

มุมมองของการจัดการห้องสมุดเที่ยงคืนของมหาวิทยาลัยในประเทศไทย

Management Facets of University Midnight Libraries in Thailand

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Abstract:

Purpose: The objectives of this study are threefold: 1) to explore opening hours of the midnight university libraries in the academic years of 2016 and 2018 in order to gain understanding in their task performance 2) to gain awareness in the characteristics of the midnight university libraries and other libraries which open beyond regular office hours and 3) to examine management aspects and concerned problems of all 9 National Research Universities (NRU).

Methodology: This quantitative research is divided into 3 stages: 1) collecting information through websites and telephone calls of all university libraries during their working hours in 2016 2) constructing questionnaires for surveying the 9 NRUs for their late opening hour management and 3) reviewing and rechecking the opening hours of all university libraries in 2018.

Findings: The analysis of the data showed that all autonomous university libraries provided longer average opening hours per week than all 5 academic library group; all 24/7 libraries belonged to autonomous universities; all NRUs provided midnight library services; and food debris in the NRU libraries was the frequently found problem. Furthermore, NRUs had difficulties in persuading their full time staff to work after regular opening hours as they could not cope with their work fatigue; NRUs used both human resources and equipment for managing security issue; and many NRUs experienced budget problems for extending their library service hours.

Applications of this study: This study indicates that even though library resources can be accessed ubiquitously in the electronic era, library physical spaces and services are important; and despite of facing many management problems in extending longer service hours, such benefits as improving learning environment, gaining university reputation, increasing student learning outcomes, and raising administrators', faculty's and students' satisfactions might worth all the troubles.

Keywords: Library Opening Hours, Library Management, Midnight Library, Thailand Library, University Library

บทคัดย่อ:

วัตถุประสงค์: 1) สำรวจเวลาเปิด-ปิดห้องสมุดของทุกมหาวิทยาลัยในประเทศไทย เพื่อทำความเข้าใจลักษณะทำการระหว่างภาคการศึกษา 2559 และ 2561 2) ทำความเข้าใจลักษณะของห้องสมุดตอนเที่ยงคืนและห้องสมุดที่เปิดเกินเวลาทำการปกติ และ 3) สำรวจการจัดการด้านและปัญหาที่เกี่ยวข้องของมหาวิทยาลัยวิจัยแห่งชาติทั้ง 9 แห่ง (NRU)

วิธีการศึกษา: ใช้การวิเคราะห์เชิงปริมาณในการวิจัยทั้งสามขั้นตอนโดย 1) รวบรวมข้อมูลผ่านเว็บไซต์และการโทรศัพท์ของเวลาเปิดทำการห้องสมุดของห้องสมุดของมหาวิทยาลัยทุกแห่งในปี 2559 2) สร้างแบบสอบถามโดยสำรวจมหาวิทยาลัยวิจัย (NRU) ทั้งเก้าสถาบันเกี่ยวกับการจัดการห้องสมุดนอกเวลาทำการ และ 3) ทบทวน - ตรวจสอบเวลาเปิดทำการของห้องสมุดมหาวิทยาลัยในปี 2561

ข้อค้นพบ: ห้องสมุดของกลุ่มมหาวิทยาลัยในกำกับมีเวลาทำการเฉลี่ยยาวที่สุดต่อสัปดาห์ ซึ่งห้องสมุดมหาวิทยาลัยในกำกับ มหาวิทยาลัยวิจัยทั้งหมดจัดให้มีห้องสมุดเที่ยงคืน และปัญหาการทิ้งเศษอาหารเป็นปัญหาที่พบบ่อยที่สุดของการจัดบริการห้องสมุดเที่ยงคืน และห้องสมุดทุกแห่งจัดให้พนักงานประจำทำงานในช่วงล่วงเวลา ทำให้พบว่าพนักงานในห้องสมุดบางแห่งประสบปัญหาความเหนื่อยล้าในการทำงานห้องสมุดเที่ยงคืนและความยากลำบากในการหาพนักงานมาทำงานในช่วงล่วงเวลา การจัดการปัญหาด้านความปลอดภัยทั้งคนและอุปกรณ์ต่าง ๆ นอกจากนี้ ห้องสมุดเที่ยงคืนหลายแห่งสะท้อนถึงปัญหางบประมาณเพื่อขยายเวลาห้องสมุด

การประยุกต์ใช้จากการศึกษานี้: งานวิจัยชิ้นนี้แสดงให้เห็นว่าแม้ในปัจจุบันเป็นยุคที่สามารถเข้าถึงข้อมูลของห้องสมุดจากสื่ออิเล็กทรอนิกส์ แต่พื้นที่และบริการห้องสมุดทางกายภาพยังคงมีความสำคัญ มหาวิทยาลัยชั้นนำ รวมทั้งมหาวิทยาลัยวิจัยทั้งหมดและมหาวิทยาลัยในกำกับบางแห่ง จัดให้มีเวลาทำการห้องสมุดยาวนานกว่ามหาวิทยาลัยในกลุ่มอื่น ๆ แม้จะมีปัญหาเกิดขึ้นมากมาย หากประโยชน์ที่ได้รับ ได้แก่ การเพิ่มพูน

สภาพแวดล้อมของการเรียนรู้ เพิ่มชื่อเสียงของมหาวิทยาลัย เพิ่มผลสัมฤทธิ์การเรียนรู้ของนักศึกษา เพิ่มความพึงพอใจของคณาจารย์ ผู้บริหาร และนักศึกษา ซึ่งเป็นสิ่งที่คุ้มค่ากับการลงทุน

คำสำคัญ: เวลาทำการห้องสมุด การจัดการห้องสมุด ห้องสมุดเที่ยงคืน ห้องสมุดในประเทศไทย ห้องสมุดมหาวิทยาลัย

1. Introduction

University library has been one important supporting facility in higher education institutions. The functions of an academic library have been broadened beyond places for searching and retrieving information. Although there is alternate electronic access to library resources anytime and anywhere, many top universities worldwide provide longer opening hours than normal business. Many of those even provide library opening hours until midnight (from now on will be called “midnight library”) or provide services 24 hours a day and 7 days per week (from now on will be called “24/7 library”). University libraries that provide 24-hour opening are recognized and reported by Times Higher Education World University Rankings (THE, 2016).

