7.3 An established digital library continuously progressing in information and communication technology

The Khunying Long Athakravisunthorn Learning Resources Center provides information services via books and journals in electronic format, to support the teaching, learning, and research of the university. There has been a continuous development of the digital information resource services since 2007, as shown in Figure 7.3-1, and in the announced 2022 vision: "Digital library that supports learning at all ages under sustainable development".
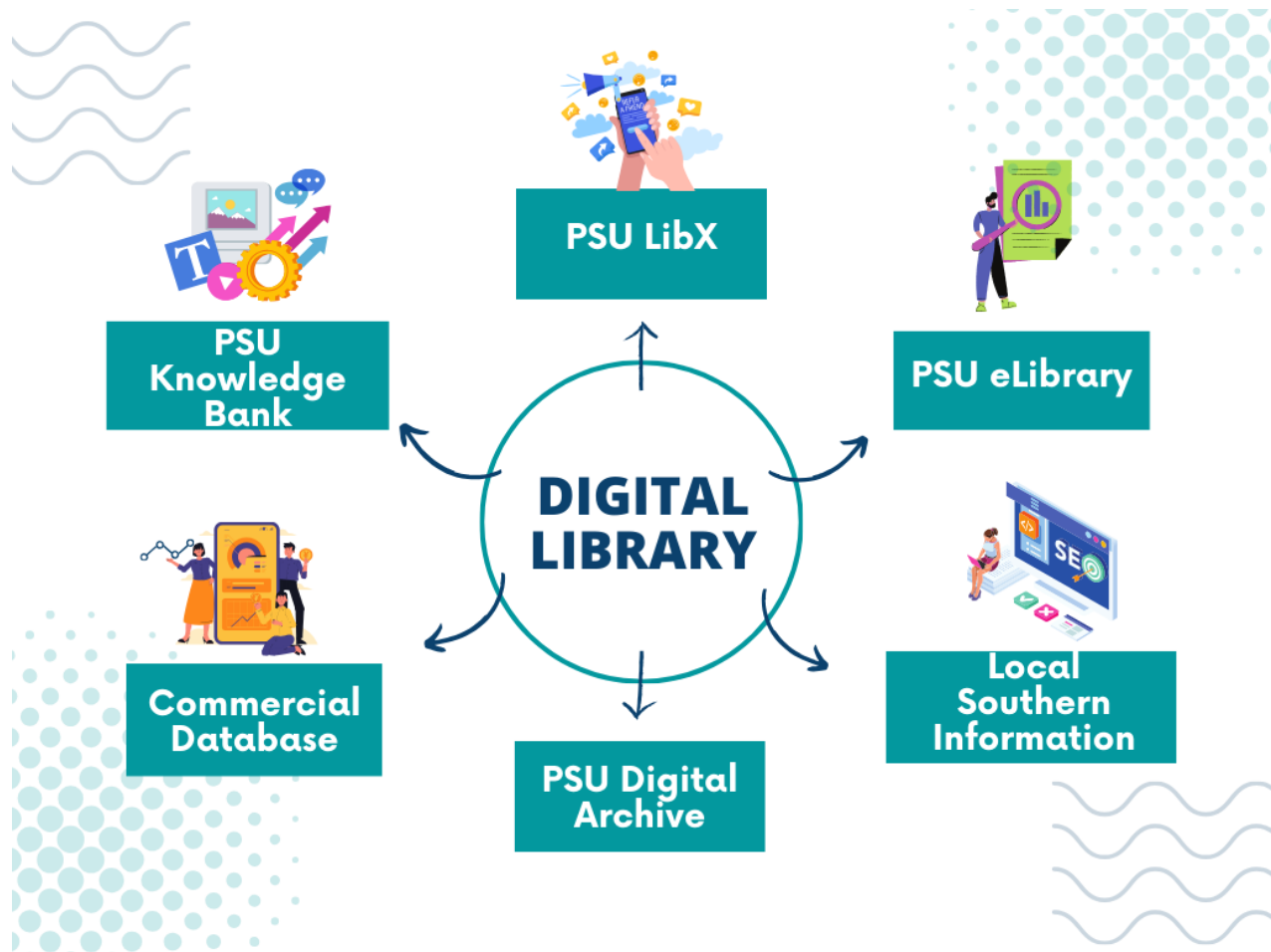

