

*International Journal of Learning, Teaching and Educational Research*  
Vol. 25, No. 5, pp. 887-915, May 2026  
<https://doi.org/10.26803/ijlter.25.5.39>  
Received Mar 5, 2026; Revised May 5, 2026; Accepted May 6, 2026

## Toward System-Wide Resource Sharing in Vietnamese Teacher Education through a Shared Portal Model

Le Van Hieu , Pham Thi Tra 

Ho Chi Minh City University of Education  
280 An Duong Vuong, Cho Quan Ward,  
Ho Chi Minh City, Vietnam

Huong Thi Pham\* 

School of Foreign Language, College of Economics,  
Law and Governance, 59C Nguyen Dinh Chieu,  
Xuan Hoa Ward, Ho Chi Minh City, Vietnam

**Abstract:** Amid ongoing reforms to teacher education in Vietnam, the government's higher-education restructuring places renewed emphasis on cooperation across the network of teacher-education universities. In this context, interlibrary collaboration and resource sharing are critical to expanding access and improving the quality and efficiency of provision. This study assesses library information, resources, and services; examines usage; and elicits stakeholder views on cooperation models across seven universities of education. This study used a cross-sectional survey conducted in late 2024 with a total of 2,346 participants, including library users, library staff, and institutional managers. Findings reveal sizeable disparities among institutions alongside strong, cross-stakeholder readiness to collaborate and near-consensus on the necessity of doing so. Respondents converge on a portal-first design—namely, a shared, centralised discovery-and-request platform with single-sign-on authentication—as the most practical and widely supported model. Enabling conditions prioritised include interoperable management systems, robust IT infrastructure, harmonised cooperation policies, and sustainable funding; professional development emerges as a crucial, yet currently underweighted, prerequisite. From the results of this study, it is suggested that a phased implementation offers a feasible pathway to durable, system-wide resource sharing. Such an implementation requires the alignment of software stacks, standardised policies, and investments in staff training.

Citation:

Hieu, L. V., Tra, P. T., & Pham, H. T. (2026). Toward System-Wide Resource Sharing in Vietnamese Teacher Education through a Shared Portal Model. *International Journal of Learning, Teaching and Educational Research*, 25(5), 887–915. <https://doi.org/10.26803/ijlter.25.5.39>

---

\*Corresponding author: Huong T. Pham; [huongpt.2742@ueh.edu.vn](mailto:huongpt.2742@ueh.edu.vn)

**Keywords:** library cooperation; library services; teacher education; resource sharing; Vietnam

## 1. Introduction

In 2023, the message “Let’s work together, let’s library,” delivered at the World Library Community Conference in Rotterdam, the Netherlands, underscored collaboration as a core strategic direction for the library sector. This orientation is reflected in the continued proliferation of national and international library consortia, which—amid accelerating digital transformation—serve as connective tissue linking learning resources to users more effectively. International exemplars include SCONUL Access in the United Kingdom, a scheme enabling reciprocal borrowing and discovery across university and college libraries, and OhioLINK in the State of Ohio, United States, which offers a unified discovery-to-delivery gateway for participating academic, public, and school libraries. These models broaden access, pool costs, and mitigate infrastructural and geographic disparities, thereby strengthening teaching, learning, and research capacity across institutions.

In Vietnam, interlibrary cooperation has taken shape since the late twentieth and early twenty-first centuries, with initiatives such as VILASAL (southern areas), NALA (northern areas), and the scientific and technological information network coordinated by NASATI in partnership with the Vietnam Library Association (Nguyễn, 2016). The current legal framework consolidates this trajectory to encourage higher education in Vietnam to work together to share resources for quality improvement and effectiveness (Government of Vietnam, 2020). In practice, interlibrary cooperation yields a dual value proposition: it optimizes access for library users and controls costs for educational institutions. By sharing resources, developing joint services, and leveraging common infrastructure, libraries reduce acquisition costs, diversify access channels, and attract users both on and off campus. Rising demand for learning materials, combined with shrinking physical stack space for print, makes cooperation increasingly urgent. For electronic databases, consortia acquisition secures lower unit costs and extends reach (Tripathi & Lal, 2016).

In teacher education universities, whose disciplinary breadth spans the natural sciences, engineering, and the social sciences and humanities, needs are especially diverse; yet current e-resource portfolios remain limited—ProQuest Central and ScienceDirect are prevalent, while specialised databases such as Scopus, ACS, and MathSciNet are not yet widely available. In this context, interlibrary cooperation and resource sharing constitute a viable lever for closing content gaps, improving return on investment, and enhancing the user experience. To inform appropriate measures for connecting libraries across teacher-education universities and thereby making more effective use of institutional resources as well as state investment, this study examines the current status of library provision and users’ needs for library services. To the best of our knowledge, no previous study has provided such evidence in this context. The study forms part of a commissioned research project funded by Vietnam’s Ministry of Education and Training.

This paper aims to: (1) compare the current state of library information, infrastructure, and e-database access across seven key teacher education institutions in Vietnam; (2) survey users' use of libraries, and (3) their expectations for interlibrary cooperation. This study, therefore, collects data to answer the following research questions:

1. What is the current state of library information resources, infrastructure, and e-database access across seven key teacher education universities in Vietnam?
2. How do users at these institutions use library resources and services?
3. What are users' expectations regarding interlibrary cooperation and resource sharing among these institutions?

## 2. Literature Review

### 2.1. Interlibrary Cooperation Models

Interlibrary cooperation has evolved into a diverse set of models designed to enhance access, reduce duplication, and optimize resource use across institutions. These models include consortia, alliances, technical integration systems, and various resource-sharing mechanisms, each offering different degrees of formality, scalability, and functionality (Atkinson, 2018; Baathuli Nfila & Darko-Ampem, 2002; Pereira & Franco, 2020; Pisani, 2002; Roy & Habib, 2024).

Library consortia are formal collaborations among libraries established to maximize cost efficiency through collective bargaining, joint acquisitions, interlibrary lending, and the deployment of shared technical infrastructure (Tripathi & Lal, 2016). These networks are typically governed by legal frameworks, such as bylaws, memoranda of understanding, and centralized governance bodies with structured financial contributions (Chisita, 2017; Samea, 2015). A notable example is *Minitex* in the United States, serving over 4,250 member libraries across several states, offering integrated services such as training, document delivery, digitization cooperation, reference support, shared software infrastructure, and access to indigenous resources (Horton & Pronevitz, 2015). In the Global South, South Africa and Zimbabwe have successfully developed similar models with strong commitments and consistent funding (Chisita & Fombad, 2024).

Joint-use libraries represent a collaborative institutional model in which two or more library sectors—commonly academic and public—co-locate and co-govern physical spaces, collections, and service delivery, operating under shared agreements to serve overlapping and distinct user communities (American Library Association, 2025; Lee, 2024). Though less rigid than consortia, they operate through formal agreements that define space allocation, service delivery, and administrative responsibilities (Breeding, 2013a). An exemplar is the *Orbis Cascade Alliance* in the Pacific Northwest of the United States, comprising 37 academic libraries utilizing a shared library services platform (Alma/Primo) and Summit Union Catalog, with coordinated training and research support services.

Interlibrary loan (ILL) remains a cornerstone of global library cooperation, enabling users to access materials beyond their home institution by borrowing from partner libraries (Hamby & Neiman, 2023). Modern ILL services have evolved from bilateral exchanges to centralized platforms such as *WorldShare ILL*, powered by the *WorldCat* global catalog and used by over 10,000 libraries worldwide (Breeding, 2013b). Advanced implementations include the University of Liège Library (ULiège) in Belgium, which integrates *RapidILL* and Alma to automate requests and comply with copyright regulations, enhancing efficiency and transparency (Prosmans & Renaville, 2023). International Federation of Library Associations and Institutions (IFLA) guidelines standardize ILL practices, while countries implement region-specific platforms such as *Trove* (Australia), *Swisscovery* (Switzerland), and *ILSaS* (Greece), often incorporating service fees, payment via IFLA vouchers, and institutional agreements (Abdallah & Collins, 2023).

Union catalogs aggregate metadata from multiple libraries using standardized protocols such as OAI-PMH, facilitating unified search and discovery experiences across institutions (Ahammad et al., 2026). Metadata—typically formatted in Dublin Core or MARC—is harvested and aggregated to support collective querying, interoperability, and shared services (Van De Sompel & Lagoze, 2002). Expanding on metadata sharing, *shared print* initiatives such as the *Eastern Academic Scholars' Trust* (EAST) allow libraries to commit to retaining and circulating designated print collections, supporting long-term preservation and reducing redundancy (Stearns et al., 2020). Examples of large-scale implementations include *ARLICON* in Russia, which connects 14 regional consortia through synchronized metadata and shared e-document services (Plemnek & Sokolova, 2015), and *CAVAL* in Australia, which manages the *CARM* print repository for multiple universities and the State Library of Victoria (Wade, 1999).

These models differ mainly in governance intensity, service scope, and technical integration. Library consortia represent the most structured approach to collaboration with their emphasis on economies of scale through cooperative buying, sharing infrastructures, and central governance. The joint use model, on the other hand, is a less systemic form of library cooperation that involves local partnerships for sharing spaces and services. The interlibrary loan model represents an access-focused collaborative effort, whereas the union catalog and technical solutions represent discovery-oriented types of library cooperation. Shared print initiatives differ further by prioritizing preservation, space optimization, and long-term collection stewardship. These models show that cooperation ranges from loose access arrangements to deeply integrated infrastructure and governance.