There have been past studies relating to library opening hours in many communities including Australia, Canada, U.S.A, and U.K. However, no research or reports focusing specifically on opening hours in Thailand-university libraries could be found. There were several questions arisen regarding the needs to extend long opening hours in the existing era of electronic accessible in Thai HEI libraries: What are the characters of opening hours, for both normal opening hour and midnight libraries? For midnight libraries, what are problems encountered? and how do they manage their services?

2. Purpose

This research aimed to find out the facets of midnight university libraries in Thailand. The studies toward this aim consisted of three facets.

2.1. Survey library opening hours of all universities in Thailand to understand the characteristics of opening hours.

2.2. Study to understand the characteristics of midnight libraries and libraries that open beyond normal office hours (from now on will be called “late hours libraries”).

2.3. Explore about management aspects and concerned problems.

Research scope

1) This study on library opening hours covers all universities' libraries in Thailand, as listed by the Office of Higher Education Commission in 2016 and 2018 (OHEC, 2016, 2018).

2) The study on managing experiences of late hours and midnight libraries covers on all nine National Research Universities.

Literature review

The issues needed reviewing as background prior to conduct details exploration include: the functions of academic library, groups of HEI in Thailand, characteristics of opening hours and demands to extend library opening hours, and experiences in managing midnight/extended library hours.

1) Functions of Academic Library: A library can be utilized in both 'Conventional' and 'Unconventional' functions. *Conventional Functions* are many important to facilitate directly to academic and other related purposes, including teaching and learning, research, preserving art and culture and providing academic services (Ministry of University Affairs, 2001). *Unconventional Functions* are roles that student uses the physical bodies of libraries in more broaden functions, including as informal learning spaces as well as socialization spaces of learning (Ministry of University Affairs, 2001) (The Central Library of Srinakharinwirot University, 2016) (Ravenwood et al, 2014). Students come to library to work/study – individually and often in groups. Learning activities performed there includes completing assignments and course works, study for exams, meet with classmates/friends, and conduct term projects/thesis (Cunningham and Walton, 2015). Vanichvatana has recently found that another function of library is as a relaxing place (Vanichvatana, 2018.) Values of libraries to facilitate college and university have been broadened to become a source of lifelong learnings (Chaiya, et al 2015) (The Central Library of Srinakharinwirot University, 2016).

2) Groups of Universities in Thailand: The total number of higher education institutions (HEI) in Thailand was 156 in November 2018 (OHEC, 2018). These 156 institutions consist of five groups of public universities and one group of private university as follows: (1) 26 autonomous universities, (2) 9 Rajamangala universities, (3) 38 Rajabhat universities, (4) 11 other public universities, and (5) 72 private universities. *Autonomous universities* are public universities that still received annual block grant from the Thai government. However, each of the 26 institutions has its independent budgeting, human resources

management and other forms of management systems and regulations for internal enforcement. Autonomous universities are considered as high-ranking universities. All Thai universities listed in THE world university rankings and QS World University Rankings, during 2016 – 2018, are autonomous universities (THE, 2016, 2017, 2018; QS, 2016, 2017, 2018). *Rajamangala Universities* were initially established as technology and vocational colleges and later developed as universities. *Rajabhat Universities* were initially established as teacher training schools that are located at central and other provincial regions of Thailand, then developed as teaching colleges and finally as universities. The names of both ‘Rajabhat’ and ‘Rajamangala’ were endured by the King Rama IX of Thailand.

Among these 156 universities, there are nine universities that have been appointed as Thailand “National Research Universities’ (NRU). Eight out of these nine NRE are from autonomous university group and the other one is from other public university group.

3) Characteristics of Opening Hours and Demand to Extend Library Opening Hours: About characteristics of opening hours, library opening hours range from regular office/government opening hours (nine-to-five) to 24-hour operations which allow users to access into the physical resources of library buildings. However, the idea of 24-hour academic library opening is not new, Libraries of University of Bath had offered a 24-hour service since 1996 (Ravenwood et al 2014). University libraries that provide 24-hour operations are recognized and reported by Times Higher Education World University Rankings (THE, 2016). ‘THE’ (2016, 2018) has conducted annual experience survey from students, who are asked to rate their university based on library facilities and library opening hours. There has been little literature until now related specifically on this issue.

About the demand to extend library opening hours, there were several evidence shown needs to increase library opening hours – in USA and Canada (Laakers, 2011) (Atuase & Koufie, 2017), in UK (Reisz, 2010), and in Australia. Curry (2003) reported evidence that there were demand for more extensive weekend and evening hours in several Australian universities. Students are particularly sensitive about library hours when exam pressure is high. The survey results by Fox (2000) showed that younger traditional students showed higher demand to extend library hours than adult learners, but both groups strongly suggested more extensive weekend opening hours. There was evidence of complaint about library summer hours at the Glasgow Caledonian University that were not in line with course offering during that period

