usage, the highest frequency was observed for students visiting "2/3 times a week" (36.3%) or "Whenever they need resources" (30.2%). Only 9.5% constitute daily users. Despite the moderate usage frequency, student satisfaction with the availability of e-resources is high. Nearly half of the respondents (47.1%) rated the availability as "Well Developed," and a further 31.5% rated it as "Moderately Developed." Only a minority (12.5%) perceived the availability as "Poor" or "No" resources available. This positive perception suggests that the issue lies not in the provision of resources, but likely in the promotion or integration of these resources into daily learning habits.

4.2.2 Descriptive Statistics for E-resource Type and Search Status

Table 4.2 details the frequency distribution of specific e-resource types accessed by students and the search strategies employed to retrieve them. The data reveals a distinct preference for foundational academic materials and a reliance on institutional discovery tools.

The usage data indicates a relatively balanced ecosystem of digital resource consumption, though heavily anchored by textual materials. E-books and E-textbooks emerged as the dominant category, accounting for the plurality of responses (22.3%, n=225). This suggests that the primary utility of the e-library remains the provision of core curricular content. Following this, a secondary tier of resources shows nearly equal distribution: Learning Management Systems (LMS) 15.9%, Multimedia/Video Platforms 15.8%, Academic Databases 15.5%. This tripartite distribution highlights a blended learning approach where students integrate administrative tools (LMS), visual learning (Multimedia), and scholarly research (Databases) in equal measure. Conversely, specialized tools such as Exam Prep (4.3%) and Subject-Specific Tools (5.8%) remain peripheral, suggesting these are utilized only for niche requirements rather than daily academic workflows.

Table 4.2 Frequency Distribution of E-resources Usage and search tools

Statement	Responses	Percentage
Types of e-resources used in school library		
E-books / E-textbooks	225	22.3%
Academic databases	156	15.5%
Multimedia/video platforms	159	15.8%
Learning Management System	160	15.9%
Subject-specific tools	59	5.8%
Citation/reference tools	111	11.0%
Exam prep tools	43	4.3%
Creative/coding tools	96	9.5%
Search tools used to search e-resources		
Library search engine or OPAC	224	23.8%
Google Scholar	186	19.8%
Direct access through platforms	103	10.9%
Teacher-provided links or folders	173	18.4%
School's LMS	52	5.5%
Ask the librarian/teacher	173	18.4%
Never used	17	1.8%
Other	13	1.4%

Information Retrieval and Search Strategies, the findings contradict the common narrative that students rely exclusively on external search engines. The Library Search Engine / OPAC was the most frequently cited method of access, accounting for 23.8% (n=224) of the total search behaviors. This indicates a high degree of "system stickiness" students are successfully using the library's native interfaces to locate materials. When combining Teacher-provided links (18.4%) and ask the librarian/teacher (18.4%), human guidance accounts for nearly 37% of all successful retrieval events. This implies that information seeking is often a socially mediated process rather than a solitary technical one. Google Scholar remains a strong

independent retrieval tool (19.8%), reinforcing the "hybrid" nature of modern student research behavior: students oscillate between the structured, trusted environment of the school OPAC and the expansive, algorithmic environment of Google Scholar.

4.3 Reliability Analysis

Reliability analysis measures the internal consistency of a scale, determining the extent to which a set of items (questions) measures a single, coherent latent construct. In the context of this study, it ensures that the multiple questions regarding "Comfort" and "Usefulness" were understood consistently by respondents and are statistically related. A Cronbach's Alpha coefficient of 0.70 or higher is generally accepted as the threshold for reliability in social science research. To establish the psychometric validity of the survey instruments, a reliability analysis using Cronbach's Alpha was conducted for the ordinal Likert scales representing Digital Comfort and Perceived Usefulness.

Table 4.3 Reliability of the scales

Variables	Mean	Variance	No of Items	IIC Score (Cronbach's Alpha)
Digital Comfort	4.616	0.133	6	0.911
Platform's Usefulness	4.813	0.177	7	0.882

The scale yielded an alpha coefficient of 0.911, this indicates that the 6 items measuring student comfort in using digital platform are highly correlated and reliably measure the students' technological confidence. The low variance (0.133) further suggests a high degree of consensus among respondents regarding their comfort levels. Similarly, the 7-item scale for platform's usefulness achieved an alpha of 0.882, indicating High reliability. This confirms that the survey accurately captures the students' valuation of the various e-resources.

4.4 E-Library Status: Factor Analysis

A total of 13 items related to digital comfort and platform utility were submitted to Factor Analysis using Principal Component Analysis (PCA) with Varimax rotation. The analysis was constrained to factors having an Eigenvalue greater than 1.0.

Table 4.4 Result of Factor Analysis for Usage and Comfort

Item / Variable Description	Factor 1	Factor 2	Factor 3
Comfort level in using each of the following e-resource types			
Comfort: E-books	0.586	0.675	0.028
Comfort: Academic Databases	0.596	0.681	0.126
Comfort: Multimedia Platforms	0.664	0.518	0.154
Comfort: LMS Platforms	0.802	0.227	0.292
Comfort: Exam Prep Tools	0.845	0.108	0.226
Comfort: Coding Tools	0.804	0.082	0.246
Platform(s) find most useful for learning			
Platform: Khan Academy	0.323	0.644	0.311
Platform: Save My Exams	0.313	0.402	0.607
Platform: Quizlet	0.283	0.167	0.789
Platform: Britannica School	0.282	0.159	0.843
Platform: Google Classroom	0.112	0.791	0.35
Platform: Scratch	0.082	0.41	0.712
Platform: Cambridge Online	0	0.71	0.418
Eigen Values	6.922	1.525	1.101
% of Variance	53.248	11.734	8.468

Note: Factor 1 = Technical Self-Efficacy, Factor 2 = Academic Engagement, Factor 3 = Specialized Tool Utility

As shown in Table 4.4, the analysis extracted three distinct factors accounting for 73.45% of the total variance. This high percentage indicates that these three dimensions robustly explain the status of e-libraries in Bangladesh.

4.4.1 Factor 1: Technical Self-Efficacy

Four items load on this factor (Comfort: Exam Prep Tools, Comfort: Coding Tools, Comfort: LMS Platforms, and Comfort: Multimedia Platforms). The loadings range from 0.664 to 0.845. The Eigenvalue of this factor is 6.92 with 53.25% of variance. This is the strongest factor and represents the students' confidence in navigating the technical infrastructure of the school.

This is the dominant factor. It groups advanced tools (Coding) with structural platforms (LMS), suggesting students view these as a unified "digital competency" domain. High scores here imply that a student's confidence in navigating the technical mechanism is the primary driver of library usage, regardless of the specific content. The items loadings on this factor are:

I. Comfort: Exam Prep Tools (0.845)
II. Comfort: Coding Tools (0.804)
III. Comfort: LMS Platforms (0.802)
IV. Comfort: Multimedia Platforms (0.664)

4.4.2 Factor 2: Academic Engagement

A total of 5 items loaded on this factor. The loadings range from 0.644 to 0.791. The Eigenvalue of this factor is 1.52 with 11.73% variance. This factor combines comfort with textual resources and the utility of core study platforms, reflecting the "Scholar" dimension.

The convergence of platforms (Google Classroom, Cambridge Online) with content resources (E-books, Databases) indicates that students do not cognitively separate the medium from the message in their core studies. These items represent the mandatory academic workflow; usage here is driven by curriculum requirements. A student who engages with Google Classroom is statistically likely to also engage with E-books, forming a coherent "Academic Engagement" profile.
The items loadings on this factor are:

I. Platform: Google Classroom (0.791)
II. Platform: Cambridge Online (0.710)
III. Comfort: Academic Databases (0.681)
IV. Comfort: E-books (0.675)

V. Platform: Khan Academy (0.644)

4.4.3 Factor 3: Specialized Tool Utility

Four items loaded on this factor with loadings ranging from 0.607 to 0.843. The Eigenvalue is 1.10 with 8.47% variance. This factor represents the use of supplementary tools.

The grouping of Britannica, Quizlet, and Scratch highlights a "non-core" or "project-based" dimension. Unlike Factor 2, which is driven by daily curriculum, these tools are often gamified (Quizlet), creative (Scratch), or episodic (Britannica). This suggests they are utilized for specific assignments or self-directed learning rather than structural academic work. A student may find these useful without necessarily being deeply engaged in the core LMS or database systems.

The items loadings on this factor are:

I. Platform: Britannica School (0.843)
II. Platform: Quizlet (0.789)
III. Platform: Scratch (0.712)
IV. Platform: Save My Exams (0.607)

4.5 E-Library Status versus Schools

It is assumed that the status of the library (Digital Climate) varies significantly from school to school based on infrastructure and administrative support. To test this, the 10 English Medium Schools (labeled School 1 to School 10) were compared using One- Way ANOVA across the three identified factors.

The ANOVA results reveal highly significant differences ($p < .001$) among the 10 schools across all three factors.