## 2.2. What Makes Interlibrary Cooperation Work

Despite the vast benefits and persistent challenges of resource sharing, the review of current literature has shown that several core elements should be addressed to make the operation and resource sharing work at various levels. Bae (2016) identifies several core elements that are essential for successful cooperation and

resource sharing among libraries, both locally and internationally. A core principle of modern library cooperation is a user-centred approach, where librarians aim to meet users' needs by fulfilling requests whenever possible and offering practical alternatives – such as resource sharing – when direct access is not available (Francis & Chinnasamy, 2025; Ku et al., 2026). This willingness to lend is crucial because a library's ability to borrow is directly influenced by its readiness to supply materials, ensuring the entire ILL system functions effectively. This user-centric philosophy requires resources, staff time, training, and financial commitment, but ultimately leads to greater user satisfaction. Bae (2016) believes that information should be used rather than merely stored on shelves, and that recalls can be made if a locally lent item is needed.

Effective resource sharing also critically depends on robust inter-departmental cooperation within libraries (Bae, 2016; Nonthacumjane, 2022). Success is “inextricably linked” to the policies and collaborative efforts of colleagues across various library functions, including reference, instruction, systems, cataloging, e-resource management, acquisitions, and collection development. Notably, ILL and circulation departments must work closely together, sometimes even merging, to create a seamless experience for patrons and simplify workflows for staff. This collaboration ensures that holdings information is accurate, systems are interoperable, and purchasing is considered when borrowing is not feasible (Bae, 2016).

Technological interoperability is another cornerstone of successful resource sharing (Bae, 2016). This enables seamless access, discovery, and exchange of resources across institutions (Xu et al., 2025; Ajani et al., 2024). Systemic challenges arise from the general lack of integration between circulation and ILL software. To overcome this, the implementation of technologies like the NISO Circulation Interchange Protocol (NCIP) and ILL transaction management software (e.g., ILLiad) is vital (Bae, 2016). These tools establish communication links between a library's Integrated Library System and its ILL management software, allowing for the automatic creation of temporary records for ILL items in the ILS and streamlining circulation processes. Recently, Sun et al. (2025) suggested a model, a blockchain-based library resource sharing system, designed to tackle issues like data security, resource allocation efficiency, and privacy protection in traditional library management.

Furthermore, consortia resource sharing offers substantial benefits by standardizing policies and leveraging shared technology among member libraries (Bae, 2016; Breeding, 2013b). These networks often use a shared union catalog or intermediary system for discovery, sometimes with real-time availability information, enabling patrons to search and request materials from a single interface (Breeding, 2013b). Standardized and efficient shipping methods, often involving contracted couriers, designated bins, and color-coded labels, drastically reduce costs and delivery times, enhancing patron satisfaction.

For international resource sharing, extant review also acknowledges significant challenges such as complex copyright laws, language barriers, high shipping costs, and a lack of standardized international infrastructure (Bae, 2016; Frederiksen et al., 2011; Sharing & Transforming Access to Resources Section International Interlibrary Loan, 2009). To make it work, libraries are required to nurture seamless and active international ILL networks actively. Practical tips include creating lists of local language experts among staff, utilizing library glossary translation tools, and writing addresses in foreign alphabets on shipping labels to prevent delays.

### **3. Research Context and the Vietnamese Situation of Library Cooperation**

#### **3.1. Vietnamese Higher Education and Universities of Education**

Vietnam's higher education system comprises 237 universities, of which 172 are public and 67 are private (Le, 2024). Only 119 higher education institutions (HEIs) fall under the direct authority of MOET; the remainder are overseen by other governing bodies such as sectoral ministries, provincial/municipal authorities, or foreign organizations (Iosad, 2020). Broadly, HEIs adhere to MOET's guidance and oversight for academic matters, while their finance and general administration are managed by their respective governing agencies. Public HEIs are funded, maintained, and represented by the government, whereas private HEIs rely on investment from domestic or foreign stakeholders. All HEIs are required to articulate their development objectives and designate an institutional orientation – either research-focused or application-oriented (Le, 2024).

In early 2025, the Vietnamese government issued a Decision approving the Plan for Higher Education and Teacher Training Institution Network Development for the period 2021-2030, with a vision to 2050. This strategic plan includes developing a university-level network for 180–200 thousand learners in teacher education, with 85% focused on undergraduate and 15% on advanced training. Institutions are categorized into three groups: leading universities of education with strong research and national coverage (64% of training needs), regional universities addressing local demands (30%), and specialized universities in fields like technology, arts, and sports (6%). Key strategies involve upgrading existing institutions, establishing new ones in major cities, ensuring quality assurance, and fostering coordinated network integration nationwide (Vietnamese Prime Minister, 2025). The plan also includes a list of 14 key universities specialised in teacher education, with two national universities. Out of 14 institutions, 7 were involved in this study.

#### **3.2. The Vietnamese Situation of Library Cooperation**

Compared to international practices, library cooperation models in Vietnam remain relatively limited in diversity and scale. However, several emerging models reflect growing efforts to integrate infrastructure, resources, and services across institutions.

### 3.2.1 Centralized integration model

This model involves consolidating all core library operations onto a shared platform managed by a lead institution or third-party provider. While offering advantages in standardization and system coherence, it requires significant upfront investment and poses risks such as a single point of failure. It also demands high levels of policy and technical standardization (Đỗ, 2017). A notable example is the Vietnam National University-Ho Chi Minh City (VNU-HCM), which operates under a central library-member library structure, where the Central Library leads strategic planning, develops shared technology platforms, manages collective resources, and enforces unified policies. Member libraries maintain physical collections and adhere to the shared governance framework (Central Library - Vietnam National University Ho Chi Minh City, 2017).

### 3.2.2 Distributed model

In this decentralized model, each library maintains its own management system but connects with others via shared search interfaces or metadata interoperability. It offers flexibility and ease of implementation, but suffers from inconsistent service policies and user experiences across institutions (Đỗ, 2017). An example is the STE Consortium, initiated by Hanoi University of Science and Technology, comprising 25 members as of 2019. This model emphasizes open membership, collaborative acquisition, and the use of open protocols like OAI-PMH for sharing internal resources. Technically, members operate autonomous systems while participating in a shared search and access portal (Nguyễn, 2019).

### 3.2.3 Resource sharing alliances

This approach is based on mutual agreements among libraries to share resources and improve user services, commonly through joint licensing, interlibrary loan, or shared digital access (Bangani et al., 2018; Ratnayake, 2025). The Vietnam Library Consortium for Science and Technology Resources, coordinated by the National Agency for Science and Technology Information, facilitates group subscriptions to electronic databases, thus optimizing licensing costs and expanding content coverage (Vietnam Academy of Science and Technology, 2017). In the higher education sector, this consortium model is a critical mechanism for sustaining access to international academic databases under budget constraints (Le, 2019).

### 3.2.4 Regional networks and professional chapters

Regional chapters such as the Northern Academic Library Association (NALA) and the Vietnamese Library Association in Southern Academic Libraries (VILASAL) serve as foundational platforms for soft integration. These networks coordinate training, workflow standardization, and resource connections across institutions. Operating through task-based working groups, they reduce redundancy in professional development, promote the dissemination of best practices, and enable collective decision-making for shared service initiatives (Truong & Lê, 2011; VILASAL, 2025).

Given this context, this study was conducted to examine the libraries of seven universities of education in Vietnam for possible library cooperation in the near

future to promote the quality of teacher education training, aiming to meet the strategic plan of the government issued recently in early 2025.

## 4. Methodology

### 4.1 Research Design

This study used a survey approach. Surveys represent a robust and widely adopted methodological approach in library and information science research, particularly for exploring user behaviors, perceptions, and expectations in academic settings (Adeniran, 2011; Connaway & Radford, 2021). In this study, the survey method is justified as it efficiently captures quantitative data from diverse participant groups across multiple universities of education in Vietnam. Key advantages of surveys include their ability to reach large, geographically dispersed samples cost-effectively, especially via online platforms like Google Forms, facilitating high response rates while minimizing logistical challenges. They support structured questionnaires with scales, yielding descriptive data on variables such as usage frequency and perceived benefits (Connaway & Radford, 2021).

### 4.2. Participants

Table 1 presents the demographic information of the participants in this study.

**Table 1: Demographic information of participants**

University	Users		Library staff		Managers	
	2,180	%	64	%	102	%
Thai Nguyen University of Education (TNUE)	256	11.8	10	15.6	10	9.8
Hanoi Pedagogical University 2 (HNPU2)	328	15	10	15.6	15	14.7
Hanoi University of Education (HNUE)	338	15.5	10	15.6	18	17.6
College of Education, Vinh University (CoE-VU)	362	16.6	11	17.2	22	21.6
University of Education - Hue University (UE-HU)	232	10.6	7	10.9	7	6.9
University of Science and Education University of Da Nang (USE-UD)	263	12.1	5	7.8	11	10.8
HCMC University of Education (HCMUE)	401	18.4	11	17.2	19	18.6

The seven universities were selected because they were identified as key teacher education providers specializing in initial teacher education as defined in a national strategic plan to reform the higher education system (Vietnamese Prime Minister, 2025). They are all public universities.

The questionnaires were distributed to users, library staff, and managers via individual universities.

### 4.3 Questionnaire

The questionnaire was developed to ask library users about how they explored libraries at their universities, including the frequency, purpose, and types of

resources and tools used, and their expectations for library resource sharing: the perceived need, benefits, and necessary conditions for an interconnected library system. The questionnaire was developed with three main sections.

Section A: Personal Information collects demographic details, including the respondent's institution, age group, and user category (lecturers/researchers, postgraduate learners, or students by year). Section B: Library Usage assesses current engagement with university libraries. It explores the frequency of library use (e.g., very frequent to never), purposes (learning/teaching, research, entertainment), and utilization of information resources (printed and digital textbooks, journals, theses, electronic databases).