(Crawford, 2002). There are many *factors* about the pressure for the demand to extend opening hours – especially for 24/7. The topmost important factors are: (1) demand from stakeholders, such as undergraduates, student's union, and university senior management, for providing extended services during exam revision periods, (2) cost constraints and budgets, (3) expectations from full fees and (4) students' performances from national survey (Ravenwood et al, 2014). The specifics about the demands from many different groups of stakeholders include students (Simpson et al, 1996), students' union (Ajala et al 2014), faculty (Siriprasoetsin et al, 2011), and library administrators (Steel & Walters, 2001). *Student*: The Office of Survey Research of the Western Washington University (Simpson et al 1996) conducted the follow-up survey based on requests and suggestions from students concerning the extension of library hours. Although the researchers did not claim that the findings represented the University students' population, the findings showed the demand for additional library hours. *Students' Union*: Students' Union from Ladoké Akintola University of Technology in Southwest Nigeria also showed demand for extended library hour services to accommodate students who live in or around the campus areas and *regularly* use the facilities offered by the university library (Ajala et al 2014). *Faculty*: Siriprasoetsin (et al 2011) surveyed faculty members of six public universities located in different regions of Thailand, from different academic disciplines: social science and humanity, health science and science and technology. The results showed that 72.2% of the overall respondents were highly demand for 24 hours library services. The levels of demand varied in different academic disciplines: health science = 83.3%, social science and humanity = 72.3% and science and technology = 68.8%. *Library Administrators*: Library administrators also demanded for library extended hours. Steele and Walters (Steel & Walters, 2001) reported that 25% of the surveyed library administrators requested for the extended hours.

4) Experiences in Managing Midnight/Extended Library Hours: Extending library hours from normal office hours required many types of resources which are limited by nature. Library administration needs to weigh and balance between extending library opening hours and limited resources (Curry, 2003). Important concerned resources during extended hours are staffing, safety and security, and budgets. *Staffing for Extended Hours*: Steel and Walters (2001) identified that the most common ways for staffing are staff reassignment from existing support staffs, new-hired staffs, students, and existing security staff or newly hired

security staff. Nevertheless, there are concerns about the lack of reference assistance (Lawrence & Weber, 2012). The limitation of staff during extending library hours could cause the restriction to use some parts of library and access to authorize patrons. *Safety and Security during Extended Hours*: During the normal library hours, though, there are several challenging issues about security, including making noise from mobile phone usage, theft, cutting and destroying library materials, and hiding books to prevent other users (Abioye & Rasaki, 2014). According to Foot and McManus (1999), for extended hours, there were fears about safety and security in medium to high levels, including personal safety of users' students and workers/employees (Lawrence & Weber, 2012). To solve safety and security issues, alarm systems, key cards, and motion/glass break sensors (Steel & Walters, 2001). *Budgets for Extended Hours*: One important type of operation costs to extend library hours is library staff payment. It is essential to balance between services provide and cost to be spent (Simpson, et.al 1996), and cost and prestige and other benefits gained. Other alternative is to hire volunteers with lower cost, instead of overtime staffs, with higher cost. Funding for extended hours could come from campus administration and student groups, with a rare case from increasing of tuition fees (Steel & Walters, 2001).

In addition to the concern about limited resources, other issues are about the areas and services, and the behaviours of student/users during the extended library hours. *Library Spaces and Services*: There are questions on whether libraries should provide 'full' or 'partial' access to library spaces and services. *Library Spaces*: The top list that is usually allowed full access include 'Study Space', following by 'Stacks', 'Copy Facilities', 'Computer Lab Facilities', 'Reference', and 'Food/Vending' spaces. *Library Services*: That are usually provided during the extended hours listed from top rankings are: 'Individual study space', 'Collaborative study space', 'Online resources', 'General collections', 'Circulation', 'Computer labs', 'Reserve readings', 'Reference service', 'Laptop check-out', 'On-call technical support', 'In person technical support' and 'Special collections' (Steele & Walters, 2001). *Behaviours of Students during the Extended Hours*: A survey regarding to experiences of managing three public universities in Southwestern Nigeria showed that 75% students who regularly used libraries' facilities were agreed to strongly agreed that libraries were their only study environment, and visited libraries for serious studies. The concerns from the circulation staffs

about students' negative behaviours are 'Party', 'Sleep', 'Leaving Food and Debris' in the library (Lawrence & Weber, 1999).

5) Benefits of Extended Library Hours: Night library provides quiet atmosphere that suits students' study preferences. Extended hours of library service help students to study well, especially for their examination (Ajiboye & Bankole, 2013). Because extended service hours, through night-time, present quiet atmosphere with less distraction. As such, night library supports students to adequately prepare for examinations. This statement also supported by Hayman (2015), that reviewed a study (Scarletto et. al, 2013). Hayman showed that half of students who responded the surveys hoped to accomplish quiet study during visiting night library.

3. Methodology

To pursue the research objectives, this research consists of a series of three stages as follows:

3.1 Stage 1 gathered data of all Thailand HEI libraries' opening hours, in early 2016.

This stage applied quantitative analysis approach. The data was collected through universities' websites and telephone calls to libraries' personals and universities' staffs. The first data gathering was conducted in the second semester of the 2015 academic year, during January to May 2016. The results from the first stage pointed out that most midnight libraries were of the National Research Universities in Thailand (NRU). Such results led to the scope of the second stage of this study.

3.2 Stage 2 surveyed managing aspects of late-hours and midnight libraries of the National Research Universities (NRU) in Thailand in late 2016.

The second stage applied quantitative analysis approach by collected management experiences of NRU libraries. A questionnaire form was created, then the surveys were performed during October and November 2016. The questionnaire surveys were sent to all nine libraries' management levels, through connections. The survey forms were sent to a predetermine persons in each of the nine institutions to be certain that the sent questionnaire form will be attentive and carefully answered and returned, via emails. With 100% cooperation, all population of NRU had filled out and returned the questionnaire forms. The persons who responded from each of the nine NRU were: three 'Library Managers', five 'Librarians', and one 'Library Staff'.