- Technical Factor ($F=9.308$): School 8 ranks first ($M=5.19$), indicating superior ICT infrastructure and student training. School 10 ranks last ($M=3.57$).
- Academic Factor ($F=21.223$): School 6 achieves an exceptionally high score ($M=6.48$), suggesting a heavily integrated curriculum with e-resources like Google Classroom and Cambridge Online. School 10 again ranks lowest ($M=4.03$).

- Specialized Factor (F=4.013): School 9 tops this category (M=4.97), indicating a creative learning environment where tools like Scratch and Quizlet are encouraged.

Table 4.5 Ranking on the Basis of E-library Status vs Schools

Factor & Rank	English Medium School										Total	F Ratio
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**		
n	29	19	30 5	31	34	32	27	46	23	24	295	
Technical	3.85	3.76	2	4.45	4.25	4.95	3.96	5.19	4.54	3.57	4.44	9.308***
Rank	8	9	5.05	5	6	3	7	1	4 5 5	10	-	-
Academic	4.24	4.08	4	4.93	5.43	6.48	4.64	5.93	4.97	4.03	5.11	21.223***
Rank	8	9	4.63	6	3	1	7	2	1	10	-	-
Specialized	4.22	4.13	5	4.63	4.94	4.39	4.12	4.81		3.99	4.52	4.013***
Rank	7	8		4	2	6	9	3		10	-	-

Note: ***p < 0.001. Rank 1 indicates the most favorable status

School 1: Oxford International School

School 2: International School Dhaka

School 3: Glenrich International School

School 4: Sunnydale School

School 5: Australian International School

School 6: Maple Leaf School

School 7: Mastermind

School 8: South Point School and College

School 9: International Hope School

School 10: BIT

4.6 Conclusion

The factor analysis of 13 e-library variables brought three distinct dimensions to light: Technical Self-Efficacy, Academic Engagement, and Specialized Tool Utility. Of these, Technical Self-Efficacy emerged as the dominant factor, suggesting that a student's confidence in navigating technology is the strongest predictor of a healthy library status.

The descriptive analysis uncovered a phenomenon best described as a "Paradox of Access". Although the student population is hyper-connected, 83% spending over four hours a day online only a mere 7.5% utilize library e-resources on a daily basis. This discrepancy highlights that high digital literacy in general contexts, such as social media or browsing, does not automatically translate into academic digital literacy. Consequently, the current library status is defined by underutilization; the infrastructure exists, with 47.1% of students rating availability as "Well Developed," yet it is not being effectively leveraged for daily learning. This reinforces the view that physical access to technology is a necessary, but insufficient, condition for effective e-library usage. The data points to a critical utilization gap: while students are "digital natives," they remain "library novices," accessing resources sporadically rather than continuously. This
indicates that while EMSLs have succeeded in acquisition (buying resources), they are struggling with integration (embedding them into student life). Finally, the ANOVA results clearly categorize the schools into two distinct tiers. The "Top Tier" schools (Schools 6, 8, and 9) exhibit a Favorable status where high technical comfort drives high academic usage. Conversely, the "Bottom Tier" schools (Schools 1, 2, and 10) display an Unfavorable status characterized by technical anxiety and low engagement. Therefore, it can be concluded that the current status of English Medium School Libraries in Bangladesh is heterogeneous. Improving this status requires a strategic shift: moving beyond simply providing access to focusing on building the Technical Self-Efficacy of the student body.

Chapter Five

The Role of EMSLs in Promoting Access, Awareness and Digital Literacy related to E-Resources

5.1 Introduction

E-resource usage in school library is the core concept of digitalization among the future generation as the learning process through school life uplift the electronic usage knowledge of the students. Moreover, the digital learning space can be considered as more useful platform by promoting access and awareness about the role properly. In this context, digital literacy plays a vital role in using e-resources more effectively in the learning sectors. English Medium School Libraries (EMSLs) in Bangladesh are important here because they use international programs that need regular work with digital platforms, online tests, and e-learning setups.

The digital landscape of academic learning provides a concept that the simple provision of e-resources is no longer sufficient to guarantee their use. This brings the concept of "Second-Level Digital Divide", where some people can't get the most out of online tools, not because they don't have the right equipment, but because they don't know how to cut through the complexities of digital systems.

Well-known in the literature, this chapter aims to see if EMSL is doing its part to bridge this divide. From the295 respondents of the survey, we investigated three areas of significance:

- **The Baseline of Competency:** What level of training are students currently getting, formal or informal?
- **The Perception of Support:** How students perceive the library's support and awareness campaigns
- **The Determinants of Demand:** How much further library services are needed by students who have had prior training.

5.2 Descriptive Analysis

5.2.1 Descriptive Profile of Digital Literacy and Awareness

The following provides the categorized frequency distribution of the training receiving status and awareness program status of the users of e-resources in the English medium school

Table 5.1 Status on Training Receiving and Arranging Awareness Programs

Variables	Category	Frequency			Percentage	
Training Receiving Status	no	71	84	140	24.1	28.5
	informal	23	106	113	47.5	7.8
	formal	53			35.9	38.3
Arranging Awareness Program	never				18.0	
	occasionally					
	regularly					
	don't know					

Status of Training and Guidance: Almost half the respondents (47.5%) received training and guidance in a formal manner in the library, whereas a substantial section (28.5%) received training and guidance in an informal manner, including peer learning, self-learning, etc. On the other hand, a quarter of the population (24.1%) is using the library without training and guidance.

The numbers show that over 52% of the students with informal and no training are not captured in the library's educational network. The high figure for "Informal Guidance" shows that, whereas the students are driven to learn, there could be a problem of capacity or a time constraint in the current learning framework that has driven them to explore the next best learning process, which could not be as organized as the previous or present learning processes.

Visibility of Awareness Programs: Considering the question about how often library-organized awareness activities are conducted, the answers reflect an existing communication gap in that. Most students knew these activities took place, with 38.3% saying they happened often and 35.9% saying they happened sometimes. Still, a sizable group wasn't really in the loop: 18.0% didn't know if the activities happened, and 7.8% said they never did.

Almost a one-fifth of students do not know if the programs exist, which suggests a marketing problem. It is quite clear that the 38% who see the programs Regularly are

aware of what's available, which suggested that the 18% who answered Don't Know aren't getting the message.

5.2.2 Descriptive Analysis of Student Requirements

When the students were asked to evaluate possible library requirements, with a scale that ranged from Strongly Disagree to Strongly Agree, they showed a clear statistic of needs related to their learning preferences.

Table 5.2 Percentage Distribution of Awareness Program Requirements among Users

Awareness Programs requirement							
Statement	**Strongly Disagree**	**Disagree**	**Slightly Disagree**	**Neutral**	**Slightly Agree**	**Agree**	**Strongly Agree**
Organize regular training/workshops on e-resources	1.70%	2.70%	0.70%	7.50%	7.10%	39.30%	41.00%
Promote awareness of available e-resources	1.70%	2.70%	0.70%	6.80%	9.50%	39.70%	39.00%
Provide user guides and manuals	2.00%	2.40%	1.00%	11.50%	17.60%	32.90%	32.50%
Ensure dedicated access to computers/devices	1.40%	3.70%	0.70%	13.20%	18.60%	31.90%	30.50%
Include e-resource sessions in class schedules	1.70%	2.70%	0.30%	13.90%	20.00%	30.50%	30.80%
Offer one-on-one assistance from library staff	1.40%	2.70%	1.70%	18.60%	22.00%	25.80%	27.80%
Integrate e-resources into student projects and homework	2.40%	2.00%	1.70%	12.50%	13.90%	33.90%	33.60%
Improve communication with new e-resource services	2.40%	2.40%	2.00%	13.90%	16.30%	30.50%	32.50%

The preference for the active learning initiative is evident by the statement “Organize regular training/workshops,” which was ranked the highest on the list with 41.0 percent respondents strongly agreeing on the statement. This is a proper indication that the students are demanding initiatives that will enable them to go beyond the provision of

resources by involving them in active learning projects that will enable them to deal with the complex environments they are encountering.

The next level of priority regards the topic of promoting awareness and was strongly supported by 39% of respondents.

On the other hand, things like better infrastructure are not considered as much. When users asked about making sure everyone could get access to computers, 30.5% of people really agreed it was important. It is important, but it shows what students care about is changing. This is in line with what has been called the "Second-Level Digital Divide," where instead of being worried about physical access, access is no longer a concern but dealing with it on a cognitive and pedagogical level is now a concern. It seems the students realize that unless it is accessed in a proper manner, access is of no use.

5.3 Psychometric Validation of the Requirement Scale

To examine the students' demand from the library a list of 8 questions of Likert scale were asked. A reliability test is done to test the consistency of the question. The test looked at how students felt about the library helping them use resources better.

Table 5.3 Result of Reliability Test for Awareness Programs Requirement among Students

Variables	Mean	Variance	No of Items	IIC Score (Cronbach's Alpha)
Awareness Programs requirement	4.703	0.031	8	0.97

The results showed that students much agreed on what they wanted from the library and their answers were very consistent. The students gave a good score of 4.703 out of 8. This means that students think the library awareness program is important. This shows a positive attitude toward the library taking on various supportive roles. These roles include organizing training, promoting awareness, and integrating e-resources into coursework.