It also examines search tool usage (online catalogues, portals) and alternative external sources (e.g., Wikipedia, social media), alongside the diversity and adequacy of resources and the impact of library services (borrowing, research support) on academic activities. Section C: Expectations for the interlibrary system evaluates willingness to participate in developing the model, its perceived necessity, and benefits (e.g., resource access, cost reduction). It also surveys preferred models (e.g., shared portals), necessary conditions (resources, IT infrastructure), influencing factors (funding, policies), and specific aspects (resource sharing, support services), and an open-ended question for additional proposals to refine the model.

The scales used in this study varied, dependent on the nature of the questions, either on a five-point Likert scale, such as from 1 (very frequent) to 5 (never), or options to select for purposes of using resources ( learning/teaching, research, entertainment).

#### **4.4 Data Collection**

The data for this study were collected through available resources at these universities, and online surveys were conducted using Google Forms from October to November 2024. This study was approved by the Research Ethics Committee for Social Sciences and Humanities of Ho Chi Minh City University of Education, Approval No. ECSH-2024-005 dated 18 September 2024. Consent was obtained from the top leaders of these universities. Emails were sent via each university system with a cover letter so that respondents could indicate their consent before taking part in the survey.

#### **4.5 Data Analysis**

Following the completion of the Google Forms survey, the study used SPSS version 22.0 to process the collected data from the questionnaires. Descriptive statistics were applied to summarize and describe the characteristics of the dataset. Key parameters utilized included frequencies, percentages, means, and standard deviations, which provided a comprehensive overview of the responses from users, library staff, and managers across the seven universities of education.

## 5. Results

### 5.1. Library Resources and Infrastructure

#### 5.1.1 Library information

As of 2025, the libraries of universities of education have diverse sources of traditional materials, digital documents, and many electronic databases.

Table 2 reveals significant variations in traditional library holdings across seven universities of education with a collective total of 372,920 titles. Textbooks and reference materials dominate, comprising over 80% of titles on average. Theses/dissertations show uneven distribution, ranging from negligible (e.g., 15 titles at HNPU2) to substantial (4,949 at HNUE). This indicates large disparities in postgraduate training at these universities. Journals and proceedings are most robust at HNUE (28,681 titles), highlighting its potential as a research hub, while “other documents” are sparse or absent in several institutions.

**Table 2: Traditional resources**

No	Types	HCMUE	TNUE	HNUE	HNPU2	CoE-VU	UE-HU	USE-UD
1	Textbooks & reference	112,146	9,597	60,738	18,260	20,000	21,372	26,021
2	Thesis at all levels	1,034	837	4,949	302	15	1,553	74
3	Journals, Proceedings	12,445	7,363	28,681	16,993	16,000	6,517	2,996
4	Other documents	2,204	614	-	-	2,000	209	-
<b>Total</b>		<b>127,829</b>	<b>18,411</b>	<b>94,368</b>	<b>35,555</b>	<b>38,015</b>	<b>29,651</b>	<b>29,091</b>
<b>All universities</b>				<b>372,920/ 1,303,840</b>				

Table 3 on digital resources reveals stark disparities in holdings, totalling 126,574 files, with journals and proceedings emerging as the dominant category. Textbooks and references vary widely, from a high of 9,637 at UED-UD to just 197 at HNPU2. The result highlights uneven digitization efforts. Theses and dissertations exhibit an extreme concentration at HNUE (26,401 files) compared to near-absence elsewhere. The results show that HNUE leads with 48,885 files, nearly 39% of the total.

**Table 3: Digital resources**

No.	Types	No. of files						
		HCMUE	TNUE	HNUE	HNPU2	CoE-VU	UE-HU	USE-UD
1	Textbooks & reference	373	1,982	1,495	197	5,000	2,837	9,637
2	Thesis at all levels	1,077	-	26,401	1	-	157	-
3	Journals, Proceedings	9,190	4,930	20,989	9,396	16,000	6,417	9,995
4	Other documents	-	-	-	-	500	-	-
<b>Total</b>		<b>10,640</b>	<b>6,912</b>	<b>48,885</b>	<b>9,594</b>	<b>21,500</b>	<b>9,411</b>	<b>19,632</b>
<b>All universities</b>				<b>126,574</b>				

Table 4 reveals a significant disparity in electronic database access as well. HNUE stands out with access to 19 databases, including major academic platforms such as Scopus, Web of Science, ScienceDirect, and ProQuest. In contrast, UED-UD has access to none, and several institutions – such as TNUE, HNPU2, and UE-HU – have minimal access (1–2 databases). Notably, high-value research databases like Scopus and Web of Science are accessible to only one or two universities. This uneven distribution underscores a critical gap in research capacity and digital equity within these universities.

**Table 4: Electronic databases**

No	Databases	HCM UE	TNUE	HNUE	HNPU 2	CoE- VU	UE- HU	UED- UD
1	ACS (American Chemical Society)	x		x		x		
2	Annual Reviews			x				
3	Association for Computing Machinery			x		x		
4	Cambridge University Press	x		x		x		
5	Elsevier			x				
6	Emerald e-Journals			x				
7	IEEE Computer Society			x		x		
8	IG Publishing	x		x		x		
9	IGI Global	x		x		x		
10	Oxford University Press	x		x				
11	Pearson			x				
12	ProQuest	x		x	x	x	x	
13	Sage Publications			x		x		
14	Science Direct		x	x		x	x	
15	Scopus			x		x		
16	Springer Link	x		x	x	x		
17	Springer Open			x		x		
18	The American Physical Society			x		x		
19	Web of Science			x				
<b>Total</b>		7	1	19	2	13	2	0

### 5.1.2 Library facility, equipment, and technology

All 7 university libraries have invested in equipment, learning spaces, and digital platforms to enhance their services and meet growing academic demands. However, the development levels and technology applications vary among institutions based on their regional characteristics and available resources. This infrastructure evaluation is critical for evaluating each library's capacity to support users and the potential for inter-institutional collaboration.

**Table 5: Library facility**

No	Units	HCMU E	TNUE	HNUE	HNPU2	CoE-VU	UE-HU	UED- UD
1	Book Repository	3	5	5	2	8	3	2
2	Reading Room	3	4	3	3	6	2	2
3	Group Study Room	8	8	3	2	5	0	1
4	Storage Area	3	1	2	2	8	2	1
5	Computer Room	0	1	1	1	3	1	2
6	Administrative Area	6	3	7	4	6	0	1
7	Consultation Area	1	1	0	0	0	0	0
8	Self-Study Area	1	0	0	0	0	0	0
9	Production Room	0	1	0	0	0	0	0
10	Photocopy Room	0	0	1	0	0	0	0
11	Canteen	0	0	1	0	1	0	0
12	Digitization Room	0	0	0	0	0	0	1
Total		25	24	23	14	37	8	10

Table 5 highlights notable variations in library facilities, indicating disparities in physical infrastructure that may impact user experience and academic support. CoE-VU leads with 37 facilities, offering a robust combination of repositories, study spaces, and computer access, while UE-HU and UED-UD lag with only 8 and 10 facilities, respectively. They did not own key areas such as consultation, self-study, and digitization rooms. Most institutions provide standard features like reading rooms and book repositories, but critical services such as digitization, materials production, and self-study areas are either limited or absent in most libraries.

**Table 6: Equipment at seven libraries**

No.	Equipment	HCMUE	TNUE	HNUE	HNPU2	CoE- VU	UE- HU	UED- UD
1	Document Security Control Gate	x	x	x		x	x	x
2	Check-out/Return Equipment	x	x	x	x	x	x	x
3	SelfCheck 24/7 Automated		x			x		x
4	Book Return System		x			x		
5	Scanner/ScanRobot Inventory	x	x	x	x	x	x	x
6	Equipment		x			x		x
7	RFID Technology Information Portal	x	x			x	x	x
8	(website, Fanpage)	x	x	x	x	x	x	x

Table 6 reflects a partial but uneven adoption of modern library equipment across the seven universities. Core technologies like check-out/return systems, scanners, and information portals are universally implemented, indicating a baseline digital infrastructure. However, more advanced features – such as SelfCheck systems, 24/7 automated book returns, and RFID inventory technology – are available

only at some institutions, primarily HCMUE, CoE-VU, and UE-HU. Notably, TNUE and HNPU2 lack the most advanced equipment.

**Table 7: Software used**

No.	Software	HCMUE	TNUE	HNUE	HNPU2	CoE-VU	UE-HU	UED-UD
1	Management Software Digital	SIERRA	ALEPH	LIBOL 8.0	KIPOS	KIPOS	LAC VIET	ALEPH MDATA
2	Library Management Software Search	DSPACE	ALEPH - SFX	LIBOL BOOKWORM	KIPOS	KIPOS		DSPACE
3	Software / Search Tools	ENCORE	PRIMO OPAC	LIBOL 8.0	KIPOS	WEB	LAC VIET	ALEPH MDATA

Table 7 reveals a fragmented software landscape at these universities, with each institution utilizing different systems for library management, digital content, and search functions. While HCMUE and HNUE have adopted integrated suites (e.g., SIERRA with ENCORE, and LIBOL across functions), UE-HU and UED-UD rely on more localized or legacy platforms (e.g., LAC VIET or ALEPH MDATA).

## 5.2 Reported Library Usage

### 5.2.1 Frequency and purposes of library use

Table 8 displays the results collected from 2,180 users at seven universities of education in Vietnam, revealing varied levels of library use. The results indicate that 41.8% of respondents frequently used the library, making it the most common level of engagement, followed by 28.0% who used it sometimes.

**Table 8: The frequency level of library use**

Frequency	Levels					M	SD	
	None	Rarely	Sometimes	Frequently	Usually			
Frequency	N	164	331	611	912	162	3.26	1.048
	%	7.5	15.2	28.0	41.8	7.4		

The results also show distinct patterns of how the participants used the libraries across the three surveyed purposes: learning/teaching, research, and entertainment. For learning and teaching, 37.9% of participants frequently used the library, and 21.9% usually used it. In contrast, for research purposes, the results show a lower engagement, with 36.1% using the library sometimes and only 18.7% frequently. Entertainment was reported the least common purpose, with 33.2% using the library sometimes, 30.9% rarely, and 19% never (Table 9). The finding suggests a moderate use of the library with a clear preference for learning and teaching over research and entertainment.