3.3 Stage 3 repeated gathering data of all Thailand HEI libraries' opening hours, in 2018. This stage applied quantitative analysis approach. This second gathering of library opening hours was in the first semester of the 2018 academic year – August to December 2018. The same as in stage 1, this stage collected data through universities' websites and telephone calls to libraries' personals and universities' staffs.

Data of stage 1 and stage 3

1) *Opening hours of 2016 and 2018*: The reason why this research collected and analyzed information about library opening of both years was to compare any changes happened between both years.

2) *Groups of Universities*: These studies grouped universities in Thailand into 5 groups, as described earlier. The data gatherings for library opening hours were collected into 5 groups accordingly.

3) *Details of data*: The data collected consist of open and close hours during both 'Study Period' and 'Exam Period', and both on weekdays and weekends of the two periods. Out of the total 156 HEI in Thailand, 155 HEI provide libraries, except one private community-college institution.

3.4. Research's levels of Conveniences to Search for Library Opening Hours Information, Ease and Difficulty: During the data gatherings, the researcher encountered different levels of conveniences to search information about library opening hours from all available 155 universities' sources. Some searches were easy, but many were difficult. The levels of conveniences to search information are ranged into five levels, from the easiest to search to the most difficult to search as follows: *Level 1, The easiest to search* – library opening hours information (both study and exam periods) are posted on the homepage (front page) of a library webpage. *Level 2, Easy to search* – library opening hours (study period, and some libraries showed exam period) are not posted on the home page (front page) but post somewhere inside library webpage. Users must put efforts to search for this information.

For information during exam period of some libraries, users must make telephone calls to libraries' staffs. *Level 3, Available information* – library opening hours (only during study periods) are not posted on the home page (front page) and nor posted visibly on any webpages. But library opening hours are kept in the format of 'html' files which users must

upload and then open the html-file up. For exam period, users must make telephone calls to libraries' staffs. *Level 4, Difficulty to search* – cannot find library opening hours on libraries' websites (neither homepage nor webpage.) Users can only make telephone calls to libraries' staffs for library opening hours (both study and exam periods). However, libraries staffs and sometimes universities' staffs were quite corporate to provide this information through telephone calls. And, *Level 5, the most difficult, not welcome to search* – cannot find library opening hours on libraries' websites (neither homepage nor webpage.) Users can only make telephone calls to libraries' staffs for library opening hours (both study and exam periods). Moreover, when the researcher made telephone calls to libraries or universities' non-library staffs, they answered but queried for reasons why users called for library opening hours.

4. Research results

The results are discussed as in: (1) the characteristics of all Thailand universities libraries, and (2) the management aspects of midnight and late hours libraries, focused on NRU. The characteristics of all university libraries in Thailand were found in five facets: (a) Open and close times, both during study and exam periods, (b) Never closed libraries and no-service-days, (c) Total length of library opening hours per week, (d) Midnight libraries in Thailand, and (e) National Research Universities' midnight libraries. The analysis results about management aspects of midnight and late hours libraries are in two facets: (f) Management aspects and (g) Benefits of midnight libraries.

4.1. The Characteristics of Open and Close Times

For *Study Periods Open and Close Times*: Study Period Open Time during weekdays were between 7:30 and 9:00, with only one university open at 10:00am in 2016. The modes are at 8:00 for both 2016 and 2018. The average weekdays open time in 2018 (8:12am) is a bit earlier than in 2016 (8:15am), as seen in Table 1. Open time during weekends were between 7:45 and 11:00, same in both 2016 and 2018, and certainly later than those during weekdays. The mode in 2016 was 8:30 but in 2018 was half an hour earlier, at 8:00. The average weekday opening hours in 2018 (8:42am) is a little earlier than in 2016 (8:43am.) These averages were half an hour later than those during weekdays. Study Period Close Time during weekdays were between 16:00 and 24:00, and the mode is at 16:30 for both 2016 and 2018. The average in 2018 (18:36pm.) is ten minutes earlier than in 2016 (18:46pm.) Close time during weekends in 2016 and 2018 were truly similar, with minor differences as shown in Table 1. In 2016 and 2018, the close times were between 15:00 and 22:00. However, in 2018, there were two

unusual cases: one autonomous university closed at 12:00pm., and one private university closed at 24:00pm. These outlier cases made the Quartile Graph between 2016 and 2018 some differences. But the averages of both 2016 and 2018 periods confirm the similarity of the two periods. As the average in 2018 (17:06pm.) was one minute earlier than the average in 2016 (17:07pm). The mode in both 2016 and 2018 were the same at 16:30pm.

Table 1 Comparison of Open/Close Hours during Normal-Teaching Days in 2016 and 2018

Groups	2016				2018			
	Study Period Opening Hours		Study Period Closing Hours		Study Period Opening Hours		Study Period Closing Hours	
	Weekdays	Weekends	Weekdays	Weekends	Weekdays	Weekends	Weekdays	Weekends
Autonomous U.	8:00- 9:00	8:00- 11:00	16:00- 22:00	16:00- 22:00	7:30- 9:00	8:00- 11:00	16:00- 22:00	12:00- 22:00
Other Public U.	7:30- 8:30	8:00- 10:00	16:00- 22:30	16:00- 21:00	7:30- 8:30	8:00- 10:00	16:30- 22:00	16:00- 21:00
Rajabhat U.	7:30- 8:30	7:45- 9:00	16:30- 20:00	15:00- 20:30	7:45- 8:30	7:45- 9:00	16:30- 24:00	16:00- 20:00
Rajamangala U.	8:00- 8:30	8:00- 9:00	18:00- 24:00	15:00- 21:00	8:00- 8:30	8:00- 9:00	16:30- 24:00	15:00- 21:00
Private U.	7:30- 10:00	8:00- 10:00	16:00- 24:00	15:00- 20:00	8:00- 9:00	8:00- 10:00	16:00- 24:00	16:00- 24:00
Mode	8:00	8:30	16:30	16:30	8:00	8:00	16:30	16:30
Average	8:15	8:43	18:46	17:07	8:12	8:42	18:36	17:06
Minimum	7:30	7:45	16:00	15:00	7:30	7:45	16:00	12:00
Maximum	10:00	11:00	24:00	22:00	9:00	11:00	24:00	24:00