The variance is small, it is 0.031. This means that the answers are all much the same as they are close to the average. Students do not rate these options in a lot of ways. This

shows that students generally think these interventions are useful and important. The interventions are seen as relevant and valuable by students.

Crucially, the reliability score (Cronbach's Alpha) is 0.97, which is exceptionally high and demonstrates that these eight items form a highly reliable scale measuring a common underlying construction, likely the perceived role of the library in enhancing e-resource use among students. The high alpha value also suggests that the items are strongly interrelated and measure the concept cohesively without redundancy.

5.4 Users E-Library Requirements versus EMS

A study of how ten English-medium schools handle library resources points out different ways they approach users training and getting users involved. Table 5.4 shows the current percentage of requirements among the students including the status on training receiving and awareness programs. The descriptive analysis of awareness program reflects that School 8 indicating the South Point School and College and Maple Leaf School mostly arrange formal training of e-resources according to the formally trained users. In contrast, mastermind (school 7) shows very disappointing result in the case of formal training session, most of the users of this school are deprived from formal even from informal training.

Except for the Maple leaf School, al other schools provide some percentage of informal training which is also helpful and better than the no training status of the students. Only Oxford International School highlights the scenario of higher percentage of students having no training status than informal training status. Moreover, there are no students with formal training in Oxford School reflecting the alarming statues of digital literacy.

Investing the frequential structure of awareness program arranging status for e-library, again the Maple Leaf school shows a satisfactory rate of arranging awareness program regularly. All the students' responses are aligned with the regular awareness program arrangement. On the other hand, Oxford and Mastermind School has zero percentage on the awareness program arranging regularly. There are also huge percentage of users who do not even know about the awareness program. Most of the responses show the idea that many schools arrange the awareness program occasionally rather than regular basis.

Table 5.4 Cross Tabulation between Schools and Training and Awareness Program Status

		English Medium School										Total
		1	2	3	4	5	6	7	8	9	10	
Training Receiving Status	no	17	3	10	7	4	0	15	5	1	9	71
		23.9%	4.2%	14.1%	9.9%	5.6%	0.0%	21.1%	7.0%	1.4%	12.7%	100.0%
	informal	12	4	11	15	12	0	11	7	1	11	84
		14.3%	4.8%	13.1%	17.9%	14.3%	0.0%	13.1%	8.3%	1.2%	13.1%	100.0%
	formal	0	12	9	9	18	32	1	34	21	4	140
		0.0%	8.6%	6.4%	6.4%	12.9%	22.9%	0.7%	24.3%	15.0%	2.9%	100.0%
Arranging Awareness Program	never	8	2	1	2	2	0	4	0	0	4	23
		34.8%	8.7%	4.3%	8.7%	8.7%	0.0%	17.4%	0.0%	0.0%	17.4%	100.0%
	occasionally	14	3	16	18	7	0	10	30	2	6	106
		13.2%	2.8%	15.1%	17.0%	6.6%	0.0%	9.4%	28.3%	1.9%	5.7%	100.0%
	regularly	0	11	8	8	17	32	0	11	21	5	113
		0.0%	9.7%	7.1%	7.1%	15.0%	28.3%	0.0%	9.7%	18.6%	4.4%	100.0%
	don't know	7	3	5	3	8	0	13	5	0	9	53
		13.2%	5.7%	9.4%	5.7%	15.1%	0.0%	24.5%	9.4%	0.0%	17.0%	100.0%

School 1: Oxford International School

School 2: International School Dhaka

School 3: Glenrich International School

School 4: Sunnydale School

School 5: Australian International School

School 6: Maple Leaf School

School 7: Mastermind

School 8: South Point School and College

School 9: International Hope School

School 10: BIT

Overall, most schools show an unsatisfactory status on the role of awareness and promoting e-resource usage as well as digital literacy. The result represents the lacking in the sector of training and awareness program arrangement which is the essential part of promoting e-resources usage.

5.5 Impact of Training Status on Library Requirements

The table5.5 highlights the significance of training receiving status on the awareness program requirement score. One way ANOVA test is conducted for the analysis of the impact of training status on library requirement.

Table 5.5 Result of ANOVA Test

Variables	Mean	SD	F Statistics	p-value	Post-Hoc
Training Receiving Status					
no	4.7623	1.56441	3.261	0.04**	Informal > Formal
informal	4.9494	1.38219			
formal	4.5241	.89071			

The test result indicates a significant result with the p value less than 0.05 with the F statistic of 3.261. This implies that. There is significant between the group generated based on training status on the library requirement score. The mean score indicates that students with informal training is more agreed with the promoting activities than the formally trained and not trained student. A high level of demand is observed for the non-trained users. It reflects that having no guidance makes many students feel insecure about using the e-resources for their study purposes. The post-hoc test implies that informally trained students exhibit significantly higher demand for different types of requirements for the e-resources usage than formally trained students (Informal > Formal).

Mainly, this result indicates that formal training makes the students more confident that they merely need more activities related to the e-resources usage than the informally trained and non-trained students. Students with informal training are most aware of the library requirement as they know the lack of using the e-resources, they feel more demand than others.

5.6 Awareness Program Requirements versus Schools

Based on the result of table 5.6, there is a variety of requirements among different schools. These results are highly aligned with the frequency distribution of training status and awareness program status which are previously discussed in this chapter. The 10 English medium schools are ranked based on requirement scale where the top rank school are indicating the unsatisfactory scenario in the role of promoting awareness and digital literacy relating with the e-resources. As Mastermind school has a very disappointing situation on awareness role, this school has gained the top rank on the requirement status with mean requirement score of 5.37. The students at this school highlight their high demand for e-library related issues. Following that the students at

Australian International School (5.14) and Glenrich International School (5.12) also give more score on requirement scale than other schools. Their responses reflect the high demand for formal training.

Table 5.6 Descriptive Statistics and Ranking of Schools on Requirements

School Code	N	Mean	Std. Deviation	Std. Error	Rank
School 7	27	5.37	1.1	0.21	1
School 5	34	5.14	0.83	0.14	2
School 3	30	5.12	0.56	0.1	3
School 1	29	4.94	1.43	0.27	4
School 4	31	4.86	0.85	0.15	5
School 8	46	4.72	0.93	0.14	6
School 6	32	4.71	0.46	0.08	7
School 9	23	4.39	0.84	0.17	8
School 10	24	3.59	2.3	0.47	9
School 2	19	3.41	1.43	0.33	10
Total	295	4.7	1.24	0.07	-

School 1: Oxford International School

School 2: International School Dhaka

School 3: Glenrich International School

School 4: Sunnydale School

School 5: Australian International School

School 6: Maple Leaf School

School 7: Mastermind

School 8: South Point School and College

School 9: International Hope School

School 10: BIT

South Point School and College show the lower rank based on requirement scores, which indicates the better situation of training and awareness status that makes the students' demand at low than other schools. The lowest rank is observed for the International School Dhaka with mean requirement score of 3.41. Also, the low standard deviation indicates stability among the scores. The lower demand reflects that students at these schools may have proper infrastructure in library usage, well-integrated programs and overcame the digital literacy gap.

Schools with rank in the middle position based on mean requirements, such as Oxford having mean score 4.86, Sunnydale with mean 4.86 and Maple leaf with mean 4.71 have average scores around 4.7-4.9, indicates that the school have better environment

for digital literacy. They agree with the requirements and require them, though they have satisfactory training status.

5.7 Conclusion

This chapter is combining the current training and awareness program status at English Medium School Libraries (EMSLs) in Bangladesh with the requirement items which the students agree with. Though most of the English Medium School have the e- resources, it does not indicate the proper utilization until the awareness and literacy training is arranged regularly in the long run.

In this digitalized era, still the data provides alarming results as a huge amount of students do not know about awareness training programs in their school, which indicates a digital literacy gap happening in many schools. The promoting role of e-resource usage creates this lacking among the students which can be easily determined by the relation of training status and awareness requirement scores. The announcement of the training sessions is not enough to attract the students' attention, in that case a lot of collaborative work should be done properly. The results also clarify that students care more about getting help with learning and schoolwork by the digital sectors they access. But accessibility is not only the requirement for the students, but the usage is also highly related to usage proficiency which can be gained by the proper training session. Moreover, the training session is not the only factor for learning the usage, it also provides the knowledge of reaching the gap of their e-resource usage knowledge. So, the difficulty arises here to train the students properly with a satisfactory role of different schools. According to the study, students' conception of their demand for library promotion and training. This implies that even though students can see how beneficial online resources can be for their studies when they have shown them, they are still unable to use them independently. Programs for library training should primarily target these students. The concepts presented in this chapter provide an efficient basis for organizing strategies to enhance students' digital literacy, engage them, and ensure that online resources are used effectively in English-medium school libraries.