Figure 7.3-1 Digital library services

In academic year 2023, the Khunying Long Athakravisunthorn Learning Resources Center received the Outstanding Educational Institution Library Award 2023 from the Thai Library Association (TLA) under the Royal Patronage of Her Royal Highness Princess Maha Chakri Sirindhorn, and obtained Green Office certification for 2022 at the excellent level from the Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment. With the aforementioned vision in 2023, the Khunying Long Athakravisunthorn Learning Resources Center aimed to enhance its digital library to provide more services, and continues to provide electronic information resources, including commercial databases, online databases, e-books, and electronic journals (https://clib.psu.ac.th/e-resources/e-databases.html). The digital library also provides learning and research software such as Endnote, Zotero, Mendeley, and plagiarism detection software (Copyleaks), alongside copy-checking programs and iThenticate, accessible via the Khunying Long Athakravisunthorn Learning Resources Center's website: https://clib.psu.ac.th/.

The development of the digital library of the Khunying Long Athakravisunthorn Learning Resources Center aims to support the learning of lecturers, students, and staff of Prince of Songkla University, enabling all five campuses to borrow and read online books anytime, anywhere. The center developed its own databases, including local databases for the southern region and the PSU Knowledge Bank, and created a database of the PSU Digital Archive, which is an information source repository of historical documents of Prince of Songkla University.

Additionally, in 2023, the Khunying Long Athakravisunthorn Learning Resources Center officially implemented the PSU LibX system in full, which can be accessed through mobile applications on both iOS and Android systems, serving library users across all five campuses. The system consists of the following functions:

       1. manual resource borrowing system

       2. resource renewal system for recovering resources (Renew)

       3. QR code generation system for library access

       4. fine payment system via Direct Payment

       5. book search system.

The development of the PSU elibrary, a system for borrowing and reading online books, involved negotiations to acquire Thai-language electronic books from Bookcaze, and foreign-language books from Cambridge University Press. It also facilitated the connection to the online book borrowing and reading system, allowing access to Thai-language electronic books through the PSU e-library and PSU LibX.

The Khunying Long Athakravisunthorn Learning Resources Center also has a mission to support lifelong learning. This is achieved by several means, including the Coursera for Campus program and the Samart Skills project from Google to enhance self-learning capabilities through internationally standardized online teaching and learning systems in reskilling/upskilling students, lecturers, and staff of Prince of Songkla University.

In academic year 2023, the Khunying Long Athakravisunthorn Learning Resources Center has allocated a budget of 32,637,309.14 baht to acquire information resources, classified by field of study and types of information resources, as shown in Table 7.3-1. Various databases also provide services classified by academic discipline, as shown in Table 7.3-2.

Table 7.3-1 Budget used for information resources acquisition

Program	Textbooks	Journals	Databases	Total
Science and Technology	13,455.80	0.00	721,000.00	734,455.80
Health Sciences	845,138.41	4,111,963.47	21,661,920.85	26,619,022.73
Social Sciences	104,906.65	0.00	0.00	104,906.65
Interdisciplinary Programs	26,496.90	57,414.07	5,095,012.99	5,178,923.96
Total	989,997.76	4,169,377.54	27,477,933.84	32,637,309.14

Table 7.3-2 List of service databases classified by field of study

Program	Subscribed by Khunying Long Athakravisunthorn Learning Resources Center	Subscribed by Office of the Permanent Secretary of MHESI	Subscribed by Faculty
Science and Technology	- SciFinder Scholar	- ACM Digital Library - American Chemical Society Journal (ACS) - Engineering Source - IEEE/IET Electronic Library (IEL)	
Health Sciences			- Access Emergency Medicine - Access Medicine - Access Surgery - AMBOSS - APA PsycINFO - BMJ Best Practice - BMJ Journals Online

Program	Subscribed by Khunying Long Athakravisunthorn Learning Resources Center	Subscribed by Office of the Permanent Secretary of MHESI	Subscribed by Faculty
			- Clinical Key - The Cochrane Library - Embase - JAMA Network - Karger Online Journals - Lexicomp - Ovid - Oxford Journals (Medicine & Health) - Thieme E-Journals - UpToDate
Social Sciences		- Emerald Management	
Interdisciplinary Programs	- Cambridge Core - EBSCO e-book - Gale Academic One File - Journal Citation Reports(JCR) - SCOPUS - Web of Science	- Academic Search Ultimate - Science Direct - Springer Link Journal	

In addition, the Khunying Long Athakravisunthorn Learning Resources Center provides various software solutions to support research, including:
1. Copyleaks and iThenticate for plagiarism detection;
2. Endnote, Mendeley, and Zotero for bibliography management.