For Exam Period Open and Close Times: In 2018, Autonomous universities, Other-public universities, and private universities provided midnight library opening hours, as in Table 2. However, the mode of the open and close times during exam period were still similar to those of study period and government official times. The averaged open and close times show that more groups of universities extend the operation times during exam period, comparing to study period, except Rajabhat university and Rajamangala university groups.

4.2. Characteristics of Never Closed Libraries and No-Service Days

In 2018 out of 155 university libraries, there were 111 libraries (71.67%) that Never Closed during study periods and 110 libraries (70.97%) never none during exam periods, shown in Table 3. Rajabhat universities had the most proportions of libraries that ‘Never Closed’ (92.11%), followed by Other-public universities (90.00%), Autonomous universities (76.92%), Private universities (59.72%), and Rajamangala universities (45.45%).

Table 2 Comparison of Open/Close Time between Study Period and Exam Period in 2018

Groups	Academic Year 2018								Note
	Study Period Opening Hours		Study Period Close time		Exam Period Open time		Exam Period Close Time		
	Weekdays	Weekends	Weekdays	Weekends	Weekdays	Weekends	Weekdays	Weekends	
Autonomous U.	7:30-9:00	8:00-11:00	16:00-22:00	12:00-22:00	0:00-9:00	0:00-10:00	16:00-24:00	12:00-24:00	
Other Public U.	7:30-8:30	8:00-10:00	16:30-22:00	16:00-21:00	0:00-8:30	0:00-10:00	16:15-24:00	16:00-24:00	
Rajabhat U.	7:45-8:30	7:45-9:00	16:30-24:00	16:00-20:00	7:45-8:30	7:45-9:00	16:30-24:00	16:00-20:00	same
Rajamangala U.	8:00-8:30	8:00-9:00	16:30-24:00	15:00-21:00	8:00-8:30	8:00-9:00	16:30-24:00	15:00-21:00	same
Private U.	8:00-9:00	8:00-10:00	16:00-24:00	16:00-24:00	8:00-9:00	0:00-10:00	1:00-23:30	16:00-24:00	
Mode	8:00	8:00	16:30	16:30	8:00	8:00	17:00	16:30	
Average	8:12	8:42	18:36	17:06	7:36	7:48	19:18	17:54	
Minimum	7:30	7:45	16:00	12:00	0:00	0:00	1:00	12:00	
Maximum	9:00	11:00	24:00	24:00	9:00	10:00	24:00	24:00	

Table 3 The Numbers of Libraries that Never Closed, during Study Periods and Exam Periods in 2018

Groups of Universities →	Autonomous Universities	Other-Public Universities	Rajamangala Universities	Rajabhat Universities	Private Universities	Total
Numbers of Library “NEVER CLOSED”, during Study Periods	20 (of 26) (76.92%)	9 (of 10) (90.00%)	4 (of 9) (44.45%)	35 (of 38) (92.11%)	43 (of 72) (59.72%)	111 (of 155) (71.61%)
Numbers of Library “NEVER CLOSED”, during Exam Periods	20 (of 26) (76.92%)	9 (of 10) (90.00%)	4 (of 9) (44.45%)	35 (of 38) (92.11%)	42 (of 72) (58.33%)	110 (of 155) (70.97%)

During weekdays, *Thursday* is the least to be No-Service-Days, with zero closed day during study periods in all libraries, shown in Table 4. In summary, Saturday and Sunday are the top No-Service-Days in both study periods and exam periods, followed by Monday and Friday, then Tuesday and Wednesday, then Thursday – as the least.

Table 4 The Numbers of No-Service-Days, during Study Period and Exam Period in 2018

	Days of the Week →						
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
The Numbers of Libraries with No-Service-Days, during Study Periods	7	1	1	0	4	25	25
The Numbers of Libraries with No-Service-Days, during Exam Periods	8	2	2	1	5	27	28

Note: A library might have none ‘No-Service-Days’ (open every day) or have many ‘No-Service-Days’.