ChapterSix

Challenges and Barriersin using E-Resources

6.1 Introduction

The collection of E-resources that Electronic Management Systems and Libraries (EMSL) collect cannot be used to determine their actual efficacy. Instead, accessibility and meaningful usage by users help to define it. This chapter uses a multifaceted analytical approach to fully examine the role that these systems play in increasing access, awareness, and digital literacy. To ascertain the frequency distribution of the numerous challenges and barriers mentioned by respondents, a descriptive analysis is first performed. Factor analysis is then used in the study to separate these distinct variables into more general latent categories.

6.2 Descriptive Analysis of Challenges and Barriers

The frequency distribution of responses pertaining to the challenges encountered by users is described in this section. The information is divided into two categories such as challenges and barriers.

The responses collected through the survey demonstrate how complexity can occur in the manner of responses given, indicating how respondents experience different forms of difficulties and barriers while using digital products or services. When comparing the accessibility factor for all participant responses, the data indicates that trouble free experiences occur much less frequently than not. A little more than one in six (16.6%) of respondents stated they had never experienced any type of problem or difficulty, whereas, 13.9% stated they have had occasional or infrequent problems or difficulties. For example, when considering specific functional barriers such as language, platform navigation or accessibility, approximately 15% to 25% respondents indicated they had experienced these sorts of difficulties or barriers at least once during their use of the product or service, and a considerable number said they experienced these difficulties frequently.

Table 6.1 Percentage Distribution of items indicating barriers and challenges

Item / Variable Description	Not at all	Rarely	Occasionally	Sometimes	Often	Very often	Always
Challenges faced while accessing e-resources							
Problemsfaced while accessing e-resources	16.60%	25.40%	13.90%	25.40%	9.50%	4.70%	4.40%
Issues of language, accessibility, or platform navigation	16.90%	20.00%	19.30%	27.50%	8.80%	4.70%	2.70%
Lack of time/training to use e-resources effectively	16.30%	21.40%	16.30%	25.10%	12.90%	3.70%	4.40%
Difficulty balancing print and digital resources	14.20%	13.60%	21.70%	26.80%	12.90%	4.40%	6.40%
Internet speed/technical interruptions during use	11.20%	18.00%	29.50%	25.40%	10.20%	2.00%	3.70%
Lack of support from teachers/librarian	22.40%	29.80%	17.30%	16.90%	7.10%	3.10%	3.40%
Barriers faced while accessing e-resources							
Lackof awareness about available e-resources	9.80%	22.70%	21.00%	20.30%	12.20%	6.80%	7.10%
Limited digital literacy skills	12.50%	22.70%	19.30%	20.30%	12.50%	5.80%	6.80%
Resistance to using e-resources (preference for print)	8.80%	19.30%	18.60%	24.10%	15.90%	5.80%	7.50%
Insufficient guidance/training from teachers or librarians	12.20%	24.70%	24.40%	21.70%	5.80%	4.40%	6.80%
Financial cost of e-resources limiting availability	4.70%	8.80%	24.40%	26.80%	17.60%	9.80%	7.80%
Unclear policies about access/use	8.80%	26.10%	16.90%	23.70%	13.20%	4.40%	6.80%

Participants also indicated that operational constraints have a significant impact on the experience. Training deficiencies were evident in the data. Only 16.3% of the

participants said they were not affected by the time or training constraints, while many others (25.1%) said they sometimes faced this constraint and some participants (12.9%) indicated that they had this constraint often. The participants also identified the cognitive demands of balancing print and digital resources in a hybrid operational workflow as a significant challenge for many students. Internet instability was identified by respondents as a significant reason for many of their technical interruptions, as many were in the middle of the range for responding to the internet stability question, as indicated by the total of 37.2% of respondents indicating that this was a major irritant for them. Surprisingly, the issue of not receiving the necessary human support was not identified by respondents as one of their primary chronic issues. Despite the technical and skills-related challenges, the vast majority of respondents
indicated that they did not experience a lack of support from teachers and librarians and thus it seems that the human component of support appears to be a stronger support component compared to the infrastructural and navigational constraints.

As we shift our viewpoint to evaluate barriers faced while accessing e-resources, we see that having a lack of awareness and low levels of digital skills impact students across the board. It is evident from the data that there is a huge gap in what students know about the services offered to them. Just 9.8% of students did not report knowing about the services provided to them. Rest of respondents will have this lack of awareness at least occasionally or regularly. This cognitive confusion can also be found when reviewing the other systemic deficiencies of digital skills. Nearly 40% of the respondents said that they have limitations in their technical abilities and they only consider this to be a problem for them sometimes. Only 12.5% of respondents report that they frequently have to deal with this type of problem.

In addition to deficits in skills, there are also barriers and obstacles created by behavior and structure that can deter the adoption of e-resources. For example, over 47% of respondents reported having a strong bias toward and preference for print over digital media as a barrier to using e-resources, and this caused interoperability problems for more than 15.9% of respondents. Additionally, access to technical assistance is inconsistent. Almost half of respondents indicated that they had received little to no assistance from teachers or librarians when it came to getting trained on how to use resources. For most respondents, it seems financial barriers were the most prevalent and significant barriers to use of e-resources. Just 4.7% of respondents reported that

they did not encounter a financial constraint when attempting to use an e-resource. Administratively, unclear governance issues posed a substantial problem, as 60% of students indicated that they were often or occasionally hindered by having an unclear understanding of the policies, which demonstrates a significant level of systemic ambiguity that impedes the ability to adopt e-resources seamlessly.

To sum up the findings, there are many barriers to e-resource use by an individual, and no single bottleneck exists for this user's experience. There is a range of obstacles including technical and infrastructural issues (e.g., accessing the internet) as well as individual digital skill level, financial limitations, and lack of institutional support. Importantly, it is also suggested by the data that most respondents are frequently encountering multiple and interrelated issues, not just one type of problem or few problems. This complex reality indicates the need for more comprehensive methods to develop and promote access and use of e-resources. Institutions must consistently be willing to provide additional assistance, training, resources, and policy clarification together to develop effective access and usage.

6.3 Reliability Analysis

This test measures the internal consistency of scale items, which indicates how consistently the survey items measure the underlying constructs of "challenge" and "barrier."

Table 6.2 Reliability Analysis of Challenges and Barriers

Variables	Mean	Variance	No of Items	IIC Score (Cronbach's Alpha)
Challenges	2.192	0.052	6	0.916 0.912
Barriers	2.558	0.075	6	

The scale used to assess the difficulties that users experience with e-resources was analyzed using a Cronbach's Alpha coefficient of 0.916 based on six unique items. The value is well above the acceptable range of 0.70 indicating that the scale has excellent internal reliability. A Cronbach's Alpha value indicates the extent to which the items of the scale are measuring the same thing and are therefore measuring very similar constructions. Therefore, the data indicates that the items are all closely related in some

way and, thus, can be treated as reliably measuring the difficulty that users experience with the use of e-resources for issues such as technical disruptions, issues with accessing materials or websites, and lack of training.

The Parallel Analysis of the Barriers construct (of which there are six items), yielded an equally impressive Alpha score (0.912) and further supports the scale's trustworthiness in measuring systemic barriers, along with measuring the relative magnitude of financial expense, limited literacy and limited understanding is done with high accuracy. Since both separate variables' coefficients exceeded 0.90, it indicates a higher level than average psychometric trustworthiness. Therefore, using statistical analysis validation confirms the strength and reliability of the survey instrument in this research; thus the survey instrument may be accepted for further statistical analysis, with the expectation that the results will produce an accurate and valid representation of the underlying factors on which the descriptive and factor analyses will be based.

6.4 Factor Analysis

In order to determine the underlying structure of the barriers faced by English Medium School Libraries (EMSL), an Exploratory Factor Analysis (EFA) was conducted employing Principal Axis Factoring with Varimax Rotation.

Table 6.3 Result of Factor Analysis for Barriers and Challenges

Item / Variable Description	Factor 1	Factor 2	Factor 3
Challenges faced while accessing e-resources			
Problems faced while accessing e-resources	**.839**	.235	.268
Issues of language, accessibility, or platform navigation	**.864**	.179	.280
Lack of time/training to use e-resources effectively	**.807**	.288	.255
Difficulty balancing print and digital resources	.409	.305	**.678**
Internet speed/technical interruptions during use	.313	.177	**.798**
Lack of support from teachers/librarian	**.536**	.290	.464
Barriers faced while accessing e-resources			
Lack of awareness about available e-resources	.495	**.747**	.060
Limited digital literacy skills	**.591**	**.738**	.045
Resistance to using e-resources (preference for print)	.264	**.758**	.252
Insufficient guidance/training from teachers or librarians	.459	**.702**	.133
Financial cost of e-resources limiting availability	-.085	**.627**	.416
Unclear policies about access/use	.153	**.682**	.372
Eigen Values	**7.069**	**1.468**	**1.124**
% of Variance	**56.885**	**9.893**	**7.295**

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Note: Factor 1 = Operational Interaction & Usage Constraints, Factor 2 = Institutional Ecosystem & Readiness Barriers, Factor 3 = Infrastructural & Logistical Impediments

A total of 12 different items which had been originally categorized under "Challenges faced" and "Barriers faced" were included in this analysis.