The Khunying Long Athakravisunthorn Learning Resources Center provides modern and adequate information resources in accordance with the curriculum/discipline, teaching, and research of the university, as shown in Table 7.3-3

Table 7.3-3 Number of information resources classified by type

Category	Number of units
In-house database	4
Database	35
Printed information resource	170,038
Electronic information resource	24,793
Total	**194,870**

The Khunying Long Athakravisunthorn Learning Resources Center provides necessary infrastructure, such as venue services/facilities, to support the learning process, as shown in Figure 7.3-2, Table 7.3-4 and Table 7.3-5.
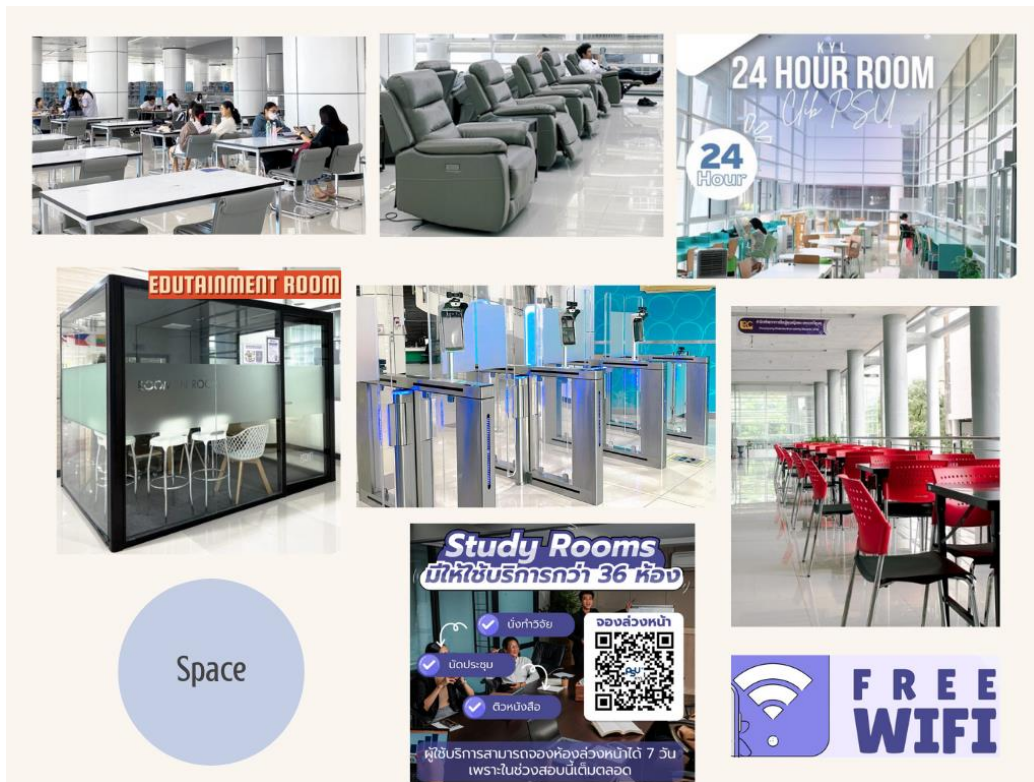

Figure 7.3-2 Venue services

Table 7.3-4 Venues/Facilities

Category (unit)	Amount
Average opening service duration (hours)	10
Reading seats	752
Special group room	36
Theater room (seats)	112
Meeting room with 40 seats and 80 seats (rooms)	2
Computer training room (seats)	50
Reading rooms (limited noise: quiet reading room)	2
24-hour reading rooms "The Forest" and "The Space" (seats)	180
Children and youth rooms	1
Reading alcoves	1
Southern Region Information Room	1
Edutainment Room	1
Meeting Box	1

The Khunying Long Athakravisunthorn Learning Resources Center uses information and communication technology to facilitate operations and services as follows:

1. The ALIST automatic library system. Users can find information resources easily and conveniently via the OPAC program (https://opac.psu.ac.th/Search_Basic.aspx), and resource acquisition services (ACQ Online).