**Table 9: Reported purposes of using the library**

<i>Purposes of using the library</i>		<i>Levels</i>					<i>M</i>	<i>SD</i>
		<i>None</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Frequently</i>	<i>Usually</i>		
Learning/Teaching	N	94	126	655	827	478	3.6	1.01
	%	4.3	5.8	30.0	37.9	21.9	7	6
Doing research	N	337	473	787	408	175	2.8	1.14
	%	15.5	21.7	36.1	18.7	8.0	2	5
Entertainment	N	415	674	724	254	113	2.5	1.08
	%	19	30.9	33.2	11.7	5.2	3	3

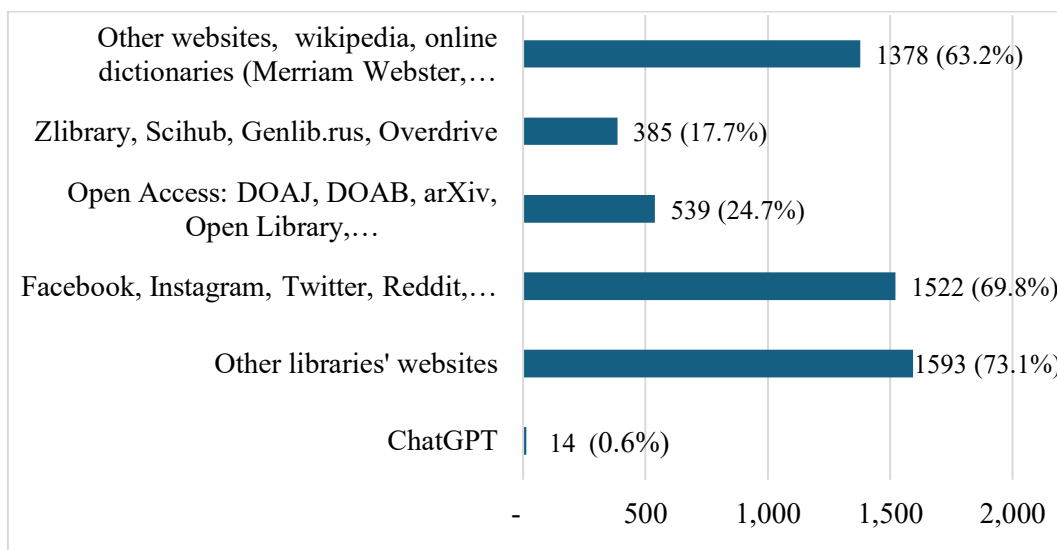
### 5.2.2 Tools Used and Alternatives

The survey also explored the extent to which participants utilized library search tools. It was found that the library portal was the most frequently used one, with 36.4% of respondents using it frequently and 16.7% usually, followed by the online catalogue, with 29.8% of frequent and 13.4% of usual users. Similarly, the document index was used frequently by 31.4% and always by 13.4% (Table 10).

**Table 10: Tools used**

<i>Tools</i>		<i>Levels</i>					<i>M</i>	<i>SD</i>
		<i>None</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Frequently</i>	<i>Usually</i>		
Online catalogue	N	232	287	719	649	293	3.22	1.159
	%	10.6	13.2	33.0	29.8	13.4		
Library portal	N	179	197	647	793	364	3.44	1.120
	%	8.2	9.0	29.7	36.4	16.7		
Document index	N	211	240	753	684	292	3.27	1.126
	%	9.7	11.0	34.5	31.4	13.4		

Despite the availability of these tools to support teaching, learning, and research, the results reveal that users also explored alternative external sources. General websites and educational platforms (73.1%,  $n = 1,593$ ) and social media (69.8%,  $n = 1,522$ ) were the most popular, followed by online dictionaries and encyclopaedias (63.2%,  $n = 1,378$ ). Free access databases like DOAJ, arXiv, and Open Library were used by 24.7% ( $n = 539$ ), while unofficial sources such as Z-Library and Sci-Hub accounted for 17.7% ( $n = 385$ ). ChatGPT usage was minimal at 6.6% ( $n = 14$ ). The results indicate a reliance on diverse external resources beyond the library system to meet their information needs (Figure 1).



**Figure 1: Other external sources**

### 5.2.3 Usage of resources

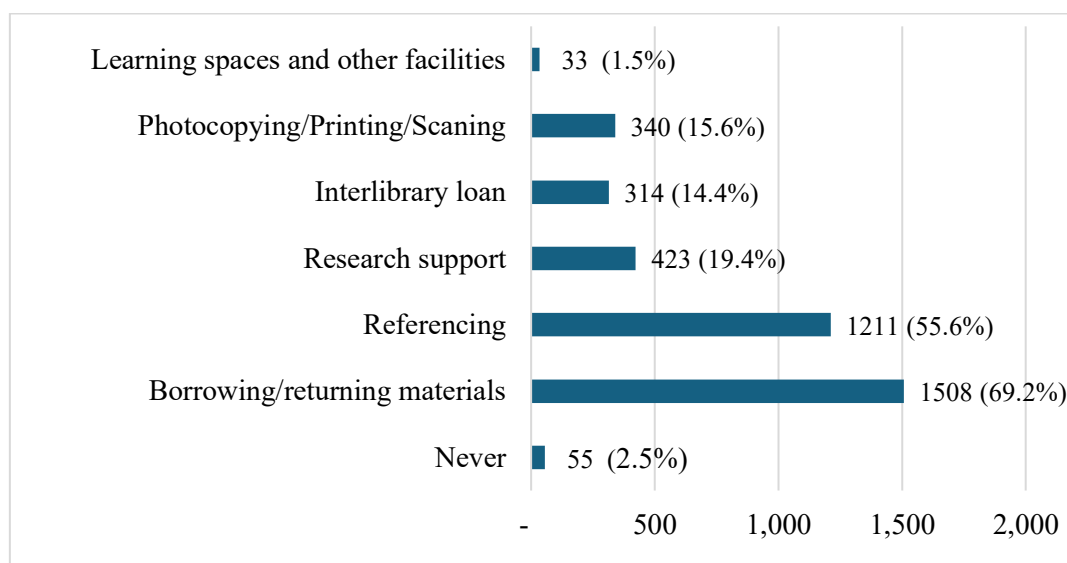
The results, as presented in Table 11, report the frequency of use of different resources at these libraries. Printed textbooks were the most utilized resource, followed by printed reference books. Usage of printed scientific journals, research projects, conference proceedings, theses, and dissertations was lower, with means ranging from 2.95 to 3.04. For digital resources, digital textbooks showed a mean of 3.29, while digital reference books had a mean of 3.01. Digital journals and theses/dissertations exhibited lower engagement, with means of 2.97–3.01. Electronic databases, such as SpringerLink and ProQuest, were the least used, with a mean of 2.98. Overall, printed resources, particularly textbooks, were preferred over digital counterparts, highlighting a reliance on traditional materials despite growing digital availability.

**Table 11: Frequency level of using various resources**

Resources	M	SD
Printed textbooks	3.66	1.137
Printed reference books	3.53	1.071
Printed journals, research projects, conference proceedings...	3.04	1.168
Printed theses and dissertations	2.95	1.235
Digital textbooks	3.29	1.171
Digital reference books	3.01	1.243
Digital journals, research projects, conference proceedings...	3.01	1.243
Digital theses and dissertations	2.97	1.264
Electronic databases (Springerlink, Proquest...)	2.98	1.241

### 5.2.4 Usage of library services and effectiveness

As regards library services, the results show a significant engagement of participants with library services (Figure 2). The most used service was borrowing/returning materials, with 69.2% (n = 1,508) of respondents using it, followed by reference and information search services, used by 55.6% (n = 1,211). Research support services were used by 19.4% (n = 423), while printing/photocopying/scanning services accounted for 15.6% (n = 340). Interlibrary loan services were accessed by 14.4% (n = 314), and space provision was the least used, with only 1.5% (n = 33). Additionally, 2.5% (n = 55) reported not using any services.



**Figure 2: Reported use of library services**

### 5.3 Expectations for the Library Collaboration

The survey results on users' expectations for library cooperation and resource sharing among universities of education in Vietnam provide insights into user willingness, perceived necessity, and benefits.

#### 5.3.1 A strong adoption intent across stakeholder groups

The results indicate a high level of consensus among participants on joining in developing a cooperation model, with 92.5% (n = 2,016) of the 2,180 users expressing willingness, alongside 98.4% (n = 63) of the 64-library staff and 90.2% (n = 92) of the 102 managers. Only 7.5% (n = 164) of users, 1.6% (n = 1) of library staff, and 9.8% (n = 10) of managers indicated unwillingness (Table 12).

**Table 12: Willingness to join in developing a cooperation model**

Options	Users		Library staff		Managers	
	N = 2,180	%	N = 64	%	N = 102	%
Yes	2,016	92.5	63	98.4	92	90.2
No	164	7.5	1	1.6	10	9.8

Willingness to participate in a cooperative model is exceptionally high for all three cohorts. This breadth of support suggests favourable change readiness rather than enthusiasm concentrated in a single constituency. The slightly lower “yes” rate among managers likely reflects governance and risk considerations rather than opposition per se.