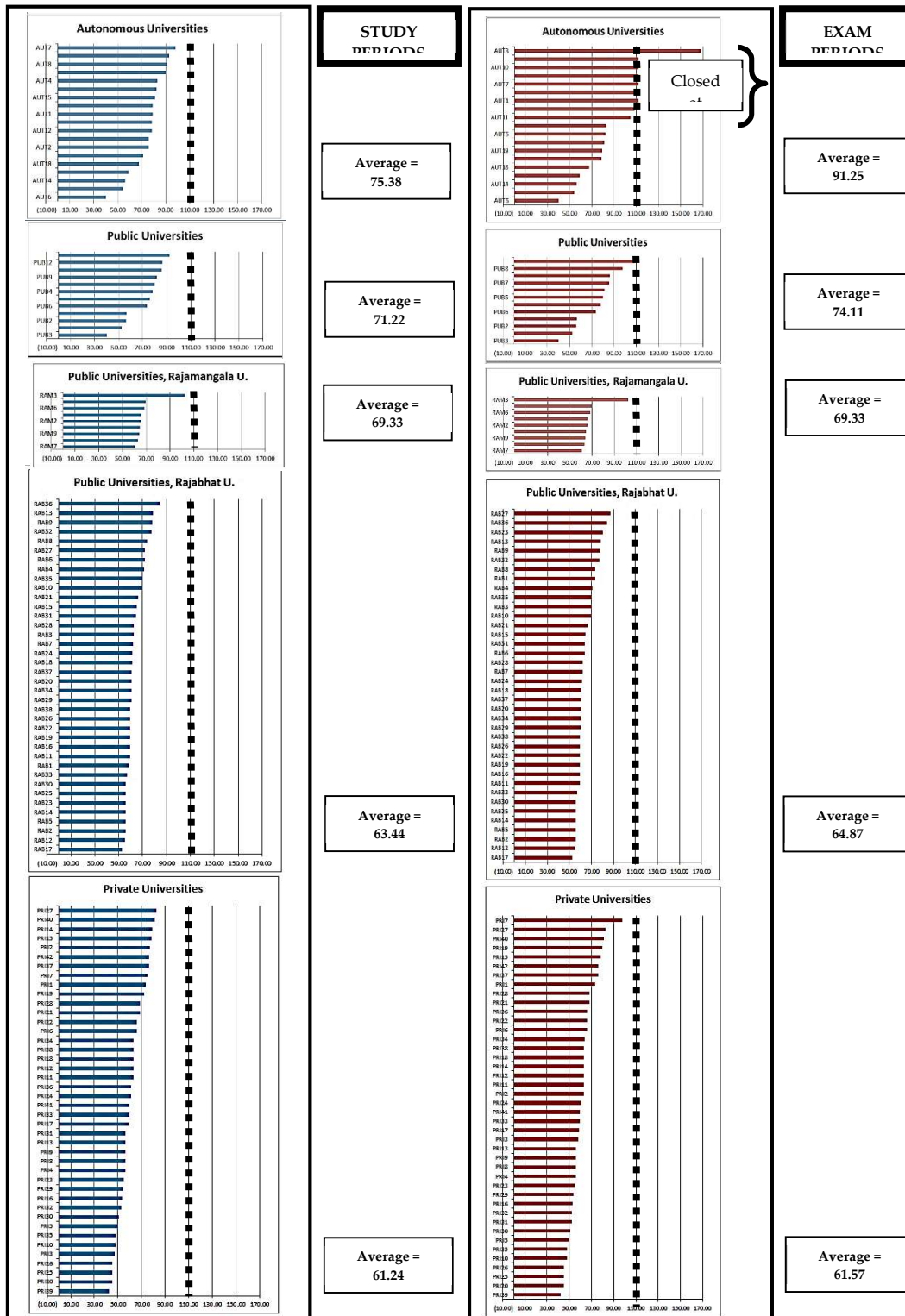


Figure 1 Comparison between the Length of Library Open Hours during ‘Study Period’ and ‘Exam Period’, in Five Groups of Universities in Thailand

4.3. Total Length of Library Opening Hours per Week

The length of library opening hours per week is the total hours that a library opens within a week (Monday through Sunday). The following analysis compare the length of opening hours per week between study periods and exam periods, of both 2016 and 2018 in the five university groups. Figure 1 shows the Length of Library Opening Hours in 2016 during Study periods and Exam periods, in the five university groups. The vertical dotted lines indicate the length of library opening hours at 110 hours per week. Most universities had similar library opening hours in both study and exam periods. However, some libraries in autonomous, other-public universities and Rajamangala universities had opening hours longer during exam periods.

Table 5 The Length of Library Opening Hours in 2016 and 2018, both Normal-Teaching and Exam Days, by University Groups

2016	Average Total hours per week during Study Periods	Average Total hours per week during Exam Periods	Differences between Exam Periods over Study Periods	% Difference
Autonomous	75.38	91.25	15.87 hours	21.05%
Other-Public U	71.22	74.11	2.89 hours	4.06%
Rajamangala	69.33	69.33	-	0.00%
Rajabhat	63.44	64.87	1.43 hours	2.25%
Private U	61.24	61.57	0.33 hours	0.54%

2018	Average Total hours per week during Study Periods	Average Total hours per week during Exam Periods	Differences between Exam Periods over Study Periods	% Difference
Autonomous	73.03	90.10	17.08 hours	23.38%
Other Public U	61.55	87.36	25.82 hours	41.95%
Rajamangala	62.39	64.44	2.06 hours	3.29%
Rajabhat	65.64	69.52	3.88 hours	5.91%
Private U	59.10	59.42	0.32 hours	0.54%

Comparison between 2016 & 2018	Difference (hours)	Difference (hours)	Notes
Autonomous	-2.35 hours (-3.12%)	-1.15 hours (-1.26%)	* 2018 opened shorter hours both Study Periods & Exam Periods
Other Public U	-9.67 hours (-13.58%)	13.25 hours (17.88%)	* 2018 opened a lot shorter hours during Study Periods / * But opened a lot longer hours during Exam Periods
Rajamangala	-6.94 hours (-10.01%)	-4.89 hours (-7.05%)	* 2018 opened shorter hours
Rajabhat	2.20 hours (3.47%)	4.65 hours (7.17%)	* 2018 opened longer hours
Private U	-2.14 hours (-3.49%)	-2.15 hours (-3.49%)	* Open similar length of hours in both periods

The comparison between the information in 2016 and 2018 shows in Table 5. Autonomous universities had the longest averaged library open hours per week, during both study periods and exam periods, in both 2016 and 2018. Comparing between 2016 and 2018, only Other-Public university group and Rajabhat university group increased their average opening hours per week, the other three groups decreased.