2. Development of electronic service programs on the website, such as a Table Reservation System (PSU LibX), Group Reading Room Reservation System, Interlibrary Loan Service, and Find Full-Text 4U service.

3. The development of in-house technological innovations includes the automatic ticket vending system (Ticket Machine), and the automatic gate system (Smart Gate).

In the previous year, the following technological innovations have been implemented:

3.1 The automatic ticket vending system has been transformed into a cashless unit.

3.2 The Smart Gate system has been updated with modern features to accommodate the PSU LibX application, facial recognition scanning, and an extra entrance exit in front of the elevators on the first floor of Building 1, to provide greater access to people with disabilities and the elderly. Greatly expanded the use of digital media as communication channels with users such as Facebook, LINE, Instagram, YouTube, website, email, Messenger, and TikTok.

4. Development of in-house databases such as the PSU Knowledge Bank, Local Southern Information, Memory@PSU, and the PSU eLibrary.

5. Provision of computers and accessories such as headphones, extension socket plugs, power banks, calculators, TV sets, Lightning adapters, and Type C adapters.
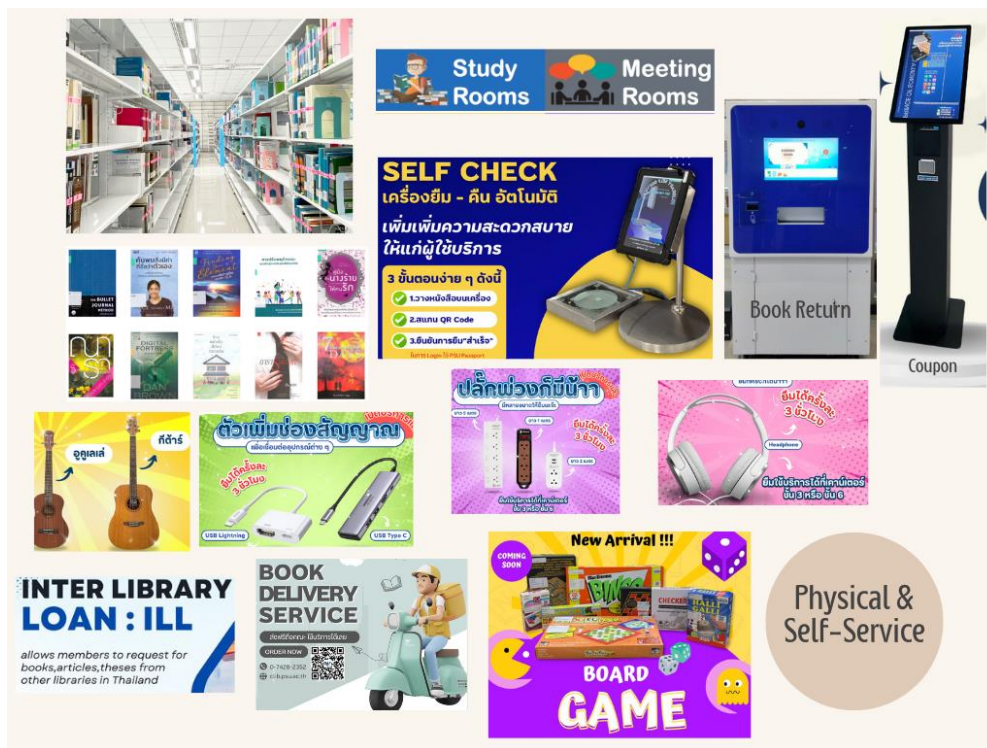

Figure 7.3-3 Facilities

Table 7.3-5 Computers and accessories

Category	Unit
Computer	88
Calculator	5
Headphone	49
Extension socket plug	33
Power Bank	3
TV	24
Lightning adapter	2
Type C adapter	5

In addition, the Khunying Long Athakravisunthorn Learning Resources Center forms collaborative networks with libraries of the university's campus (PSULINET), at regional (PULINET) and national (AUNILO) levels, to support learning and the use of information resources together in a cost-effective manner, as shown at the link: https://tdc.thailis.or.th/tdc/basic.php. Users can access and download a more diverse set of academic articles and electronic media, which promotes self-study.