The rotation took a total of 10 iterations to converge to a solution, resulting in a three-factor solution that accounted for 74.07% of the total variance. This is a high percentage. Therefore, these three factors best describe the central difficulties respondents face. A summary of the interpretation of the factors generated from this analysis appears below:

6.4.1 Factor 1: Operational Interaction & Usage Constraints

Factor 1 explains most (56.89%) of the total variance. Therefore, it is considered the greatest limiting factor of the study. The attributes for Factor 1 are those related to the real-life and practical experience of users with e-resources and also their experience in using e-resource systems.

- **Items Loaded:**
    - o Issues oflanguage, accessibility, or platform navigation (.864)
    - o Problemsfaced while accessing e-resources (.839)
    - o Lack of time/training to use e-resources effectively (.807)
    - o Lack of support from teachers/librarian (.536)

The high associated scores for this factor are indicative of the significant operational problem faced by EMSLs. The high statistical loading for both the “Language and Platform Navigation” (.864) and “Lack of Time” (.807) variables suggests that users of these e-resources perceive them as complex systems that are both difficult to navigate through and time-consuming to learn. A point of curiosity is the behavior of the “Lack of Support” variable because it does not logically line up within the same factor as “Institutional Guidance” (Factor 2) but instead fits into this factor. The existence of e- resources does not guarantee a successful experience because technical failures, poor navigation, and, in some cases, inadequate training make them challenging to utilize appropriately. The fact that mostly all loading values are greater than .80 demonstrates that this factor is the leading challenge facing e-resource users. Therefore, improving

the quality of training programs and reinforcing user support services, along with redesigning users' interfaces to improve usability, are potential solutions to remove these barriers.

6.4.2 Factor 2: Institutional Ecosystem & Readiness Barriers

The second factor groups variables that describe the broader environment in which the user operates. It combines items related to policy, cost, and the user's fundamental preparedness.

- **Items Loaded:**
    - Resistance to using e-resources (.758)
    - Lack of awareness about available e-resources (.747)
    - Limited digital literacy skills (.738)
    - Insufficient guidance/training from teachers or librarians (.702)
    - Unclear policies about access/use (.682)
    - Financial cost of e-resources limiting availability (.627)

Factor 2 focuses on the culture of the organization compared to the tools needed to use them. The high degree of clustering of the items relating to the Resistance (.758), Lack of Awareness (.747) and Unclear Policies (.682) factors suggest a broader cultural issue. The inclusion of specific Items from Factor 1, Financial Cost and Unclear Policies are particularly relevant because it indicates the correlation between these two Items and the creation of Resistance and Stagnation. Additionally, if a financial cost is not clearly communicated to the user, and the policy is not clear, then the institution is creating an environment that is conducive to creating resistance and Stagnation of digital literacy skills.

6.4.3 Factor 3: Infrastructural & Logistical Impediments

- **Items Loaded:**
    - Internetspeed/technical interruptions during use (.798)
    - Difficulty balancing print and digital resources (.678)

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Factor three demonstrates considerable loadings on the difficulty users experience in balancing their use of both print and digital resources for research (.678), and the speed & technical interruptions (.798) associated with the Internet. Access to quality online resources is affected by three things, those are: how easy it is for people to get to use those resources, whether or not they have a good internet connection, and how well print materials work together with digital materials. People have identified the difficulties associated with having an unreliable ISP, insufficient bandwidth at their institution, and no systematic method of linking print with electronic resources as barriers to a good user experience and to the increased use of electronic resources by patrons. In response to these challenges, libraries must provide sufficient resources in terms of hardware and technology to support their patrons, provide a reliable network of services and create library management policies that ensure a balanced approach between print and digital resources.

The Factor Analysis shows that e-resource barriers still exist at three levels. Initially, the survey attempted to categorize them as challenges and barriers. Yet, analysis of data indicated that respondents see difficulty along three dimensions based on their responses:

i. User Accessibility: Respondents highlight an inability to effectively use e-resources because their user interface is either difficult/too time-consuming (Factor 1);

ii. Organizational Architecture: Respondents report insufficient policies, training, and training of staff around e-resources (Factor 2);

iii. Connectivity Limitations: The internet does not effectively support the existing organization of workflow and vice-versa (Factor 3).

6.5 Conclusion

According to the descriptive analysis, it shows the overall user experience at this time. While the human element and the librarian support is strong, satisfactory. The support provided to the user is limited by two main areas: technical interruptions and finances. The analyses from factor analysis indicate that a user's most significant issue for the majority of users is Operational Competency, which is the ability to successfully navigate the platform.

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As a result, if the EMSL wants to promote access and digital literacy, EMSLs need to implement a strategic change in the way they provide services to users. Instead of focusing on general types of support that are working well, EMSLs should focus on two specific areas for improvement. These are, provide services to make their technology more stable so that their users do not experience as many technology issues and provide targeted digital literacy training to help users gain knowledge and skills to successfully navigate the platform and be financially supported. Once these two areas of descriptive and latent barriers are systematically remediated, EMSLs will successfully transition users from a state of passive availability to a state of active and competent use of the EMSL's digital offerings.

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Chapter Seven

Findings and Discussions

7.1 Introduction

This chapter provides a framework for understanding how EMSLs facilitate significant interaction between students and digital resources. Based on previously discussed factor structures developed in previous chapters, it examines how the interactions between students' Technical Self-Efficacy, Academic Engagements, Institutional Preparedness and Infrastructure play out on a student-systems level. This model represents how individual student experiences connect back up to the overall features of the institution and the digital world it offers. The model provides a theoretical framework for the disparity of the outcomes produced by different institutions with the same resources.

This Chapter combined the data collected and analyzed from the earlier chapter to examine how connectivity with e-resources, background information and current institution condition have impacted the current status of EMSLs in Bangladesh, by using the three major areas of information, which are (i) usage and comfort (Technical Self-Efficacy, Academic Engagement, and Specialized Tool Utility), (ii) background/current status (gender, level of digital literacy, funds for resources), and (iii) challenges and barriers (operational interaction and usage constraints, institutional ecosystem and readiness barriers, infrastructural and logistical impediments).

7.2 Usage and Comfort Factors

The three major and influential latent factors found in the analysis of the usage of e-libraries were Technical Self-Efficacy, Academic Engagement, and Specialized Tool Utility, which explained about 70% of the variance in the way of students' using digital technology for their academic needs. The most significant determiner of how actively involved students were in using the e-library environment was a student's comforts in using complex digital tools, including coding platforms, test preparation software, multimedia systems and/or Learning Management System (LMS) interfaces. In

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contrast, Specialized Tool Utility was found to be a more specific predictor for types of uses of digitized products (e.g., Britannica School, Quizlet, Scratch and Save My Exams), when students tend to access these platforms to complete projects or prepare for tests rather than for their day-to-day learning and development. On the other hand, Academic Engagement represents a combination of how comfortable students feel when using different types of e-book and database digital resources, in addition to their perceptions regarding the usefulness of using core educational platforms such as Google Classroom, Khan Academy and Cambridge Online. As such, the students who score high on Academic Engagement may think of their e-library as an augmented version of the traditional classroom, including required readings, assignments, and structured practices, rather than as a resource to support self-directed research.

7.3 Background Information and Current Status

The background information and usage characteristics presents a contradiction, as the respondent group are very connected with e-resources but not using these resources as a library tool. Most students reported that they spend over four hours online each day. However, very small number of these students regularly use library e-resources. The mode of access is two to three times per week or less. Therefore, it is important to find out the difference between entertainment and educational usage of electronic resources because being actively involved in technology does not necessarily portray the student's academic ability to engage digitally.

There are two additional factors that further explain the previously mentioned demographic and usage profile. First, females are mostly in the sample. Moreover, more than 50% of the participants believed that their computer usage skills are average or below average and less than 25% of those who participated in the survey identified themselves as "expert" in that capacity. This indicates that many students may not be able to utilize the available resources available to conduct their academic research. Second, the e-library status of institutions is significantly different from institution to institution. A one-way analysis of variance (ANOVA) is conducted to find out the statistically significant difference at the school level among all three factors related to e-library use. Some schools (those with the highest scores for Technical Self-Efficacy

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and Academic Engagement) provide their students with more multifaced access to e-resources than other schools.

7.4 Challenges and Barriers Factors

Together, Operational Interaction & Usage Constraints, Institutional Ecosystem & Readiness Barriers, and Infrastructural & Logistical Barriers represent three unique factors affecting access to online information that contribute to over 70% of reported difficulty levels when accessing electronic resources. Operational Interaction & Usage Constraints represent the immediate real-life challenges that users encounter when trying to obtain information and are characterized by immediate tactile issues (language, locating or searching material), training (requiring additional training to properly use the platforms), and the need for immediate assistance when attempting to locate information. These types of challenges are often associated with the initial phase of access, but as indicated by the high association values of the associated constructs, operational interaction, and usage constraints are not an indication that there is poor access; they are an indication of a greater cognitive and procedural barrier that must be overcome to adequately use the e-resources.