4.4. Characteristics of Overall Midnight Libraries in Thailand

Among 155 university libraries, there were not many libraries provided midnight libraries. All midnight libraries occurred during exam periods. There are two types of midnight libraries in Thailand. The first type is “24/7 Library”, a library that open 24 hours a day and 7 days a week. The other type is “Midnight Library”, a library that close at or around midnight (23:00 to 1:00), then open at regular office hours. All 24/7 libraries in 2016 and 2018 were Autonomous universities. There were more Autonomous 24/7 libraries in 2018 than in 2016. There were also many more midnight libraries in 2018 than in 2016, the majorities were autonomous universities, as seen in Table 6.

Table 6 Comparison between 24/7 Library and Midnight Library, in 2016 and 2018

Types of Midnight Libraries	2016	2018	Differences	Notes
24 / 7 Library: * 0:00am to 24:00pm., 7 days	1	6	Increased by 500%	- All were Autonomous Universities
Midnight Library: * 8:00-8:30am to 23:30pm. * 8:00am to 24:00pm. * 8:00-9:00am to 1:00am.	8 } 9 1 }	3 } 14 10 } 1 }	Increased by 55%	2016: - Autonomous U. = 8 - Public U. = 1 2018: - Autonomous U. = 10 - Rajamangala U. = 1 - Rajabhat U. = 1 - Private U. = 2
Total Numbers of 24/7 Libraries and Midnight Libraries	10	20	Increased by 100%	

4.5. Characteristics of National Research Universities' Midnight Libraries

From the surveys in 2016 with all nine NRU library staffs, the demand for extending library hours beyond the normal government office hours were initiated from the students' request (8 of 9), with only one (1 of 9) from the university management level. All nine NRU provided midnight libraries during exam-periods weekdays, as shown in Table 7.

Table 7 Opening Hours of NRU Libraries

Names of National Research University	Study Periods Library Opening Hours		Exam Periods Library Opening Hours	
	Weekday	Weekend	Weekday	Weekend
	Chulalongkorn University	8:00-21:00	9:00-18:00	8:00-24:00
Mahidol University	8:00-21:00	9:00-17:00 ¹	8:00-24:00	9:00-17:00
Chiang Mai University	8:00-21:00	10:00-18:00	8:00-23:30	10:00-18:00
Thammasat University	0:00-24:00	0:00-24:00	0:00-24:00 ²	0:00-24:00 ²
Kasetsart University	8:00-20:00	11:00-19:00	8:00-24:00 ³	9:00-19:00 ³
Khon Kaen University	9:00-20:30 ⁴	9:00-20:30 ⁴	0:00-24:00	0:00-24:00
King Mongkukt's University of Technology Thonburi	8:00-21:00	8:00-21:00	8:00-24:00	8:00-24:00
Prince of Songkla University	8:30-22:00	9:00-19:30	8:30-23:30	9:00-21:30
Suranaree University of Technology	8:00-20:00	9:00-17:00	8:00-24:00 ⁵	9:00-24:00 ⁵

Note: Applied for the main library of each NRU
¹: During study periods opening hours - Opened on Saturday only
²: Extended 1 week before midterm and final
³: Midterm extended 3 weeks until 24:00, Final extended 4 weeks, the 1st week till 24:00, the 2nd-4th weeks open 24/7.
⁴: Provided 24/7 Study Center
⁵: Extended 2 weeks before midterm and final

For *Access Areas*: during the exam extended library hours, more NRU libraries limited users for partial access areas (6 of 9) than for normal full access areas (3 of 9). Some NRU provided special study areas, and some provided the ground floor of the library as 24/7 study area. For *Users' Activities during Extended Hours*, the most common activity across all NRU libraries was 'Group study' (9 of 9), following by 'Self-study' (8 of 9), 'Book search/borrow-return' (4 of 9), 'Tutorial' (2 of 9), and 'Audio visual aids' (1 of 9). When compared the *Number of Users* during the study periods and the exam periods, more NRU libraries had a greater number of users during the exam periods (6 of 9). But two NRU (2 of 9) said there were fewer users during the exam periods, and one NRU (1 of 9) said there were the same number of users during both study and exam periods. The popular users' *Access Hours* during the late hours were "20:00-22:00" (5 of 9), and "18:00-20:00" (3 of 9).

4.6. Management Aspects of Midnight Libraries

The nine NRU reflected their experiences in managing midnight libraries in four facets: (1) Problems occurred during the extended hours, (2) Staffing, (3) Safety and security, and (4) Budget. For *Problems* occurred during the extended library hours, listed from top problems, were: (1) "Users left food debris" (9 of 9), (2) "Noisy talk/not study" (4 of 9), (3) "Sleep" (3 of 9), (4) "Too many users and not enough seats" (3 of 9), (5) "Leave lots of garbage" and "Bring food/drink inside" and "Too many users and could not properly manage toilet hygiene" (each with 1 of 9).

For *Staffing* during the extended hours: all nine NRU assigned full-time staff to work

overtime (9 of 9). There were two NRU (2 of 9) hired additionally part-time staff, but none NRU (0 of 9) hired students. Moreover, more NRU (7 of 9) assigned fewer number of staffs to work during the extended hours than the normal hours, and only 2 NRU (2 of 9) assigned similar number of staff in both normal and extended hours. In assigning staff, who work during normal hour and prolonged shift during the library extended hours, six NRU (6 of 9) said they encountered problems. Five NRU (5 of 6) reported “Fatigue” problems occurred with staff who worked on extended hours.