### 5.3.2 Perceived necessity is near-consensus – especially among implementers

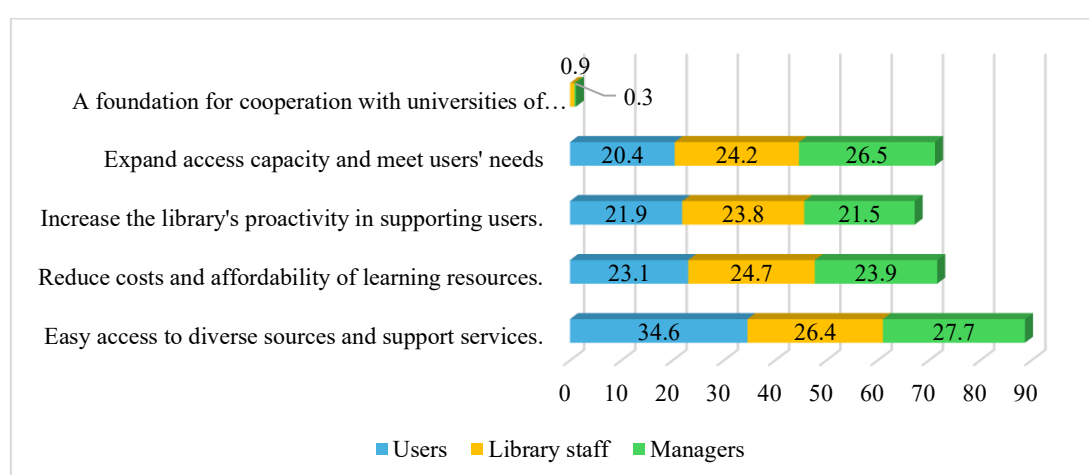
Table 13 further reveals strong support for the necessity of the model to enhance resource quality, services, and facilities for training and research. Perceptions of necessity are overwhelmingly positive. The higher “very necessary” shares among staff and managers indicate that those responsible for delivery view cooperation not merely as beneficial but as operationally urgent.

**Table 13: Reported level of necessity for a cooperation model**

Necessary levels	Users		Library staff		Managers	
	N = 2,180	%	N = 64	%	N = 102	%
Very necessary	1,171	53.7	47	73.4	70	68.6
Necessary	810	37.2	17	26.6	32	31.4
Neutral	184	8.4	-	-	-	-
Limited necessary	15	0.7	-	-	-	-
Not necessary	0	-	-	-	-	-

### 5.3.3 Benefits cluster around access, cost, and operational agility

Across groups, the top-ranked benefits are: (i) wider access to diverse resources, (ii) cost reduction, and (iii) greater access capacity to meet the users’ needs. Figure 3 highlights perceived benefits, with increased access to diverse resources scoring highest among users (34.6%), library staff (26.4%), and managers (27.7%), followed by cost reduction (23.1% users, 24.7% staff, 23.9% managers) and meeting the users’ needs (20.4% users, 24.2% staff, 26.5% managers). Interpreted together, stakeholders view cooperation as a high-ROI lever that expands content reach while improving service responsiveness.



**Figure 3: Perceived benefits of developing a cooperation model for seven universities**

### 5.3.4 Conditions for success: technology, content, and policy – weighted differently by role

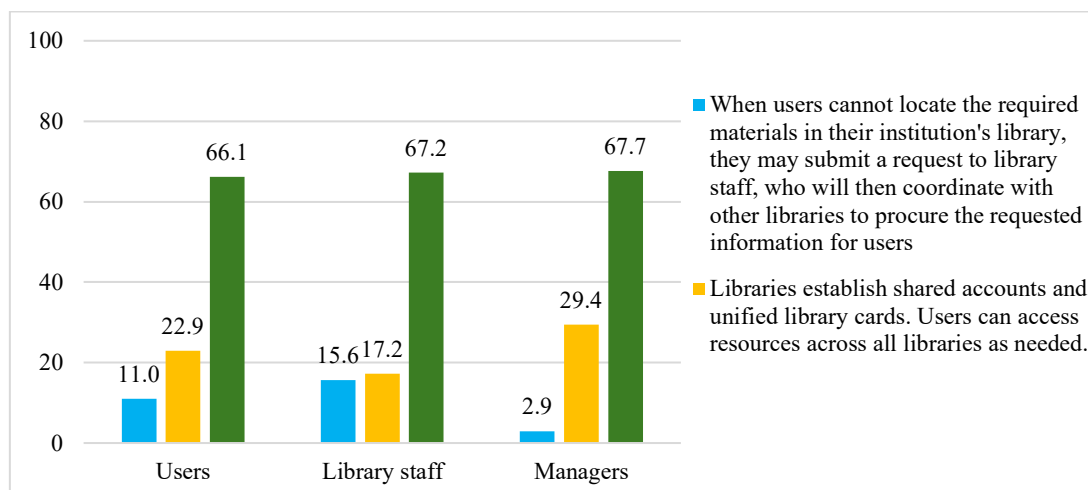
As regards participants' perspectives related to perceived conditions, necessity, and preferred models. Table 14 details the essential conditions for the model. Users rated information resources highest (mean = 4.35, SD = 0.76), followed by IT infrastructure (4.32, SD = 0.76), learning spaces (4.28, SD = 0.78), library services (4.26, SD = 0.76), and unified user accounts/policies (4.24, SD = 0.77). Library staff and managers showed higher means, with IT infrastructure (4.70–4.80), information resources (4.68–4.76), and cooperation policies (4.75–4.72) topping the list. Users emphasize information resources and IT infrastructure, followed by learning spaces and services. Staff and managers assign even higher weights to IT infrastructure, information resources, and cooperation policies. This pattern is instructive: end users focus on *what* is available and how reliably it can be accessed; implementers prioritize the *rules and rails* (policy and governance) that make sharing sustainable and compliant.

**Table 14: Conditions for a cooperation model**

Conditions	Users		Library staff		Managers	
	M	SD	M	SD	M	SD
Information resources	4.35	0.76	4.68	0.50	4.76	0.45
Library services	4.26	0.76	4.52	0.50	4.45	0.56
Learning spaces	4.28	0.78	4.16	0.60	4.17	0.75
Unified user accounts	4.24	0.78	4.51	0.59	4.46	0.77
Cooperation policies	4.24	0.77	4.75	0.44	4.72	0.51
IT infrastructure	4.32	0.76	4.70	0.46	4.80	0.45

### 5.3.5 Preferred design: centralized digital integration with unified identity

Figure 4 highlights preferred cooperation features, with a shared information portal with unified accounts being the most favored (66.1% users, 67.2% staff, 67.7% managers), followed by common library cards (22.9% users, 17.2% staff, 29.4% managers), and request-based interlibrary sharing (11% users, 15.6% staff, 2.9% managers). A shared information portal with unified accounts is the dominant preference, far ahead of common physical cards and request-based ILL alone. Stakeholders are signalling a desire for single-sign-on and one-stop discovery-to-delivery, rather than piecemeal or purely transactional sharing.



**Figure 4: Preferred features of library cooperation**

### 5.3.6 Factors affecting cooperation

Key determinants for the successful implementation of an interlibrary system were also surveyed (Table 15). The results show that users believed funding for development and maintenance, interconnected management systems, resource sharing capabilities, diverse library services, and policy development were equally highest, with staff training ranking third. Library staff prioritized resource sharing as the top factor, followed by management systems, policy development and funding, staff training, and service diversity. Managers ranked policy development highest, followed by management systems, funding, resource sharing, service diversity, and staff training lowest. Overall means across groups were 4.20 (users), 4.33 (staff), and 4.49 (managers), indicating strong perceived influence, with managers showing the highest consensus and emphasizing policy and infrastructure as critical drivers for the success of cooperation.

**Table 15: Factors affecting library cooperation and resource sharing**

Factors	Users		Library staff		Managers	
	M	SD	M	SD	M	SD
Policies for cooperation	4.19	0.915	4.34	0.839	4.67	0.599
Funding for cooperation	4.21	0.889	4.34	0.82	4.58	0.636
Interconnected management system	4.21	0.901	4.36	0.842	4.64	0.607
Staff training	4.15	0.937	4.19	0.888	4.19	0.771
Resource sharing capabilities	4.21	0.929	4.42	0.851	4.54	0.74
Diverse library services	4.21	0.922	4.34	0.858	4.33	0.86
<b>Average means</b>	4.2		4.33		4.49	

## 6. Discussion

### 6.1 Library Evaluation

The evaluation of library systems across seven Vietnamese universities of education reveals an uneven landscape in terms of resource allocation, technological infrastructure, and digital integration.

Traditional print holdings are heavily skewed toward textbooks and reference materials, indicating a strong curricular focus and instructional support. However, the presence of dissertations and journals varies widely. The digital collection profile further illustrates disparities. The underdevelopment or absence of digitized “other documents” across most institutions highlights a missed opportunity to enrich digital libraries with diverse content formats such as multimedia or teaching aids. These gaps reflect not only institutional priorities but also differing capacities for digitization initiatives.

Access to electronic academic databases is among the most significant disparities. The near-exclusive availability of high-impact databases to one or two universities exposes a critical gap in research equity across Vietnam’s teacher education sector. As Lund et al. (2023) explain, developing countries frequently face barriers to subscription-based scholarly content due to limited budgets and policy constraints, forcing faculty and students to rely on informal alternatives such as Sci-Hub and academic social networks (Suh, 2024).

## **6.2 Facilities and Technology Disparities and Software Ecosystem Fragmentation**

It is possible that the uneven presence of facilities and services supported by technology in the study reflects something more than just differences in library equipment; rather, it could represent unequal preparedness for future cooperation. Current literature has established that effective cooperation relies on institutional capabilities, sustainable financing, and each member library’s contribution to a collaborative service delivery process (Cuhadar & Cimen, 2019; Ostos & Gardinier, 2018). Literature on federated authentication and remote access has similarly revealed that even what may seem to be purely technical measures, such as single sign-on and electronic resource authentication, necessitate collaboration among libraries, IT departments, vendors, publishers, and other governance agencies (Romano & Huynh, 2021; Ruenz, 2022).