Institutional Ecosystem & Readiness Barrier (these barriers to accessing e-resources) includes lack of knowledge, limited digital literacy, lack of defined access policies, budgetary constraints. These factors provide evidence of a lack of normalized culture regarding the use of e-resources at the institutional level. A similar lack of normalization can also be found within the institutional framework for governance as the institutional framework for communication does not consistently support or recognize participation in digital resources.

Infrastructural & Logistical Barriers are about technological interruption and the problem of balancing printed and electronic resources. The fact that many institutions provide low-quality internet services and have fragmented workflows creates situations that can significantly reduce the productivity levels of all electronic resource users, even highly motivated users.

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7.5 Interrelationship Model: Relationship between Background Variables and Usage Factors

According to Figure 7.1, e-resources in EMSL primarily reflect competency rather than demographic factors. The presence of three solid lines that connect user computer proficiency to each of three usage factors (technical self-efficacy, academic engagement, specialized tool utility) indicates that users significantly benefit from the relationship created by the interaction of these clusters. Consequently, as users advance through the stages of developing their fundamental computer proficiencies, they are more likely to use the EMSLs as co-educators and develop an interest in finding and utilizing new forms and methods of utilizing digital resources. Thus, digital comfort is not just a pathway to utilize the technology that is available to students but also a roadmap to forming positive attitudes toward using the technology to be learning. The absence of attendance in EMSLs does not affect the availability of digital resources,
but rather the attitudes of students regarding their ability to use these resources independently.

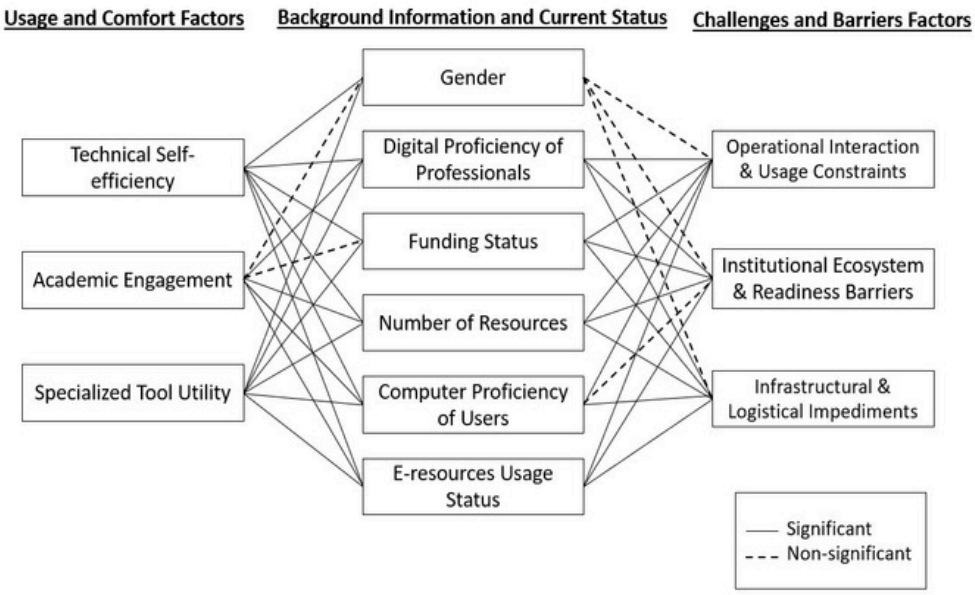


Figure 7.1 Summary of relationship among usage and comfort factor, background information and barriers factors

The model further emphasizes the important function of professional support within the system. The strong association between the Digital Proficiency of Professionals and

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Usage Factors shows that by providing Digital Proficiency in the form of strong Digital Skills, each time Instructors and Librarians provide high levels of Digital Proficiency, then Students report much greater levels of Technical Self-efficacy and Engagement. Visually, the column of Figure 7.1 contains both Professionals as well as Students in their Digital Proficiency and Usage Status. This highlights that Professionals do not occupy a peripheral role but are an integral part of the same competency network as students. Skilled Professionals will affect successful design or conduct of enhancement of students' confidence and also contribute to students' ability to successfully perform their daily responsibilities at work and school. Similarly, the number of resources has a very strong connection, by a Solid Line, to all three of these usage factors, as shown in the figure above.

Figure 7.1 is a graphic representation of gender that illustrates an important issue concerning statistical representation. The dashed lines connecting the Gender and academic engagement illustrate that the relationships between these factors were not significant in the analysis of the data. With the EMSLs analyzed, the visual representation demonstrates that male and female students are equally likely to develop technical self-efficacy and utilize digital resources for academic purposes, as well as use specialized tools for their academic requirements when accounting for technical competence. Although it is more selective, academic engagement has a significant impact. It has a substantial impact on proficiency and usage status, but it has little bearing on structural factors like funding status or demographic factors like gender. Therefore, engagement does not alter people's perceptions of structural or demographic conditions, even though it aids in the development of personal skills.

7.6 Relationship between Background Variables and Barriers

The structural model shown in the conceptual framework demonstrates a clear correlated concept between Background Information, Current Status, and the subsequent Challenges and Barriers Factors. The usage of limitation shift highlights in Figure 7.1 that the experiences that students have with electronic resources are not only influenced by the student relationship with it, but also that it is influenced by the type of barriers that students experience when using electronic resources because of their backgrounds. It can then be noted that funding status is especially pertinent in this case as it is represented by significantly high connection lines to the regions of infrastructural

or logistical obstacles and institutional ecosystem or preparedness obstacles. It is highly likely that a school with a lower funding will have poor internet access, will not have adequate instruments or will be less uniform in their use of digital resources in institutional policy and communication. Thus, Figure 7.1 is indicative of the fact that the structural interpretation of the data shows a financial barrier as a primary cause of the physical and institutional barriers that the students face when accessing electronic resources.

Digital Proficiency of Professionals is also revealed through the intersection with the barrier structure depicted in the graphic. This variable also has a solid connection to Operational Interaction & use Constraints, besides its solid connections to the use factors. Such a twofold position signifies that competency among staff influences effectiveness in two ways: it can both raise the rates of utilization and decrease day-to-day tension of gaining access and moving around platforms. In case of the non-expert digital proficiency in the professionals, the students are subjected to a series of operational problems, including the misunderstanding of instructions, limited troubleshooting, and ineffective demonstrations, illustrated graphically by the strong connection between professional competency and operational limits. By this, the model portrays the instructors and librarians to be both amplifiers and buffers of good usage and against operational limits, respectively, with the level of their skills.

7.7 Interaction between Usage and Barriers

Where figure 7.1 underlines the intervening activity of background variables, figure 7.2 defrays the system to a more determined connection among Usage and Comfort Factors (left column) and Challenges and Barriers Factors (right column). It becomes evident in this second model that the correlation between what students do and what they face is not the same in all kinds of usage.

The solid line between Technical Self efficacy and Operational Interaction & Usage Constraint is statistically significant and substantively strong negative relationship. In graphic representation, this linear connection suggests that technological confidence serves as a protection against normal obstacles like technical troubles, novel interfaces, or multi-step navigation procedures. Learners' familiar with the use of digital technologies will quickly adapt, explore other options.

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The broken lines between Technical Self-Efficacy and Institutional Ecosystem and Readiness Barriers and Infrastructural and Logistical Impediments on the other alert us that personal competence is not much in the event of system failure. Personal competency is not sufficient to offset the lack of access to subscriptions, ambiguous off-campus usage policies, or the continued poor performance of the internet connection, the model is graphical to show that these are not under the control of an individual engaging in the activity.

The highest relationship is found between Academic Engagement and Infrastructural and Logistical Impediments. This linkage in the figure suggests that students who depend on electronic tools in their basic academic tasks like using LMS portals, using assignment tools or accessing suggested e texts are susceptible to infrastructure issues. The work of these active internet users is immediately interrupted when the internet collapses or the gadgets get out of service. The broken lines between Academic Engagement and the other two barriers' factors indicate that although the engaged students have some operational and institutional barriers, they often have means of transcending them.

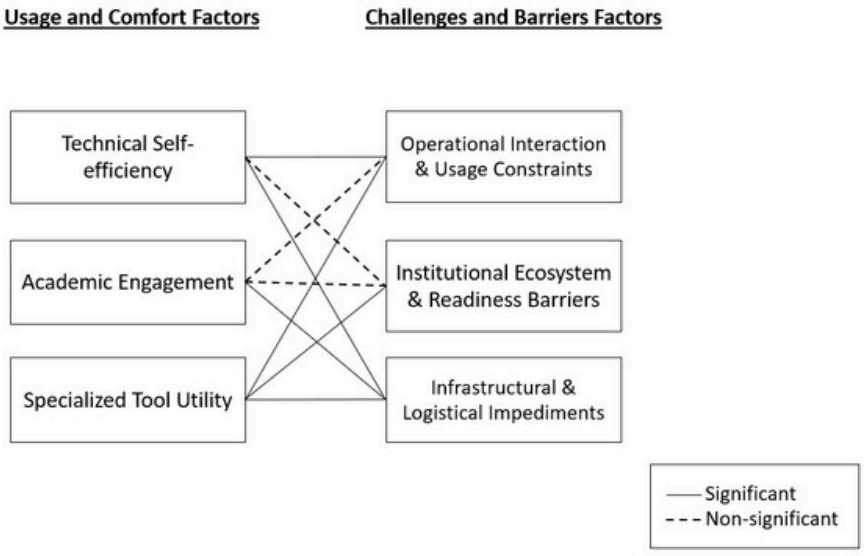


Figure 7.2 Summary of the relationship between usage factors and barriers factors

The position of Specialized Tool Utility in Fig. 7.2 is quite educative. Solid lines between this factor and all three barrier categories imply that this is the case with sophisticated, creative, or project-based uses of electronic resources being sensitive to

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all forms of constraints. Students who explore scratch programming, internet encyclopedias or exam-studying sites tend to do so voluntarily, not as a mandatory component of their education.