Evidence list 7.3

7.3.1 Khunying Long Athakravisunthorn Learning Resources Center website: http://clib.psu.ac.th/

7.3.2 Digital Library System website of the Khunying Long Athakravisunthorn Learning Resources Center: https://clib.psu.ac.th/

7.3.3 Online databases, e-books, and electronic journals: https://clib.psu.ac.th/e-resources/e-databases.html

7.3.4 Information resources of the Khunying Long Athakravisunthorn Learning Resources Center: https://opac.psu.ac.th/Search_Basic.aspx

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7.9 The quality of the facilities (library, laboratory, IT, and student services) is subjected to evaluations and enhancements.

In 2023, the assessment of the quality of learning support and learning environment for university courses was carried out, and the Khunying Long Athakravisunthorn Learning Resources Center utilized the following evaluation criteria, passing "certified" quality:

      1. Thailand Quality Award (TQA) criteria were used for organizational quality assessment;

      2. excellent-level (gold) Green Office certification was received from the Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment, and the Green Library evaluation criteria were satisfied;

      3. evaluation was carried out for digital data management quality according to CoreTrustSeal standards;

      4. the Outstanding Educational Institution Library Award 2023 was received from the Thai Library Association (TLA) under the Royal Patronage of Her Royal Highness Princess Maha Chakri Sirindhorn.

Additionally, the Khunying Long Athakravisunthorn Learning Resources Center evaluated user satisfaction in five aspects: resources, services, personnel, facilities, and communication.
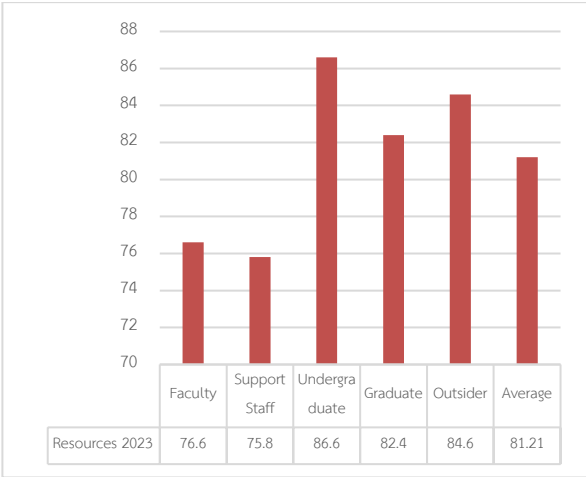
	Faculty	Support Staff	Undergraduate	Graduate	Outsider	Average
Resources 2023	76.6	75.8	86.6	82.4	84.6	81.21

Figure 7.9-1 Percentage of service recipients' satisfaction with resource provision

	Faculty	Support Staff	Undergraduate	Graduate	Outsider	Average
Services 2023	63.6	78.6	87.4	88	84.6	80.44

Figure 7.9-2 Percentage of service recipients' satisfaction with services

	Faculty	Support Staff	Undergraduate	Graduate	Outsider	Average
Personnel 2023	75.8	90	91.6	92	90.2	87.92

Figure 7.9-3 Percentage of service recipients' satisfaction with personnel

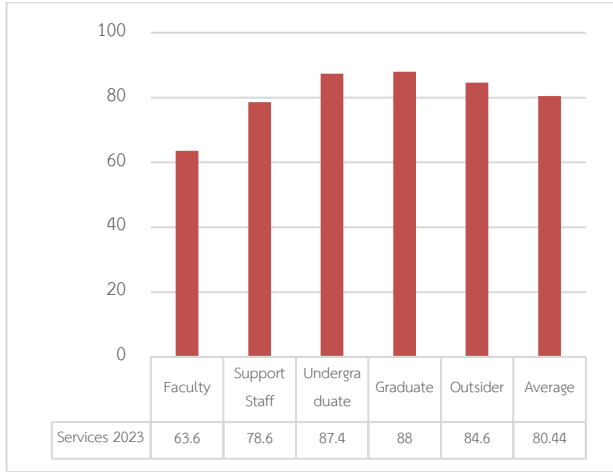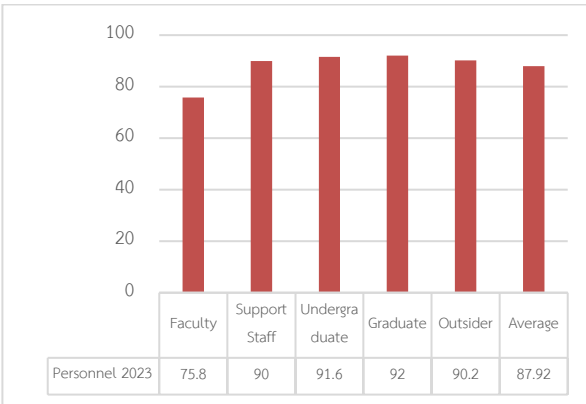|	Faculty	Support Staff	Undergraduate	Graduate	Outsider	Average
Facilities 2022	89.8	89.6	91.4	86.6	86.2	88.8
Facilities 2023	58.6	60.4	90	85	86	76