As a result, the dominance of sophisticated facilities like the SelfCheck kiosks, round-the-clock return stations, and RFID technology in only some universities might engender asymmetric participation in a future cooperative network. Libraries endowed with superior equipment would likely serve as service centers, whereas less developed libraries could end up as passive beneficiaries rather than active partners. Such a phenomenon would resonate with findings from academic libraries in developing countries, where the transition to digital services has been largely dictated by infrastructure, human capacity, and institutional readiness (Rafiq et al., 2021). Without harmonized digital infrastructures, even basic collaboration, such as interlibrary loans or joint digitization projects, becomes technically complex and administratively burdensome (Bae, 2016; Breeding, 2013b).

The disparities identified above present real obstacles to forming a cooperative specialized library network among the seven institutions. Key challenges include (a) technological incompatibility, (b) inequitable resource distribution, (c) budget and policy constraints, (d) governance and institutional autonomy. Yet, these challenges also represent areas where strategic intervention could yield

significant benefits. For example, national-level initiatives to support shared digital infrastructure, such as a national library system or consortia subscriptions, could reduce costs and improve equity. Shared repositories, standardized metadata protocols, and open-access digitization campaigns could further enhance access, aligning with global trends toward collaborative digital scholarship.

### 6.3 Library Usage

The survey results demonstrate critical dimensions of library usage. The strong preference for learning and teaching purposes over research and entertainment suggests that libraries are primarily perceived as instructional hubs rather than multifaceted research or leisure spaces. This is consistent with recent literature showing that academic libraries have increasingly been reorganized around learning commons, student engagement, and informal learning functions rather than solely around collections (Allison et al., 2019; Kim, 2022; Zhu et al., 2025). This imbalance may reflect curriculum-driven demands but also highlights an opportunity to reframe libraries as dynamic research ecosystems, potentially through targeted digital resource development to align with academic research goals.

The reported heavy reliance on library portals and external sources indicates that digital-savvy users value convenience beyond traditional systems. This finding shows a gap in current library services, which may not match the range or immediacy offered by external platforms. The tendency for academic users to turn to alternative, and sometimes unofficial, sources is also noted by Suh (2024). Suh (2024) studied Sci-Hub usage among Korean researchers. Even in more digitally mature contexts, the preference for pirate access and academic social networks reflects frustrations with traditional access mechanisms, much like what Vietnamese students and faculty may experience. Additionally, Zapata-Carratala et al. (2022) argue that the global discontent with commercial database paywalls supports the notion that researchers often turn to Sci-Hub and similar platforms not out of disregard for legality, but out of necessity. This aligns with the behaviour found in this study, where users rely on both library portals and non-traditional sources, maybe for research, given the limited research resources at these universities.

Furthermore, Oladokun et al. (2024) emphasize the growing role of free-access and hybrid platforms for disseminating scholarly information. This supports the global trend of researchers seeking alternative access models due to institutional constraints. The results highlight the need for Vietnamese education libraries to integrate open-access resources and develop targeted digital strategies. Such measures could realign libraries with academic research goals and close the accessibility and usability gap currently filled by unofficial platforms. Service usage in this study is led by borrowing/returning and reference support. While these show moderate perceived impact, this finding reveals underutilized potential in research support and interlibrary loans. This could be linked to limited promotion or accessibility. This is closely aligned with curriculum-driven

library use and perhaps other barriers, including language barriers, as found in other countries (Lund et al., 2023).

#### **6.4 Models of Cooperation: Participants' Perspectives**

The study's findings suggest a system primed for collaboration. Across users, library staff, and managers, willingness to join a cooperative model is uniformly high, and perceptions of necessity approach consensus. These results align with previous studies discussing resource sharing as a key strategy in the conditions of the growing cost of informational materials, changes in academic resource markets, and transition from ownership to access provision (Levenson et al., 2020; Bergstrom et al., 2024). The marginally lower willingness among managers is plausibly a governance and risk signal rather than opposition. Similar findings were found in studies examining the effectiveness of library consortia in cooperation (Cuhadar & Cimen, 2019; Hoang & Genoni, 2014).

The perceived benefits for resource sharing reported in this study fall into three categories: broader access to diverse resources, cost containment, and meeting users' needs. This mirrors what consortia and interlibrary networks typically claim as their core value proposition. A notable result is how clearly respondents converge on how cooperation should be implemented: a centralized digital model with unified identity. Preference for a shared information portal and single sign-on over piecemeal mechanisms aligns with the socio-technical view that sharing is, at heart, a multi-system integration problem (Beamer, 2019). In line with this view, users weigh what is available and reliably accessible (Abubakar, 2020; Fagan, 2014), while implementers add layers of regulations and infrastructure (Felts & Carpenter, 2023; Romano & Huynh, 2021).

The major problem with this study's findings is that staff training is consistently understressed as opposed to strategy, infrastructure, and funding. Recent practice consistently shows that training on metadata/standards, license boundaries, routing logic, OA substitution, purchase-on-demand triggers, and analytics is critical in transforming available infrastructure into an efficient one. The lack of training can lead to failure to realize potential benefits from improvements related to fill rates, turnaround time, and compliance despite strong platforms and policies. Human resources and skills are key to any initiative (Bae, 2016; Tran, 2023). Another tension lies in how governance is perceived. Users tend to place less importance on cooperation policies than managers, even though policy frameworks are what make cross-institutional services predictable and fair. This gap could be addressed by developing transparent, user-facing policies and dashboards that can translate abstract governance into tangible service assurances.

### **7. Conclusion**

This study shows substantial disparities in library resources, infrastructure, and technological capacity among seven universities of education, yet strong institutional readiness for interlibrary cooperation is also evident. Some universities, such as HNUE and HCMUE, contrast sharply with less-resourced counterparts, particularly in access to high-impact databases and integrated

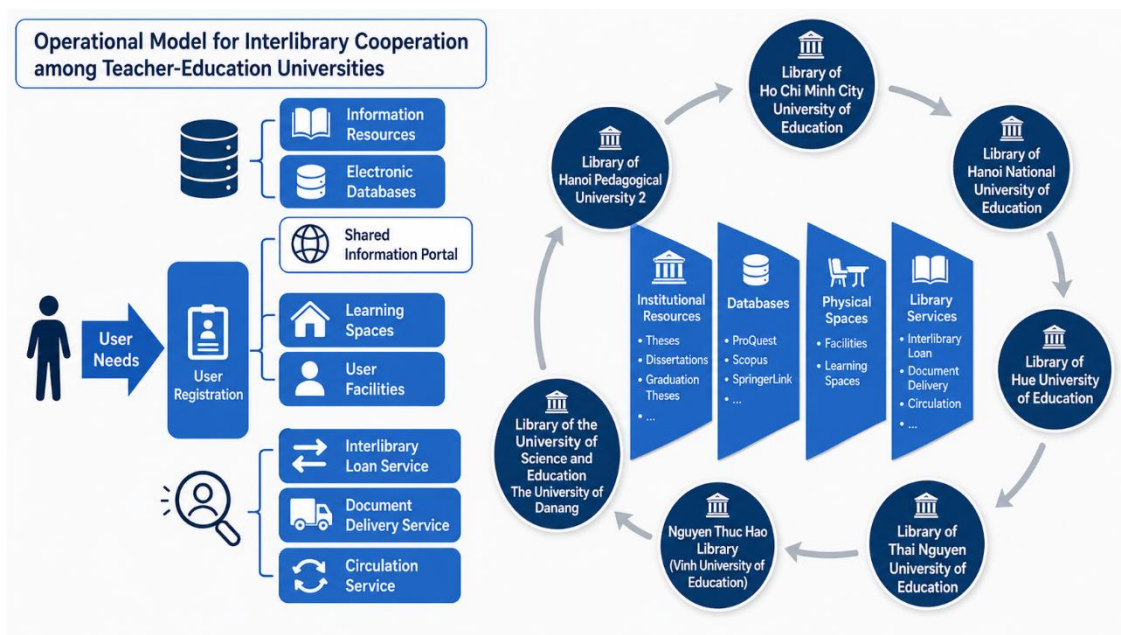
digital systems. Library usage patterns further reveal a predominantly instructional orientation and a reliance on informal external sources, which highlights systemic gaps in research support. Despite these challenges, consensus among various stakeholder groups indicates the perceived value of cooperation in enhancing access, efficiency, and service quality. More importantly, the study demonstrates that technological solutions alone are insufficient; human capacity, particularly staff skills and training, are key drivers in translating cooperative intent into sustainable outcomes. These results affirm the central argument that coordinated governance, interoperable systems, and strategic investment in people are essential to building an equitable and effective academic library network.

## **8. Implications**

This research offers practical direction for policymakers and institutional leaders aiming to put interlibrary cooperation into practice through a phased, system-wide approach. We suggest a distributed library network in the current stage of development before transforming the network to a centralised one (Figure 5).

The proposed model is grounded in the principle of a distributed library network, in which multiple autonomous teacher-education university libraries are connected through shared infrastructure, resources, and services without requiring the establishment of a single central library. In this model, each participating library retains its institutional identity and local management, while contributing to and benefiting from a common system for bibliographic data sharing, information-resource access, interlibrary loan, document delivery, and circulation services. This approach reflects established international models such as OCLC, OhioLINK, Jisc Library Hub, and CARL, where cooperation is achieved through interoperability rather than institutional centralization. For Vietnamese teacher-education universities, a distributed model is particularly appropriate because it allows unevenly resourced institutions to collaborate gradually, optimize investment, expand access to learning and research materials, and strengthen service capacity across the network.