This makes their involvement to be contingent on a positive operating climate, a strong institutional ecology, and a dependable infrastructure. As any of these disorders become impaired, these higher order, self-directed forms of use are the first activities to be impaired. Optically, the whole complex of solid connections portrays Specialized Tool utility as the most vulnerable layer of the digital ecology, an indicator of a library system functioning successfully, but the first victim when the wall is built.

From the above discussion, a generic model of status of EMSL is graphically presented in fig 7.3

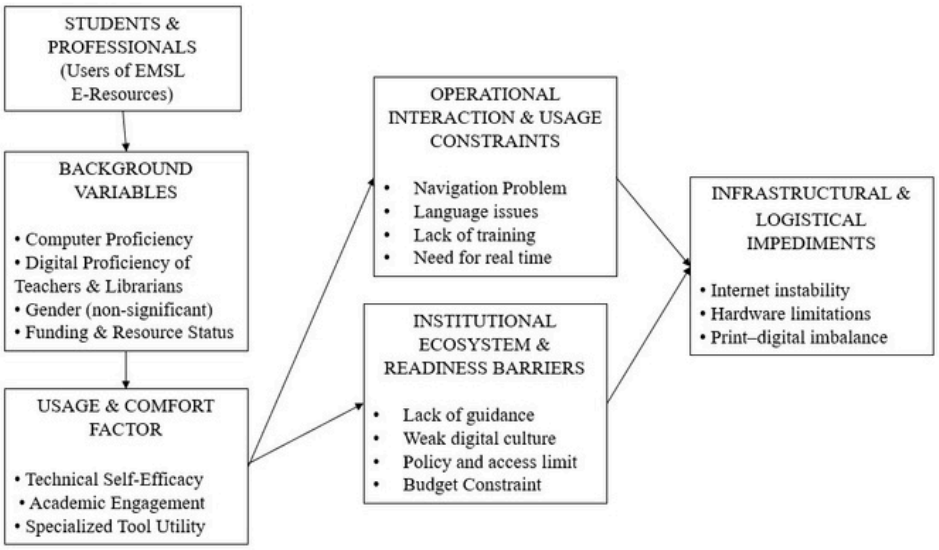


Figure 7.3 A model of status and usage of EMSL

7.8 Conclusion

Together, Figs. 7.1 and 7.2 depict a proficiency-driven model of e-resource consumption in English medium schools. The constant significance of Computer Proficiency for Users and Digital Proficiency for Professionals, both in terms of usage reasons and barrier structures, calls into question naive beliefs that access alone ensures utilization. Instead, the diagrams together demonstrate that Technical Self-efficacy is

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the critical barrier between potential and actual participation. Students' progress from having resources to attaining sustained Academic Engagement when their own and their teachers' talents coincide to provide confidence, guided practice, and timely help.

Simultaneously, the models highlight how human competence operates within a broader Institutional Ecosystem. Low funding status directly contributes to logistical and infrastructure barriers, undermining institutional readiness and, consequently, severing the connections between students' competencies and actual utilization opportunities. The interaction model illustrates how various barriers impede various levels of usage. Mandatory academic use is most susceptible to infrastructure failure, routine technical use is most susceptible to operational friction, and specialized use is susceptible to nearly anything.

For EMSLs, these visual and analytical insights convert into a multi-layered strategic plan. Investing in human capital, including structured training for both students and professionals, addresses the left side of the models by increasing Technical Self-efficacy, Academic Engagement, and Specialized Tool Utility. Securing material capital, adequate finance, dependable connections, and clear institutional policies, addresses the right side by breaking down infrastructure and ecosystem constraints. Only by addressing both sides simultaneously can the solid lines in the models be redirected away from barriers and toward richer, more equitable patterns of e resource engagement, allowing EMSLs to function as true engines of digital learning rather than mere repositories of underutilized technology.

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Appendix A

Research Questionnaire

(Library Users)

Usage and Application of E-Resources inthe English Medium School Libraries of Bangladesh:AModel Plan

Dear Sir/Madam,

Greetings. I am Rumana Rahman Shithi, an M.Phil. student in the Department of Information Science and Library Management, University of Dhaka, under the supervision of Professor Dr. Muhammad Mezbah-ul-Islam.

As part of my research titled *"**Usage and Application of E-Resources among English Medium School Libraries of Bangladesh: A Model Plan**"* I am collecting data from school librarians and students to understand the present status, challenges, and opportunities in e-resource management and use.

I would be very grateful if you could kindly participate in this study by completing the questionnaire. You may respond either through the Google Form link or using the attached hard copy, whichever is convenient. Your responses will be used strictly for academic purposes and will remain confidential.

Your cooperation will contribute significantly to improving e-resource practices among school libraries across Bangladesh.

Thank you very much for your time and kind support.

Supervisor:

Muhammad Mezbah-ul-Islam, PhD
Professor
Department of Information Science and Library Management, University of Dhaka
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Sincerely Yours,

Rumana Rahman
M.Phil.Researcher
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Cell: 01675835408

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Questionnaire for Users (Students/Teachers)

Please fill in the following information before starting the questionnaire:

Section A: Background Information

Name: _____

Class/position: _____

Age: _____

Gender: □ **Male** □ **Female** □ **Other**

School Name: _____

1. **Computer proficiency:** □ Novice □ Mediocre □ Expert
2. **Internet usage (daily):** □ 1-3Hours □ 4-7hours □ 8-11 Hours □ More than 12 hours
3. **How long have you been using the school library?**
   □ Less than1year □ 1–2years □ More than 2 years □ More than 5 years
4. **What is the frequency of visiting the library?**
   □ Daily □ 2/3 times a week □ 2/3 times a month
   □ Whenever I need any resources □ Never
5. **How many hours in a day do you generally spend in the library for reading purposes?** □ 0 □ 1-2 Hours □ 3-4 Hours
   □ More than 5 Hours

6. **How long have you been using the school library?**
   □ Less than 1 year □ 1–2 years
   □ More than 2 years □ More than 5 years

Section 2: Exploring the status of EMSLs. Instructions:

Please respond to the following items. Tick or circle the appropriate option or use the 7-point scale where indicated.

1. What types of e-resources do you use from the school library? (Select all that apply)

□ E-books / E-textbooks (e.g., Cambridge Online, Oxford Owl, Kindle)
□ Academic databases (e.g., JSTOR, Britannica, ProQuest)
□ Multimedia/video platforms (e.g., Khan Academy, BBC Bitesize, TED-Ed)
□ Learning Management System (e.g., Google Classroom, Moodle, Microsoft Teams, Canvas)

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☐ Subject-specific tools (e.g., GeoGebra, Quizlet, PhET)
☐ Citation/reference tools (e.g., Zotero, Sora)
☐ Exam prep tools (e.g., Save My Exams, Past Papers Wiki)
☐ Creative/coding tools (e.g., Canva, Scratch, Code.org)
☐ None

2. How often doyou usee-resourcesprovided byyourschoollibrary?

☐ Daily ☐ 2–3 timesaweek ☐ Weekly
☐ Monthly ☐ Rarely ☐ Never

3. Rate your comfort level in using each of the following e-resource types
(1 = Not comfortable at all
2 = Slightly comfortable
3 = Somewhat comfortable
4 = Neutral
5 = Comfortable
6 = Very comfortable
7 = Extremely comfortable)

E-Resource Type	1	2	3	4	5	6	7
E-books/E-textbooks							
Academic Databases							
Multimedia Platforms							
LMS Platforms							
Exam Prep Tools							
Creative/Coding Tools							

4. Which platform(s) do you find most useful for learning?
Ratingscale:
(1 = Not useful
2 = Slightly useful
3 = Somewhat useful
4 = Neutral
5 = Useful
6 = Very useful
7 = Extremely useful)

Platform	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Khan Academy							
Save My Exams							
Quizlet							
Britannica School							
Google Classroom							
Scratch							
Cambridge Online							

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5. Which of the following tools have you used to search or retrieve e-resources?