Figure 7.9-4 Percentage of service recipients' satisfaction with facilities
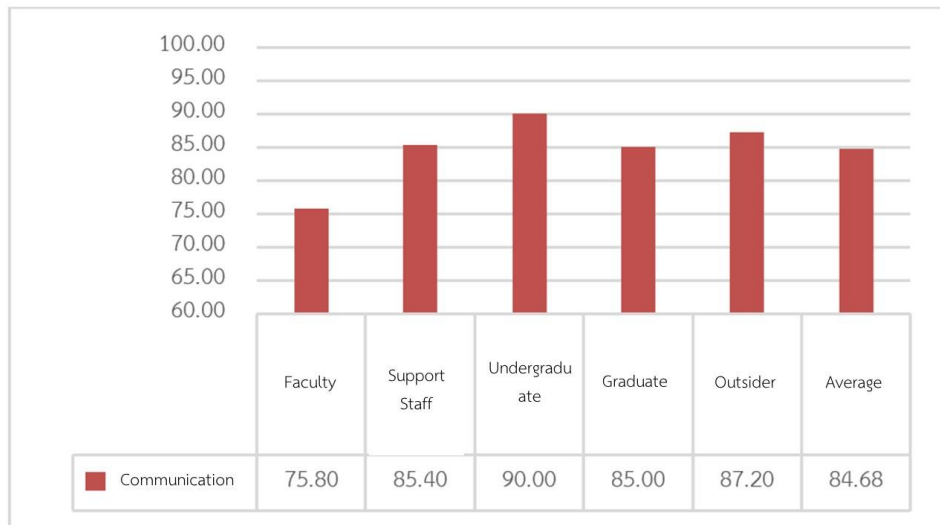
Figure 7.9-5 Level of service recipients' satisfaction with communication

The results of the satisfaction survey conducted among service recipients regarding resources found that undergraduate students had the highest satisfaction rate at 86.6%, followed by external individuals at 84.6%, graduate students at 82.4%, and faculty and support staff at 76.6% and 75.8%, respectively. The overall satisfaction rate of service recipients with resources was 81.21%.

Regarding service provision, graduate students displayed the highest satisfaction rate at 88%, followed by undergraduate students at 87.4%, and external individuals at 84.6%, with support staff and faculty at 78.6% and 63.6%, respectively. The overall satisfaction rate of service recipients with service provision was 80.44%.

Personnel were rated highest by graduate students at 92%, followed by undergraduate students at 91.6%, and external individuals at 90.2%, with support staff and faculty at 90% and 75.8%, respectively. The overall satisfaction rate of service recipients with personnel was 87.92%.

The highest satisfaction rate with facilities was given by undergraduate students at 90%, followed by external individuals at 86%, and graduate students at 85%, with support staff and faculty at 60.4% and 58.6%, respectively. The overall satisfaction rate of service recipients with facilities was 76%.

Finally, communication was rated highest by undergraduate students at 90%, followed by external individuals at 87.20%, and graduate students at 85%, with support staff and faculty at 85.4% and 75.8% respectively. The overall satisfaction rate of service recipients with communication was 84.68%.

Evidence list 7.9

7.9-1 Assessment of customer satisfaction towards the service of the Khunying Long Athakravisunthorn Learning Resources Center https://clib.psu.ac.th/about/tqa.html

7.9-2 Green Library website of the Khunying Long Athakravisunthorn Learning Resources Center https://clib.psu.ac.th/greenlibrary/

7.9-3 Thai Library Association (TLA) under the Royal Patronage of Her Royal Highness Princess Maha Chakri Sirindhorn Announcement, Subject: Outstanding Educational Institution Library Award 2023 https://tla.or.th/attachments/article/464/announce-3v2.pdf