For *Safety* concern for staff who worked after the normal hours, “Staff travel at night” was mentioned by two NRU (2 of 9) as a problem. *Security* approaches used during the extended hours were: “Extra Guards patrolling around properties” (5 of 9), “Using CCTV” (5 of 9), “Provide guard checkpoints” (1 of 9), and “Increase lighting around buildings” (1 of 9). However, none of the nine NRU had ever experience any major problem occurred with personal safety. There was only one incident that occurred during daytime about the loss of a motorcycle.

For *Budget* aspect, there were different experiences on all NRU. The majorities were “No problem about budget” (5 of 9). However, there were two NRU (2 of 9) with “Some budget problems” and one NRU (1 of 9) with “Major budget problems”.

4.7. Benefits of Midnight Libraries

The top benefit for extending library opening hours was “Improve learning environment” (9 of 9) which were agreed upon by all nine NRU. Other benefits, listed from high to low frequency, are “Increase faculty and management satisfactions” (5 of 9), “Increase university reputations” (3 of 9), “Increase student satisfaction” (3 of 9), and “Improve student learning outcome” (1 of 9). There was no opinion about “Increase satisfaction from alumni” nor about “Increase satisfaction from parents”.

5. Conclusion

This study examined several management facets of all universities’ libraries in Thailand. And, more importantly, analyzed and identified midnight libraries in Thailand, especially the characteristics of library opening hours, difficulties found about management facets and benefits from offering midnight libraries. Generally, the opening hours of university libraries in Thailand are similar to government office opening hours. Autonomous university group provide the longest averaged library opening hours per week than the other four university

groups. Midnight libraries and 24/7 libraries were offered during exam periods. However, the number of these midnight and 24/7 libraries are in small proportion compared to the total number of All Thailand's university libraries. All NRU provided midnight libraries. All 24/7 libraries were of Autonomous universities. In addition, some private universities extended their library opening hours to midnight in 2018.

Among NRU libraries, the demand for extended library opening hours were more from students. Most NRU main libraries provided accessibility to only 'Partial Serviced Areas'. For users' activities, there were several activities students came for during extended hours. The top activities were 'Self Study' and 'Group Study.' Other less frequency performed were 'Book Search/Borrow-Return', 'Tutorial' and 'Audio Visual Aids'.

The three management facets covered: staffing, safety and security, and budget. All nine NRU assigned full-time staffs during the extended hours, with some hiring part-time staff but no one used students for the purpose. Moreover, some universities encountered fatigues in staff and difficulties to find staff to work during the extended hours. There are several approaches applied for security systems, using both human and non-human approaches. Budgeting problems were also occurred with some of the NRU. There are numerous benefits gained from extended library opening hours until midnight including: improve learning environment, increase universities' reputation, increase students' learning outcomes, increase satisfactions of faculty/management, and increase satisfactions of students.

Limitation and further studies

The scope of this study is all university libraries in Thailand. The results lead to many questions which are opportunities for future research. Firstly, it is interesting to study about decision making process and experiences from the universities that provide midnight and 24/7 libraries. The next question is about proper approach for staffing in the appropriateness to hire students to assist and replace of full-time staffs working overtime. The other question is about budgeting, how and where to get funds and balances between costs and benefits. If Thailand can establish national university rankings, further study can be done to analyze relationship between university rankings a library opening hours.

6. Discussion

There are many insights found from the analysis results. This section proposes possible solutions to problems, library opening hours information, and benefits of midnight library despite encountered problems: (1) staffing experiences, (2) security experiences, (3) budgeting experiences, (4) Disclosure of library opening-hour information, and (5) benefits of midnight libraries.

6.1. Staffing experiences, every library of NRU assigned full-time staff to work during extended library hours shifts. Some NRU libraries hired additional part-time staff. But no NRU hired students to work during the extended hours. This is, somewhat, different from the approaches recorded in past research which mentioned about hiring part-time staff and students to reduce cost (Lawrance & Weber, 2012). These practices might cause *problems* about ‘Fatigue’ in staffs and difficulty to ‘Find staff on extended shift’. A question rises here as why NRU do not hire student to be a staff during extended hours. Hiring part-time staffs and students can reduce problems about fatigue in full-time staff who work on both normal and extended shifts. Also, staff payments to part-time staff and students can be reduced in comparing to overtime-payments of full-time staff.

6.2. Security experiences: There is no best way nor worst way on security approach. Management must apply a combination of both human and non-human security approaches including guards patrolling, guard checkpoints, CCTV, and increase lightings, etc.

6.3. Budget experiences, NRU are universities that receive big funding from Thai government for research purpose. These universities are well established institutions. However, almost half of these NRU reflected that there were some or major budget problems relating to extended library beyond regular hours. Therefore, to extend library hours, budgeting is an important aspect that a university should be aware of.

6.4. Disclosure of library opening-hour: Libraries should properly disclose information about opening hours, both normal opening hours during study periods and any special extended hours during exam periods. University library is a supporting facility to teaching and learning, hence the very first step to welcome customers is to tell them opening hours. Library opening hours should be displayed on home page, the first page of a library website. It should not be hide on sub menus or required users to download files for opening hours information. The even worse circumstances are showing NO library information on website

and making users to make phone calls to a library. As nowadays people use websites as the main sources of information, it is very important for any university libraries to carefully design webpages where library visitors/users to easily find about library opening hours – without putting extra efforts to upload pdf file or even make a phone call.

6.5. Midnight library creates several benefits. Despite numerous problems occurred during the operation of extended library opening hours, there are paybacks from hard works. The number of midnight library in Thailand increase in 2018 from 2016, in almost all groups of universities. Benefits from hard works seem to overweigh all problem encountered. These benefits include Improve learning environment by support quiet study, improve students' learning outcomes, increase satisfactions from students, increase satisfactions from faculty/management, and increase universities' reputation. These benefits are encouraging awards that any universities should consider about operating midnight library.

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