- ☐ Library searchengine or OPAC
- ☐ Google Scholar
- ☐ Direct accessthrough platforms (e.g., Britannica, JSTOR)
- ☐ Teacher-provided links or folders
- ☐ School's LMS
- ☐ Ask the librarian/teacher
- ☐ Never used anytool
- ☐ Other: _____

6. How would you describe the overall status of e-resource availability and usage in your school library?

- ☐ Very well developed (wide rangeof resources, actively used)
- ☐ Moderately developed (some resources available, moderately used)
- ☐ Limited (few resources, used occasionally)
- ☐ Poor (very few or no resources, rarely used)
- ☐ Not sure / Don't know

Section 3: Role of School Libraries in Promoting Access, Awareness & Digital Literacy

1. Have you received any training or guidance from your school on how to use these e-resources?

- ☐ Yes, formal training/workshops
- ☐ Yes, informalguidance
- ☐ No
- ☐ Not sure

2. Has your school library ever organized awareness programs for e-resources?

- ☐ Yes, regularly
- ☐ Occasionally
- ☐ Never
- ☐ Don't know

3. According to you, what possible roles can the library play to equip you with using e-resources more effectively?

Ratingscale:
(1=Strongly Disagree
2=Disagree
3=Slightly Disagree
4=Neutral
5=Slightly Agree
6=Agree
7=Strongly Agree)

Suggested Library Role	1	2	3	4	5	6	7
Organize regulartraining/workshops on e-resources							
Promote awareness of available e-resources							

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Provide user guides and manuals							
Ensure dedicated access to computers/devices							
Include e-resource sessions in class schedules							
Offer one-on-one assistance from library staff							
Integrate e-resources into student projects and homework							
Improve communication about new e-resource services							

Section 4: Challenges and Barriers in Using E-Resources

A. What challenges did you face while accessing e-resources?

Rating scale:

(1 = Not at all
2 = Rarely
3 = Occasionally
4 = Sometimes
5 = Often
6 = Very often
7 = Always)

Challenges	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Problems faced while accessing e-resources							
Issues of language, accessibility, or platform navigation.							
Lack of time/training to use e-resources effectively							
Difficulty balancing print and digital resources.							
Internet speed/technical interruptions during use							
Lack of support from teachers/librarian							

B. What barriers did you face while accessing e-resources?

Rating scale:

(1 = Not at all
2 = Rarely
3 = Occasionally
4 = Sometimes
5 = Often
6 = Very often
7 = Always)

Barriers	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Lack of awareness about available e-resources.							
Limited digital literacy skills.							
Resistance to using e-resources							
Insufficient training from teachers or librarians.							
Financial cost of e-resources limiting availability.							
Unclear policies about access/use.							

Thank you for your time and efforts

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Appendix B

Research Questionnaire

(Library Professionals)

Usage and Application of E-Resources inthe English Medium School Libraries of Bangladesh:AModel Plan

Dear Sir/Madam,

Greetings. I am Rumana Rahman Shithi, an M.Phil. student in the Department of Information Science and Library Management, University of Dhaka, under the supervision of Professor Dr. Muhammad Mezbah-ul-Islam.

As part of my research titled *"**Usage and Application of E-Resources among English Medium School Libraries of Bangladesh**: **A Model Plan**"* I am collecting data from school librarians and students to understand the present status, challenges, and opportunities in e-resource management and use.

I would be very grateful if you could kindly participate in this study by completing the questionnaire. You may respond either through the Google Form link or using the attached hard copy, whichever is convenient. Your responses will be used strictly for academic purposes and will remain confidential.

Your cooperation will contribute significantly to improving e-resource practices among school libraries across Bangladesh.

Thank you very much for your time and kind support.

Supervisor:

Muhammad Mezbah-ul-Islam, PhD
Professor
Department of Information Science and Library Management, University of Dhaka
E-mail: mezbah2000@yahoo.com

Sincerely Yours,

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M.Phil.Researcher
Department of Information Science and Library Management, University of Dhaka
E-mail: shithi@ewubd.edu
Cell: 01675835408

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Questionnaire for Library Professionals

Please fill in the following information before starting the questionnaire:

Name: _____

Class/position: _____

Age: _____

Gender: □ Male □ Female □ Other

Section A: Background Information

School Name: _____

4. **Digital proficiency**: □ Novice □ Mediocre □ Expert

2. **Received any training on e-resource management:** □ Yes □ No

3. Years of experience in school libraries:

- □ Less than 1 year
- □ 1–3 years
- □ 4–6 years
- □ 7–10 years
- □ More than 10 years

4. Approximate number of users served daily:

- □ Less than 50 users
- □ 50–100 users
- □ 101–200 users
- □ 201–500 users
- □ More than 500 users

5. Type of school (curriculum followed):

- □ National curriculum (Bangladesh)
- □ British curriculum (O'/A' Levels, IGCSE, etc.)
- □ American curriculum
- □ International Baccalaureate (IB)
- □ Other (please specify): _____

Section 2: Exploring the Current Status of EMSLs.

Instructions: Please select or rate the following based on your library's practices and experience.

1. **Which types of e-resources does your school currently subscribe to or provide? (Select all that apply)**

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- ☐ E-books / E-textbooks (e.g., Cambridge, Pearson, Oxford Owl)
- ☐ Academic databases (e.g., JSTOR, ProQuest, Gale)
- ☐ Multimedia platforms (e.g., BBC Bitesize, TED-Ed, YouTube EDU)
- ☐ LMS (e.g., Google Classroom, Microsoft Teams, Moodle)
- ☐ Subject-specific tools (e.g., GeoGebra, PhET, Quizlet)
- ☐ Exam prep tools (e.g., Save My Exams, Past Papers Wiki)
- ☐ Citation/Library tools (e.g., Sora, Zotero, Mendeley)
- ☐ Creative and coding platforms (e.g., Canva, Scratch, Code.org)
- ☐ None

2. How many e-resources (platforms/subscriptions) do your library manage?

☐ 1–5 ☐ 6–10 ☐ 11–15
☐ Morethan15 ☐ Don't know

If known, please list the platform names in the table below:

Platform Name	**Type of Resource (e.g., E-book, LMS, Database)**

3. How is the funding for e-resources allocated in your school?

- ☐ Separate annual e-resource budget
- ☐ Included in general library budget
- ☐ Sponsored by third-party projects
- ☐ No funding allocated
- ☐ Don't know

4. Howwouldyouratethefrequency of e-resource usage among students?

(1 = Not used at all
2 = Rarely used
3 = Occasionally used
4 = Sometimes used
5 = Frequently used
6 = Very frequently used
7 = Used daily)

E-Resource Type	**1**	**2**	**3**	**4**	**5**	**6**	**7**
E-books/E-textbooks							
Academic Databases							
Multimedia Platforms							
LMS Platforms							
Exam Prep Tools							
Creative/Coding Tools							

5. Do you maintain statistics for digital platforms?

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□ Yes, regularly (e.g., monthly usage reports, login/access data, download reports) database
□ Occasionally (e.g., informal tracking or survey-based feedback)
□ No (no formal or informal tracking exists)
□ Not sure / I don't know

6. Which retrieval or discovery tools are available and used in your school for accessing e-resources? (Select all that apply)

□ Integrated Library System (ILS) or OPAC
□ Google Scholar
□ EBSCO Discovery Service
□ Direct access via publisher/platform dashboards
□ School's LMS
□ Custom link repository
□ No formal retrieval system
□ Other: _____

Section 3: Role of School Libraries in Promoting Access, Awareness & Digital Literacy

1. How often are awareness or orientation sessions held for users?

□ Monthly □ Quarterly □ Yearly
□ Never □ Not applicable

2. According to you, what possible roles can the library play to increase the use of e resources?
Ratingscale:
(1 = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neutral
5 = Slightly Agree
6 = Agree
7 = Strongly Agree)

Suggested Role of Library	1	2	3	4	5	6	7		
Advocate for budget allocation toward e-resources									
Train students and teachers on how to use e-resources									
Regularly promote available e-resources through notices or LMS									
Collaborate with teachers to integrate e-resources into lesson plans									
Maintain up-to-date e-resource collections and tools									
Monitor and report usage statistics to improve services									
Offer incentives or recognition for e-resource users									
Develop a school-wide e-resource usage policy									

Dhaka University Institutional Repository

Section 4: Challenges and Barriers in Using E-Resources

A. To what extent do you agree that the following challenges are in managing or promoting e-resources in your school?
Please use the following Likert scale:
(1 = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neutral
5 = Slightly Agree
6 = Agree
7 = Strongly Agree)

Challenges	1	2	3	4	5	6	7
Common challenges in managing e-resources (infrastructure, budget, staff) Issues of							
copyright/licensing Difficulty in training							
students/teachers. Limited technical support from							
school administration Challenges in integrating e-							
resources with curriculum.							
Low engagement from students/teachers despite availability							
Others (If any)							

B. To what extent do you agree that the following are barriers in managing or promoting e-resources in your school?
Please use the following Likert scale:
(1 = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neutral
5 = Slightly Agree
6 = Agree
7 = Strongly Agree)

Barrier	1	2	3	4	5	6	7
Lack of budget							
Poor internet/technical infrastructure							
Lack of trained staff							
Resistance from teachers							
Limited student literacy in digital platforms							
Lack of administrative support/policy clarity.							

Thank you for your time and efforts