In the later stage, MOET could play a key role by initiating a sector-wide interlibrary cooperation project with dedicated funding, technical coordination, and structured professional training. Such a project would allow teacher-education universities to move beyond voluntary, fragmented cooperation toward a formally supported system with shared infrastructure, common standards, and clear implementation responsibilities. Thus, government involvement would not simply facilitate cooperation; it would provide the institutional support needed to make cooperation work and sustain over time.



**Figure 5: Operational model for interlibrary cooperation among teacher education universities in Vietnam**

At the governance level, the proposed distributed model requires participating institutions to move beyond ownership-driven approaches toward an access-based and consortial logic. Each university would retain its institutional autonomy, but resource access, service standards, and technical development would be coordinated through shared policies and collaborative decision-making. A later-stage priority would be the introduction of a shared discovery layer and single sign-on authentication to reduce fragmentation and improve the user experience. In this process, the existing platforms and technical capacity of leading teacher-education universities such as HCMUE and HNUE could serve as pilot anchors or reference systems for gradual expansion across the seven institutions. However, such coordination would require a strong enabling role from MOET, particularly in funding, policy alignment, interoperability standards, and capacity building.

Operationally, the model should prioritize automation of core workflows, resource-sharing services, interlibrary loan, document delivery, and scan-and-deliver mechanisms. These improvements would allow the distributed network to function as an integrated service ecosystem while preserving local library operations. At the same time, targeted staff development is essential because librarians would need to move beyond custodial roles toward more active functions as digital navigators, research-support providers, and information-literacy guides.

In the longer term, the sustainability of the model will depend on policy reform, especially around copyright, licensing, metadata interoperability, and shared-service governance. Continued investment in human capacity remains crucial because the effectiveness of a distributed library network ultimately depends not

only on shared platforms but also on the ability of library staff and institutional leaders to adapt, coordinate, and innovate across organizational boundaries.

## 9. Limitations and Future Research

This study is limited by its research design, focusing on the broad picture related to the libraries of seven universities and capturing stakeholder perceptions rather than observed outcomes of cooperation. This study is, therefore, a descriptive study in nature. The sample is also context-specific, focusing on universities of education, and participant groups were unevenly represented. Future research could examine institutional heterogeneity, pilot specific cooperation models, or employ qualitative approaches or a mixed method study to better understand governance dynamics, implementation challenges, and long-term impacts of interlibrary collaboration. Future research could also explore the impacts of library resources on education quality or outcomes.

## 10. Ethics Statements

The research was carried out following “the Principles and Ethical Standards in Social Sciences and Humanities Research,” accompanied by Decision No. 4111/QĐ-ĐHSP dated 27 December 2022 by the President of Ho Chi Minh City University of Education. The ethical aspects of this research, therefore, were reviewed and approved by the Research Ethics Committee for Social Sciences and Humanities of Ho Chi Minh City University of Education, Approval No. ECSH-2024-005 dated 18 September 2024.

## Conflict of Interest

The authors declare no competing interests.

## Funding

This research is funded by Viet Nam Ministry of Education and Training under grant number B2024-SPS-02, Project title: “Research on Library interconnection model to improve the quality of training and scientific research services at the University of Education.”

## Generative AI Statement

As the authors of this work, we used ChatGPT for the purpose of improving the readability and language of the manuscript. After using this tool/service, we reviewed and edited the content as needed and take full responsibility for the content of the published article.

## 11. References

- Abdallah, E., & Collins, P. (2023). *Document delivery and resource sharing: Global perspectives*. IFLA.
- Abubakar, J. (2020). Availability and accessibility of information resources in university libraries for students’ academic use: A case study of pharmaceutical science students at the University of Jos. *Library Philosophy and Practice*, Article 4231. <https://digitalcommons.unl.edu/libphilprac/4231>.
- Adeniran, P. (2011). User satisfaction with academic library services: Academic staff and students’ perspectives. *International Journal of Library and Information Science*, 3(10), 209–216. <https://doi.org/10.5897/IJLIS11.045>

- Ahammad, N., Shoeb, M. Z. H., Rahman, M. S., Alam, M. J., Islam, M. N., Rahman, M. Z., & Sarker, M. A. M. (2026). Building bridges between libraries: The creation of a Union Catalog with VuFind open-source software and the role of patronizing bodies. *Reference Services Review*, 54(1), 31–52. <https://doi.org/10.1108/RSR-07-2025-0047>
- Ajani, Y. A., Adefila, E. K., Olarongbe, S. A., Enakrire, R. T., & Rabiun, N. (2024). Big data and the management of libraries in the era of the Fourth Industrial Revolution: Implications for policymakers. *Digital Library Perspectives*, 40(2), 311–329. <https://doi.org/10.1108/DLP-10-2023-0083>
- Allison, D., DeFrain, E., Hitt, B. D., & Tyler, D. C. (2019). Academic library as learning space and as collection: A learning commons' effects on collections and related resources and services. *The Journal of Academic Librarianship*, 45(3), 305–314. <https://doi.org/10.1016/j.acalib.2019.04.004>
- American Library Association. (2025). *Joint-use libraries*. <https://libguides.ala.org/Jointuselibraries>
- Atkinson, J. (2018). Collaboration and academic libraries: An overview and literature review. In J. Atkinson (Ed.), *Collaboration and the academic library* (pp. 11–33). Chandos Publishing. <https://doi.org/10.1016/B978-0-08-102084-5.00002-X>
- Baathuli Nfila, R., & Darko-Ampem, K. (2002). Developments in academic library consortia from the 1960s through to 2000: A review of the literature. *Library Management*, 23(4–5), 203–212. <https://doi.org/10.1108/01435120210429934>
- Bae, S. (2016). Thinking locally and sharing globally: The impact of library policies on collection sharing. In B. Posner (Ed.), *Library information and resource sharing: Transforming services and collections* (pp. 53–72). Libraries Unlimited. <https://doi.org/10.5040/9798400679100.ch-004>
- Bangani, S., Chizwina, S., & Moyo, M. (2018). An analysis of interlibrary loan services: A case study of a university in South Africa. *Information Discovery and Delivery*, 46(1), 26–37. <https://doi.org/10.1108/IDD-08-2017-0059>
- Beamer, J. E. (2019). Digital libraries for open science: Using a socio-technical interaction network approach. *Italian Research Conference on Digital Libraries*.
- Beamer, J. E. (2019). Digital libraries for open science: Using a socio-technical interaction network approach. In P. Manghi, L. Candela, & G. Silvello (Eds.), *Digital libraries: supporting open science* (Communications in Computer and Information Science, Vol. 988, pp. 122–129). Springer. [https://doi.org/10.1007/978-3-030-11226-4\\_10](https://doi.org/10.1007/978-3-030-11226-4_10)
- Bergstrom, T., Rieger, O. Y., & Schonfeld, R. C. (2024, August 1). Governance and business models for collaborative collection development. <https://doi.org/10.18665/sr.321102>
- Breeding, M. (2013a). Case study: The Orbis Cascade Alliance—Strategic collaboration among diverse academic institutions. *Library Technology Reports*, 49(1), 30–31. <https://journals.ala.org/index.php/ltr/article/view/4408>
- Breeding, M. (2013b). Products and services. *Library Technology Reports*, 49(1), 16–29. <https://journals.ala.org/index.php/ltr/article/view/4411>
- Central Library – Vietnam National University Ho Chi Minh City. (2017). *Introduction of VNU-HCM Library System*. Vietnam National University Ho Chi Minh City.
- Chisita, C. T. (2017). Developing a national library consortium: Lessons learnt from other countries. *Mousaion*, 35(1), 155–179. <https://doi.org/10.25159/0027-2639/2448>
- Chisita, C. T., & Fombad, M. (2024, December 2). Sharing library resources in technology enhanced and technology-starved times: A case of selected Southern African library consortiums [Conference paper]. 18th IFLA ILDS Conference: Global to Local – Diversity and Inclusiveness in Resource Sharing, Baku, Azerbaijan. ADA University. <https://doi.org/10.60119/occm9432>
- Connaway, L. S., & Radford, M. L. (2021). *Research methods in library and information science*. Bloomsbury Publishing.

- Cuhadar, S., & Cimen, E. (2019). Cost-sharing models: Experience of the Anatolian University Libraries Consortium. *The Journal of Academic Librarianship*, 45(3), 252–261. <https://doi.org/10.1016/j.acalib.2019.03.004>
- Đỗ, V. H. (2017). Chia sẻ tài nguyên thông tin giữa các thư viện đại học: Nhận diện các yếu tố tác động và đề xuất mô hình hợp tác [Information resource sharing among university libraries: Identifying influencing factors and proposing a collaborative model]. *Tạp chí Thông tin và Tư liệu [Journal of Information and Documentation]*, (1), 4–14. <https://scholar.dlu.edu.vn/thuviensso/handle/DLU123456789/114923>
- Fagan, J. C. (2014). The dimensions of library service quality: A confirmatory factor analysis of the LibQUAL+ instrument. *Library & Information Science Research*, 36(1), 36–48. <https://doi.org/10.1016/j.lisr.2013.10.003>
- Felts, J., & Carpenter, T. (2023). Leveraging federated authentication to simplify access: Understanding changes in access mechanisms to online content. *Library Faculty Publications*. 11. <https://digitalcommons.coastal.edu/lib-fac-pub/11>
- Francis, F., & Chinnasamy, K. (2025). Exploring user perceptions in academic libraries: A comprehensive review of trends, challenges and future directions. *College Libraries*, 40(4), 61–68. <https://collegelibraries.in/index.php/CL/article/view/226>
- Frederiksen, L., Bean, M., & Nance, H. (2011). *Global resource sharing*. Elsevier.
- Government of Vietnam. (2020). *Decree No. 93/2020/ND-CP detailing several articles of the Law on Libraries*.
- Hamby, R., & Neiman, A. B. (2023). A tiny library with a million volumes: Open-source resource sharing with fulfillment interlibrary loan (ILL). *Information Services and Use*, 43(3-4), 285–288. <https://doi.org/10.3233/ISU-230222>
- Hoang, T. T., & Genoni, P. (2017). The prospects for Vietnamese academic library consortia: Results of a survey. *Libri*, 67(1), 15–33. <https://doi.org/10.1515/libri-2016-0050>
- Horton, V., & Pronevitz, G. (2015). *Library consortia: Models for collaboration and sustainability*. American Library Association.
- Iosad, A. (2020). *Digital at the core: A 2030 strategy framework for university leaders*. <https://beta.jisc.ac.uk/guides/digital-at-the-core-a-2030-strategy-framework-for-university-leaders>.
- Kim, Y., & Yang, E. (2022). Academic library spaces and student activities during the COVID-19 pandemic. *The Journal of Academic Librarianship*, 48(4), Article 102529. <https://doi.org/10.1016/j.acalib.2022.102529>
- Ku, K. M., Mahboobani, V. R., Qiu, Y. V., Yang, T. T., & Woo, E. M. W. (2026). Reshaping the future of academic library: Service model for holistic research data support. *The Journal of Academic Librarianship*. <https://doi.org/10.1016/j.acalib.2025.103180>
- Lê, H. T. (2019). Hợp tác chia sẻ tài nguyên thông tin giữa các thư viện luật ở Việt Nam: Thực trạng và giải pháp [Collaboration in sharing information resources among law libraries in Vietnam: Current situation and solutions]. *Tạp chí Thư viện Việt Nam [Vietnam Library Journal]*, 6, 3–9. <https://nlv.gov.vn/nghiiep-vu-thu-vien/hop-tac-chia-se-tai-nguyen-thong-tin-giua-cac-thu-vien-luat-o-viet-nam-thuc-trang-va-giai-phap.html>
- Le, T. T. T. (2024). Digitalization of higher education in Vietnam. *Journal of Comparative & International Higher Education*, 16(2), 23. <https://digitalcommons.lib.uconn.edu/jcihe/vol16/iss2/23>
- Lee, P.-C. (2024). Transitioning elementary school libraries to joint-use spaces: Insights from organizational learning. *IFLA Journal*, 50(3), 605–619.
- Levenson, H. N., & Nichols Hess, A. (2020). Collaborative collection development: Current perspectives leading to future initiatives. *The Journal of Academic Librarianship*, 46(5), Article 102201. <https://doi.org/10.1016/j.acalib.2020.102201>

- Lund, B. D., Wang, T., Shamsi, A., et al. (2023). Barriers to scholarly publishing among library and information science researchers: International perspectives. *Information Development*, 39(2), 376–389. <https://doi.org/10.1177/02666669211052522>
- Nguyễn, H. V. V. (2016). Liên hiệp thư viện: Mô hình phát triển bền vững cho thư viện Việt Nam [Library consortia: A sustainable development model for Vietnamese libraries]. *Tạp chí Thư viện Việt Nam [Vietnam Library Journal]*, 3(59). <https://nlv.gov.vn/nghiep-vu-thu-vien/lien-hiep-thu-vien-mo-hinh-phat-trien-ben-vung-cho-thu-vien-viet-nam.html>
- Nonthacumjane, P. (2022). Organizational aspects of collaboration on local information within a network of collaborating provincial university libraries. *Public Library Quarterly*. <https://doi.org/10.1080/01930826.2022.2102380>.
- Nguyễn, T. T. T. (2019). Mô hình liên hiệp chia sẻ nguồn tin khoa học, công nghệ và kỹ thuật giữa các trường đại học Việt Nam [A consortium model for sharing science, technology, and engineering information resources among Vietnamese universities]. In *Kết nối, chia sẻ thông tin giữa các thư viện điện tử – Thực trạng và giải pháp [Connecting and sharing information among electronic libraries: Current situation and solutions]* (pp. 179–192). [http://repository.vnu.edu.vn/handle/VNU\\_123/143638](http://repository.vnu.edu.vn/handle/VNU_123/143638)
- Oladokun, B., Sambo, A., Basse, M., & Enakrire, R. (2024). The open access effect: Transforming collection development using open repositories. *International Journal of Librarianship*, 9(4), 36–51. <https://doi.org/10.23974/ijol.2024.vol9.4.395>
- Ostos, M., & Gardinier, L. (2018). Spanish-language print materials within academic consortia: Assessing the impact of resource sharing in two academic libraries. *The Journal of Academic Librarianship*, 44(2), 295–299. <https://doi.org/10.1016/j.acalib.2017.12.005>
- Pereira, R., & Franco, M. (2020). Library as a consortium perspective: A systematic literature review. *Journal of Librarianship and Information Science*, 52(4), 1126–1136. <https://doi.org/10.1177/0961000620904754>
- Pisani, A. (2002). Library consortia and cooperation in the digital age. *Biblioteca Universitaria*, 5(2), 87–102.
- Plemnek, A., & Sokolova, N. (2015). Sharing resources of Russian libraries: Ten years of consortia services development. *Interlending & Document Supply*, 43(3), 151–159. <https://doi.org/10.1108/ILDS-03-2015-0012>
- Prosmans, F., & Renaville, F. (2023, September 11). From fee to free: How our library moved from a paid to a free ILL service [Conference Paper]. IGeLU 2023 Conference and Developers' Day, Leuven, Belgium.
- Pellen, R., & Miller, W. (2002). *Cooperative efforts of libraries* (1st ed.). Routledge. <https://doi.org/10.4324/9781315863443>
- Rafiq, M., Batool, S. H., Ali, A. F., & Ullah, M. (2021). University libraries response to COVID-19 pandemic: A developing country perspective. *The Journal of Academic Librarianship*, 47(1), Article 102280. <https://doi.org/10.1016/j.acalib.2020.102280>
- Ratnayake, R. (2025). Importance of sharing resources in academic libraries: An analysis of recent research studies. *International Journal of Social Science, Management and Economics Research*, 3(1), 15–23. <https://doi.org/10.61421/ijssmer.2025.3102>
- Romano, J., & Huynh, N. (2021). OpenAthens odyssey: Challenges of implementing federated authentication for a multi-institutional user population. *Journal of the Medical Library Association*, 109(4), 648–655. <https://doi.org/10.5195/jmla.2021.1170>
- Roy, P., & Habib, M. A. (2024). Fostering effective collaboration between LIS academics and practitioners in Bangladesh. *IFLA Journal*, 50(3), 574–590. <https://doi.org/10.1177/03400352241236737>

- Ruenz, M. M. (2022). Remote authentication: One library's journey on offering EZProxy and OpenAthens. *Internet Reference Services Quarterly*, 26(3), 153–167. <https://doi.org/10.1080/10875301.2022.2067283>
- Samea, L. (2015). Academic library consortia in Arab countries. *International Journal of Library and Information Science*, 7(7), 130–147. <https://doi.org/10.5897/IJLIS2014.0540>
- Sharing and Transforming Access to Resources Section, IFLA. (2009). Lending and borrowing across borders. *Reference & User Services Quarterly*, 49(1), 54–63.
- Stearns, S., Revitt, M., & Leonard, K. (2020). Taking shared print to the next level. *Journal of Library Administration*, 60(7), 812–820. <https://doi.org/10.1080/01930826.2020.1803020>
- Suh, J. Y. (2024). Study on the use and perception of Sci-Hub among Korean researchers. *Journal of Information Science*. Advance online publication. <https://doi.org/10.1177/01655515241253824>
- Sun, Y., Zhou, W., Deng, L., & Liu, H. (2025). Library resource sharing system and data management model based on blockchain. In *Proceedings of the 3rd International Conference on Artificial Intelligence and Education (ICAIE 2024)*.
- Tran, Q. H. N. (2023). Library as a learning organization. *The Learning Organization*, 30(3), 339–354. <https://doi.org/10.1108/TLO-10-2022-0126>
- Tripathi, A., & Lal, J. (2016). *Library consortia: Practical guide for library managers*. Chandos Publishing.
- Trương, Đ. L., & Lê, T. T. H. (2011). *Đẩy mạnh hợp tác các liên hiệp thư viện đại học ở Việt Nam*. <http://huc.dspace.vn/handle/DHVH/3576>
- Van de Sompel, H., & Lagoze, C. (2002). Notes from the interoperability front: A progress report on the Open Archives Initiative.
- Vietnam Academy of Science and Technology. (2017). *Biên bản hội nghị Liên hiệp Thư viện Việt Nam lần thứ 17* [Minutes of the 17th Conference of the Vietnam Library Consortium]
- Vietnamese Prime Minister. (2025). *Decision No. 452/QĐ-TTg approving the network planning of higher education and pedagogical institutions for 2021–2030, vision to 2050*.
- VILASAL. (2025). *Vietnam Library Association of Southern Academic Libraries*. <https://vilasal.org.vn/>
- Wade, R. (1999). The very model of a modern library consortium. *Library Consortium Management: An International Journal*, 1(1–2), 5–18. <https://doi.org/10.1108/14662769910284230>
- Xu, Y.-S., Khalid, Y. I. A. M., & Kassim, M. S. (2025). Is the intelligent development of libraries accelerating? A decade of comprehensive scientometric assessment and SWOT analysis. *Journal of Librarianship and Information Science*. <https://doi.org/10.1177/09610006251384336>
- Zapata-Carratala, C., Glowacki, J., Martin-Dussaud, P., Franzmann, G., Thomas, A., van Helden, A., Tselentis, E.-E., & Penz, L. (2022). *Against parasite publishers: Making journals free*. Basic Research Community for Physics.
- Zhu, X., Whitaker, E., Cho, M., & Zhang, M. (2025). Student engagement in academic libraries: A conceptual framework. *College & Research Libraries*, 86(2), 275. <https://doi.org/10.5860/crl.86.2.275>